

Prepared for

NC STATE UNIVERSITY

North Carolina State University

c/o

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**INDOOR ENVIRONMENTAL
INVESTIGATION REPORT –
INITIAL PHASE
NORTH CAROLINA STATE UNIVERSITY
POE HALL, RALEIGH, NORTH CAROLINA**

Prepared by

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CERTIFICATION PAGE

INDOOR ENVIRONMENTAL INVESTIGATION REPORT – INITIAL PHASE

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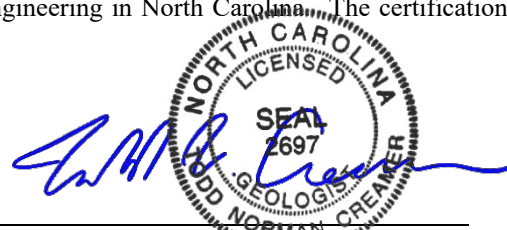
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I, Todd N. Creamer, a Licensed Professional Geologist for Geosyntec Consultants of NC, P.C., do certify that the information in this report is correct and accurate to the best of my knowledge.

Geosyntec Consultants of NC, P.C. is licensed to practice engineering in North Carolina. The certification number (Firm's License Number) is C-3500.



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1. INTRODUCTION

North Carolina State University's (NCSU's) outside counsel, Kilpatrick Townsend & Stockton LLP, retained Geosyntec Consultants of NC, P.C. (Geosyntec) on December 7, 2023, to provide environmental consulting services in a matter at Poe Hall on the NCSU campus in Raleigh, North Carolina (**Figure 1**). Consulting services relate to assessing and, if necessary, mitigating exposure of building occupants to polychlorinated biphenyl (PCB) compounds that may be present in the building.

Geosyntec understands that in the fall of 2023, NCSU collected samples of surficial dust, air and some bulk materials from components of the heating, ventilation and air conditioning (HVAC) systems for laboratory analysis for PCBs, in response to concerns from Poe Hall occupants about environmental conditions in the building. After receiving analytical results from the laboratory in November that reported detections of PCBs in some dust and some bulk samples, NCSU closed Poe Hall and shut down the HVAC systems out of an abundance of caution, pending further investigation.

Poe Hall is a 7-story academic building constructed in approximately 1971, when PCBs were widely used in building materials, such as paint, caulk, and some mastics, across the United States. PCBs are a family of related artificial compounds, manufactured for use in a multitude of industrial and commercial products prior to 1979, when they were banned in the United States. Each PCB consists of a biphenyl molecule bonded to one or more chlorine atoms. There are 209 distinct PCB compounds (called congeners) with each containing from 1 to 10 chlorine atoms. The number and placement of the chlorine atoms on the biphenyl molecule determines how the congener is named. PCBs typically occur as a mixture of congeners, and the most common commercial mixtures are called "Aroclors." Aroclor names reflect the percentage of chlorine by weight in the mixture (for example, Aroclor-1262 is 62% chlorine by weight).

Geosyntec is supporting NCSU's inquiry into the presence of PCBs in Poe Hall through a phased investigation, and this report provides a summary of the initial phase of investigation, conducted in December 2023 to assess the present state of Poe Hall. The investigation is focused on understanding the sources of PCBs that could be accessible to building occupants and the distribution of accessible PCBs in the building. Based on the information collected to date, the preliminary conceptual site model (CSM) is built on the assumption that the primary mechanism by which building occupants potentially could be exposed to PCBs, would be through contacting or respiring PCBs adsorbed to dust, and further, that dust is conveyed and distributed by the building's six air handling units, which are combined into four HVAC circulation zones. Sources of PCBs in this preliminary CSM would be located inside the HVAC system components, in contact with

flowing air, where the bulk materials that make up potential sources might break down and later be distributed to indoor spaces. Following this initial investigation and based on additional sampling data and information, this preliminary CSM will be refined and further developed in a coming report.

This initial investigation phase included collecting samples of indoor air and surficial dust from December 20 to 22, 2023 in Poe Hall to understand the current conditions of PCBs in surficial dust and air, and to support NCSU's decisions about building access for near-term needs, such as maintenance, required inspections and emergency services. The sampling plan included air samples and surface wipe samples distributed in Poe Hall considering the following variables: floor, HVAC circulation zones, room use, room location (perimeter with windows or interior). In addition, wipe samples were planned to be collected both from surfaces that were likely to have frequent touches and surfaces that were likely to have infrequent touches. Some wipe samples were collected in rooms that NCSU has identified where critical system maintenance, emergency preparedness and inspections will be required, but in general, wipe and air samples were collected in rooms with air supplies.

2. AIR AND SURFACE WIPE SAMPLING METHODS

This section describes sampling procedures, equipment and analyses.

2.1. Air Sampling Methods

Geosyntec sampled indoor and outdoor air on December 20, 21, and 22, 2023 from select locations in Poe Hall. The sampling set included 14 indoor air samples, one outdoor air sample on the rooftop, one duplicate (collected from Room 106) and one blank. Sample locations were selected to include multiple samples from each of the seven building floors and rooftop, from most types of rooms, and for each of the 4 HVAC circulation zones. Room types sampled included offices, classrooms, laboratories, and a bathroom.

Air samples were collected by drawing air through a laboratory-provided sampling cartridge with a calibrated Gillian GilAir Plus air sampling pump. Sampling cartridges contained a clean polyurethane foam (PUF) and were attached to the continuous-flow air sampling pump for a total of 24 hours. The 24-hour sampling duration was selected to achieve laboratory reporting limits that were lower than the most stringent of USEPA's risk-based exposure levels for evaluating PCBs in school indoor air (0.100 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] for most PCBs). The PUF cartridges sorb target analytes from air that is pumped through them. Each PUF sample cartridge was positioned on a tripod set approximately 1-2 meters above floor level with the intake pointed downward or horizontally. Pumps were placed on flat surfaces that were covered in plastic sheeting and connected to a PUF sampling cartridge with clean tubing. Air sample designations were generated as (A [for air sample] – unique sample identifier [01 through 15] – room # - date [MMDDYY]). After collection, samples were shipped on ice under chain-of-custody protocol to EMSL Analytical, Inc. (EMSL) of Cinnaminson, NJ to be extracted by United States Environmental Protection Agency (USEPA) Method TO-10A and analyzed for PCB Aroclors by USEPA Method TO-10A.

2.2. Surface Wipe Sampling Methods

Geosyntec collected surface wipe samples on December 20 and 21, 2023 from select locations within Poe Hall. The sampling set included 67 wipe samples (including 3 duplicates) and one field blank. Sampling locations were selected to include samples from a variety of smooth and impervious surfaces, surfaces more likely to be touched frequently and those likely to be touched less frequently. Samples were collected throughout the seven building floors, various room uses, and HVAC circulation zones. Surface types included desktops, tabletops, books, bookshelves, storage shelves, bathroom sink counters, container lids, air supply vents, elevator buttons, and

miscellaneous equipment such as a microwave, printer, tampon dispenser, chemical mixing dispenser, metal box and a cardboard box.

Sampling locations were distributed across the 7 floors and across the four HVAC circulation zones. Samples were also collected from a representative subset of rooms grouped into categories by use (office, classroom, laboratory, maintenance/utility, and bathrooms), location (perimeter with windows or interior), and frequency of touch for surfaces (high frequency like desktops and lower frequency like bookshelves). The sampling effort included collecting surface wipe samples in each of the following 28 rooms to support NCSU's expressed need to facilitate critical system maintenance, emergency preparedness and inspection requirements: Rooms 101, 120, 127, 130, three elevators (197, 198, 199), two penthouse rooms on the roof associated with elevators, bathrooms (12) and one janitorial closet per floor (7) with water service.

Surface wipe samples were obtained by wiping a laboratory-supplied gauze pad that was field saturated with a mixture of one quarter acetone and three quarters hexane across a 10 cm x 10 cm area (100 cm²) on each surface. A 100 cm² template supplied by the laboratory was used to establish the sample surface. After wiping a surface, each wipe was folded with the wiped surface facing inward and placed into a capped sample vial with a Teflon-lined lid. The templates and gloves used were disposed into municipal trash after each sample. Wipe sample designations were generated as (W [for wipe sample] – unique sample identifier [001 through 067] – room # - date [MMDDYYYY]). Samples were shipped on ice under chain-of-custody to EMSL to be prepared by method 3540C and analyzed for PCB Aroclors by USEPA Method SW846-8082A.

3. RESULTS

Results of indoor air and surface wipe sampling for PCBs collected in Poe Hall in December 2023 are summarized below. The laboratory (EMSL) reported results for the 9 common PCB Aroclors (Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, and Aroclor-1268). Geosyntec checked each laboratory sample data group using a level 1 data quality checklist.

The preliminary sampling summarized in this report is intended to assess the present state of Poe Hall: (i) Poe Hall's HVAC systems were turned off in November 2023 and have remained off; (ii) since November 2023, occupation has been restricted to essential personnel; and (iii) bathroom exhaust fans were operating. On December 20-22, weather conditions were cloudy with temperatures that ranged from 40-60 degrees Fahrenheit (°F), winds were 5 to 6 miles per hour, and no precipitation.

3.1. Air Sampling Results

Eleven indoor air samples and one outdoor air sample were collected on December 21st, and one indoor air sample was collected on December 22nd. Two indoor air samples (Room 216 and Room 742) had sampling periods that spanned December 21 and 22nd because the pumps used to draw air through the samplers stopped pumping overnight several hours after beginning. Geosyntec accessed the electronic log in each pump that recorded the start and stop times and used the logs to restart both pumps on the 22nd to run for the balance of hours needed to complete a 24-hour sample time for each. A summary of laboratory data is presented in **Table 1**. Aroclor-1262 was detected in each indoor air sample (concentrations ranged from 0.0131-0.121 µg/m³) and was not detected in the outdoor air sample. No other Aroclors were detected in air samples. Laboratory reports are included in **Appendix A1**, and air sampling field forms are included in **Appendix A2**.

Indoor air sampling results were compared to the USEPA exposure levels for evaluating PCBs in school indoor air for adults and children ages three (3) years and older. For these exposure levels, USEPA made certain assumptions about the amount of time spent in school, stating "EPA estimated exposure to PCBs in schools using established values for the number of days per year and the number of hours per day children and adults spend

at school. Depending upon age, these values were 180 to 185 days per year, and 6.5 to 8 hours per day at school.”¹

USEPA has provided the following guidance in interpreting its “exposure levels for evaluating PCBs in indoor school air:”

After the implementation of the recommended BMPs or conducting other actions to reduce exposure, these exposure levels may be used to guide thoughtful evaluation of indoor air quality in schools. These exposure levels should not be interpreted nor applied as ‘bright line’ or ‘not-to-exceed’ criteria. Isolated or infrequent indoor air PCB measurements that exceed the exposure levels would not necessarily signal unsafe exposure to PCBs. When measured indoor school air PCB concentrations are above these exposure levels, the EPA suggests that school building administrators take further steps to reduce PCB exposure such as reviewing, reevaluating and adjusting BMPs or taking other actions to identify and address PCB sources.²

All air results were below the exposure level for adults over the age of 19 years ($0.500 \mu\text{g}/\text{m}^3$), and all results were also below the exposure levels for children ages 3-19 years ($0.200\text{-}0.600 \mu\text{g}/\text{m}^3$).³ As described by USEPA, these exposure levels are not intended to be “bright line” or “not-to-exceed” criteria and are intended to maintain PCB exposures below the oral reference dose (RfD) of 20 nanograms of PCBs per kg of body weight per day, which is a daily exposure that is unlikely to pose a significant risk of harm over a lifetime of exposure.³

3.2. Surface Wipe Sampling Results

Wipe samples for surficial dust were collected on December 20th and 21st. PCBs were not detected in almost two-thirds of wipe samples collected. The laboratory reported Aroclor-1262, the only analyte detected, in 25 out of 67 surface wipe samples at concentrations that ranged from $0.529 \mu\text{g}/100 \text{ cm}^2$ to $74.6 \mu\text{g}/100 \text{ cm}^2$. Results are summarized in **Table 2**. Laboratory reports are included in **Appendix B1**.

Where detected, all but one measured PCB concentration in surface wipe samples were below the USEPA threshold for non-porous surfaces in high occupancy areas ($10 \mu\text{g}/100 \text{ cm}^2$). Surface wipe sample W-025-300D-12212023, collected from a windowsill in

¹ EPA, PCBs in Building Materials—Questions & Answers, July 28, 2015.

² EPA, PCBs in Building Materials—Questions & Answers, July 28, 2015.

³ [Exposure Levels for Evaluating Polychlorinated Biphenyls \(PCBs\) in Indoor School Air | US EPA](#)

Room 300D, had a concentration of 74.6 $\mu\text{g}/100\text{ cm}^2$. This USEPA threshold applies to PCB cleanup standards for the unrestricted use of non-porous surfaces previously contaminated by spills of liquid PCBs.⁴ Laboratory reporting limits for surficial wipe samples (0.500 $\mu\text{g}/100\text{ cm}^2$) were all well below the USEPA threshold for non-porous surfaces (10 $\mu\text{g}/100\text{ cm}^2$). As summarized in **Table 3**, windowsills had both the highest frequency of detection (100%) and generally the highest concentrations, ranging from 0.573-74.6 $\mu\text{g}/100\text{ cm}^2$. Higher detection frequencies were also observed for desks, elevator buttons, product dispensers, and air supply vents. Lower detection frequencies were observed for other surface types including tables, shelves, bathroom counters, books, container lids, a microwave, a printer and a cardboard box.

⁴ [eCFR: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

4. DISCUSSION

PCB Aroclor-1262 was reported in surficial dust and indoor air samples collected on each floor and in rooms in Poe Hall at concentrations that were generally very low and almost entirely below USEPA exposure levels and thresholds. Nearly two-thirds of surficial dust samples had undetectable concentrations of PCBs at reporting limits well below the USEPA threshold, with only one detected result exceeding the threshold. For each of the 14 indoor air samples collected, all results were below USEPA exposure levels for evaluating PCBs in school indoor air for adults and children ages three (3) years and older.

Some spatial trends were observed in the air data and in the surface wipe sampling data for PCBs in surficial dust. Concentrations, while low overall, were generally higher on floors 3 through 7 (average concentration of approximately $0.06 \mu\text{g}/\text{m}^3$) than on floors 1 and 2 (average concentration of approximately $0.03 \mu\text{g}/\text{m}^3$). This pattern is consistent with the division of HVAC circulation zones in Poe Hall, where floors 1 and 2 are serviced by two ground-mounted air handling units, and floors 3 through 7 are serviced by four roof-mounted air handling units. Air handling units are likely mechanisms for distributing dust in the building. Notably, PCBs were not detected in the outdoor air sample which suggests that outdoor air is not the source of PCBs indoors. Higher detection frequencies (generally greater than or equal to 50%) were observed for windowsills, desks, elevator buttons, product dispensers, and air supply vents, and lower frequencies for other surface types including tables, shelves, bathroom counters, books, container lids, a microwave, a printer and a cardboard box.

Observations from this first phase of investigation about the concentrations, dominance of a single Aroclor and spatial distributions of detections may be helpful in updating the preliminary CSM and guiding further investigation to identify potential sources of PCBs to dust indoors, and to identify the modes of transport and distribution of PCBs on dust in Poe Hall.

5. RECOMMENDATIONS

Based on the results of this first phase of investigation presented herein, Geosyntec recommends the following additional steps and investigation activities, focused on developing a better understanding of PCB fate and transport within Poe Hall:

1. Review historical documents and inspect HVAC system components to identify candidate building materials that may contain PCBs (potential sources). Collect and analyze bulk samples of potential sources, focused on potential sources that are present in systems that can distribute dust in the building, most notably the components of HVAC systems. Potential sources may have been originally manufactured with PCBs or have been in contact with materials that were.
2. Revise the preliminary conceptual site model using:
 - information gleaned from historical documents and from the HVAC systems inspection,
 - surficial wipe, bulk and air sample data previously collected by NCSU,
 - surficial wipe and air sample data described in this report, and
 - bulk data collected during system inspections.
3. Use the revised conceptual site model to identify potential data gaps in our understanding of sources of Aroclor-1262 to dust, and potential transport mode(s) for distributing dust in Poe Hall. Prioritize the data gaps for further investigation.
4. After bulk sampling and data evaluation are conducted, return the HVAC systems to service and conduct follow-up indoor air and surficial wipe sampling to re-evaluate conditions in the building, with respect to air and surficial dust, while the HVAC systems are operating. Note that before returning HVAC systems to service, additional interim steps may be appropriate based on the results of bulk sampling, including replacing or encapsulating portions of mechanical systems, cleaning and follow-up bulk sampling.
5. Review relevant toxicological and epidemiological scientific studies on PCBs to support a current understanding of the potential human health effects associated with exposure, including an evaluation of the strength and consistency of such associations with the relative magnitude of exposures.

TABLES

Table 1 – Summary of Detected PCB Aroclors in Indoor Air Samples
Indoor Environmental Investigation Report – Initial Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample-ID	Room Number	Room Type	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 concentration (µg/m ³)	Aroclor-1262 Concentration (µg/m ³)	US EPA Exposure Levels for Evaluating PCBs in School Indoor Air (µg/m ³) ¹						
							Age: 1 - <2 yr	Age: 2 - <3 yr	Age: 3 - <6 yr	Age: 6 - <12 yr	Age: 12 - <15 yr	Age: 15 - <19 yr	Adult >19 yr
1st	2	A-13-106-122123	106	Laboratory	< RL	0.0193	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	2	DUP-01-122123	106 (dup)	Laboratory	< RL	0.0131	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	1	A-15-117-122223	117	Laboratory	< RL	0.0436	0.100	0.100	0.200	0.300	0.500	0.600	0.500
2nd	1	A-11-209-122123	209	Classroom	< RL	0.0341	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	2	A-12-228-122123	228	Classroom	< RL	0.0250	0.100	0.100	0.200	0.300	0.500	0.600	0.500
3rd	5+6	A-01-216-122223	216	Auditorium	< RL	0.0704	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3+4	A-02-317F-122123	317F	Office	< RL	0.0285	0.100	0.100	0.200	0.300	0.500	0.600	0.500
4th	3+4	A-10-400-122123	400	Classroom	< RL	0.0457	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	5+6	A-09-402G-122123	402G	Office	< RL	0.0384	0.100	0.100	0.200	0.300	0.500	0.600	0.500
5th	5+6	A-07-510E-122123	510E	Office	< RL	0.0794	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3+4	A-08-526-122123	526	Bathroom	< RL	0.0451	0.100	0.100	0.200	0.300	0.500	0.600	0.500
6th	5+6	A-05-608J-122123	608J	Office	< RL	0.121	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3+4	A-06-635-122123	635	Laboratory	< RL	0.0333	0.100	0.100	0.200	0.300	0.500	0.600	0.500
7th	5+6	A-04-714B-122123	714B	Office	< RL	0.108	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3+4	A-03-742-122223	742	Laboratory	< RL	0.0677	0.100	0.100	0.200	0.300	0.500	0.600	0.500
Roof	N/A	A-14-ROOF-122123	N/A	Outdoor air	< RL	< RL	0.100	0.100	0.200	0.300	0.500	0.600	0.500

¹Exposure Levels for Evaluating Polychlorinated Biphenyls (PCBs) in Indoor School Air | US EPA

Notes:

Sample ID nomenclature: Air Sample-Sample Number-Sample Room Number-Sample Date (A-##-####-mmdyy)

HVAC: heating, ventilation and air conditioning

µg/m³ = micrograms per cubic meter

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

The method reporting limit (RL) ranges from 0.00691 to 0.00716 µg/m³.

< RL: analyte was not detected at or above the reporting limit.

Exposure levels are rounded to the nearest 0.1 micrograms per cubic meter.

Table 2 – Summary of Detected PCB Aroclors in Surface Wipe Samples
Indoor Environmental Investigation Report – Initial Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration (µg/100 cm ²)	Aroclor-1262 (µg/ 100 cm ²)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas (µg/100 cm ²) ¹	
1st	2	W-068-100-12212023	100	Maintenance/utility	Desk	< RL	1.95	10	
		W-002-101-12212023	101	Maintenance/utility	Lid	< RL	< RL	10	
		W-003-102A-12212023	102A	Laboratory	Desk	< RL	< RL	10	
		W-004-103-12212023	103B	Laboratory	Vent	< RL	< RL	10	
	1	W-014-103B-12212023	103	Laboratory	Desk	< RL	7.4	10	
		W-067-116-12212023	116	Maintenance/utility	Desk	< RL	1.12	10	
		W-006-117-12212023	117	Laboratory	Table	< RL	< RL	10	
		W-005-117-12212023	117	Laboratory (dup)	Table	< RL	< RL	10	
		W-007-120-12212023	120	Classroom	Desk	< RL	< RL	10	
		2	W-008-125-12212023	125	Maintenance/utility	Lid	< RL	< RL	10
			W-009-127-12212023	127	Maintenance/utility	Metal Box	< RL	< RL	10
	W-010-130-12212023		130	Maintenance/utility	Table	< RL	< RL	10	
	N/A	W-011-197-12212023	197	Elevator	Elevator buttons	< RL	< RL	10	
	N/A	W-012-198-12212023	198	Elevator	Elevator buttons	< RL	0.592	10	
	N/A	W-013-199-12212023	199	Elevator	Elevator buttons	< RL	0.573	10	
	2nd	2	W-015-201-12212023	201	Bathroom	Shelf	< RL	< RL	10
W-017-202-12212023			202	Classroom	Table	< RL	< RL	10	
W-016-202-12212023			202	Classroom (dup)	Table	< RL	< RL	10	
W-018-208Q-12212023			208Q	Office	Desk	< RL	< RL	10	
1		W-019-210-12212023	210	Classroom	Desk	< RL	< RL	10	
		W-020-213-12212023	213	Bathroom	Counter	< RL	0.673	10	
		W-014-218-12212023	218	Classroom	Desk	< RL	0.644	10	
		W-022-220-12212023	220	Classroom	Vent	< RL	9.49	10	
2	W-023-222-12212023	222	Maintenance/utility	Product dispenser	< RL	0.733	10		

¹[eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

Notes:

Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-##-####-mmddyyyy)

HVAC: heating, ventilation and air conditioning

µg/100 cm² = micrograms per 100 square centimeters

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

The method reporting limit (RL) = 0.500 µg/100 cm².

< RL: analyte was not detected at or above the reporting limit

**Table 2 – Summary of Detected PCB Aroclors in Surface Wipe Samples
Indoor Environmental Investigation Report – Initial Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration (µg/100 cm ²)	Aroclor-1262 (µg/ 100 cm ²)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas (µg/100 cm ²) ¹
3rd	5+6	W-021-216-12212023	216	Classroom	Desk	< RL	< RL	10
		W-025-300D-12212023	300D	Office	Window Sill	< RL	74.6	10
		W-026-309-12212023	309	Bathroom	Shelf	< RL	< RL	10
		W-024-310L-12212023	310L	Office	Vent	< RL	1.87	10
	3+4	W-028-312-12212023	312	Classroom	Table	< RL	0.529	10
		W-027-312-12212023	312	Classroom (dup)	Table	< RL	< RL	10
		W-029-313-12212023	313	Maintenance/ utility	Shelf	< RL	0.763	10
		W-030-325-12212023	325	Bathroom	Counter	< RL	< RL	10
		W-031-326S-12212023	326S	Office	Shelf	< RL	< RL	10
		W-033-400-12202023	400	Classroom	Desk	< RL	1.57	10
4th	5+6	W-034-402G-12202023	402G	Office	Window Sill	< RL	7.75	10
		W-035-406-12202023	406	Bathroom	Counter	< RL	< RL	10
		W-036-412G-12202023	412G	Office	Microwave	< RL	< RL	10
		W-037-413-12202023	413	Maintenance/ utility	Shelf	< RL	1.43	10
	3+4	W-038-414A-12202023	414A	Classroom	Counter	< RL	< RL	10
		W-039-419-12202023	419	Bathroom	Shelf	< RL	3.1	10
		W-040-424-12202023	424	Classroom	Desk	< RL	0.766	10
		W-041-500-12202023	500	Classroom	Window Sill	< RL	4.5	10
5th	5+6	W-042-509-12202023	509	Bathroom	Counter	< RL	< RL	10
		W-043-510E-12202023	510E	Office	Shelf	< RL	< RL	10
		W-044-514-12202023	514	Maintenance/ utility	Product dispenser	< RL	1.62	10
	3+4	W-045-518-12202023	518	Office	Printer	< RL	< RL	10
		W-046-526-12202023	526	Bathroom	Shelf	< RL	< RL	10
		W-048-529-12202023	529	Classroom	Vent	< RL	< RL	10
		W-047-532-12202023	532	Classroom	Table	< RL	< RL	10

¹[eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

Notes:

Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-##-####-mmddyyyy)

HVAC: heating, ventilation and air conditioning

µg/100 cm² = micrograms per 100 square centimeters

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

The method reporting limit (RL) = 0.500 µg/100 cm².

< RL: analyte was not detected at or above the reporting limit

**Table 2 – Summary of Detected PCB Aroclors in Surface Wipe Samples
Indoor Environmental Investigation Report – Initial Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration ($\mu\text{g}/100\text{ cm}^2$)	Aroclor-1262 ($\mu\text{g}/100\text{ cm}^2$)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas ($\mu\text{g}/100\text{ cm}^2$) ¹
6th	3+4	W-049-604-12202023	604	Laboratory	Table	< RL	< RL	10
	5+6	W-050-605-12202023	605	Laboratory	Shelf	< RL	< RL	10
		W-051-607-12202023	607	Bathroom	Counter	< RL	< RL	10
		W-052-608P-12202023	608P	Office	Desk	< RL	2.00	10
	3+4	W-053-613-12202023	613	Maintenance/utility	Cardboard box	< RL	< RL	10
		W-054-616A-12202023	616A	Office	Window Sill	< RL	1.91	10
W-055-630-12202023		630	Bathroom	Counter	< RL	< RL	10	
7th	5+6	W-056-700-12202023	700	Laboratory	Shelf	< RL	< RL	10
		W-057-719-12202023	719	Bathroom	Counter	< RL	< RL	10
		W-058-729-12202023	729	Office	Book	< RL	< RL	10
	3+4	W-059-734-12202023	734	Maintenance/utility	Shelf	< RL	< RL	10
		W-060-742-12202023	742	Laboratory	Window Sill	< RL	0.573	10
		W-061-744-12202023	744	Bathroom	Product dispenser	< RL	< RL	10
		W-062-761-12202023	761	Office	Desk	< RL	< RL	10
Roof	N/A	W-063-P1000A-12212023	P1000A	Maintenance/utility	Desk	< RL	< RL	10
	N/A	W-064-P1001A-12212023	P1001A	Maintenance/utility	Book	< RL	< RL	10
Roof	5+6	W-066-P1003-12212023	P1003	Maintenance/utility	Book	< RL	7.88	10
	3+4	W-065-P1004-12212023	P1004	Maintenance/utility	Metal Box	< RL	2.87	10

¹[eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

Notes:

Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-##-####-mmddyyyy)

HVAC: heating, ventilation and air conditioning

$\mu\text{g}/100\text{ cm}^2$ = micrograms per 100 square centimeters

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

The method reporting limit (RL) = 0.500 $\mu\text{g}/100\text{ cm}^2$.

< RL: analyte was not detected at or above the reporting limit

Table 3 – Summary of Aroclor-1262 Detection Frequency by Surface Type
Indoor Environmental Investigation Report – Initial Phase
Poe Hall, NCSU - Raleigh, NC

Surface Type	Number of Samples	Number of Aroclor-1262 Detections	Detection Frequency (%)	Aroclor-1262 Concentration ($\mu\text{g}/100\text{ cm}^2$)	Number of Exceedances of the US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas ($10\ \mu\text{g}/100\text{ cm}^2$) ¹
Book	3	1	33%	7.88	0
Cardboard box	1	0	0%	< RL	0
Counter	8	1	13%	0.673	0
Desk	14	7	50%	0.644; 0.766; 1.12; 1.57; 2.00; 1.95; 7.4	0
Elevator buttons	3	2	67%	0.573; 0.592	0
Lid	2	0	0%	< RL	0
Metal Box	2	1	50%	2.87	0
Microwave	1	0	0%	< RL	0
Printer	1	0	0%	< RL	0
Product dispenser	3	2	67%	0.733; 1.62	0
Shelf	11	3	27%	0.763; 1.43; 3.1	0
Table	9	1	11%	0.529	0
Vent	4	2	50%	1.87; 9.49	0
Window sill	5	5	100%	0.573; 1.91; 4.5; 7.75; 74.6	1
All surfaces (total)	67	25	37%	see Table 2	1

¹[Exposure Levels for Evaluating Polychlorinated Biphenyls \(PCBs\) in Indoor School Air | US EPA](#)

Notes:

$\mu\text{g}/100\text{ cm}^2$ = micrograms per 100 square centimeters

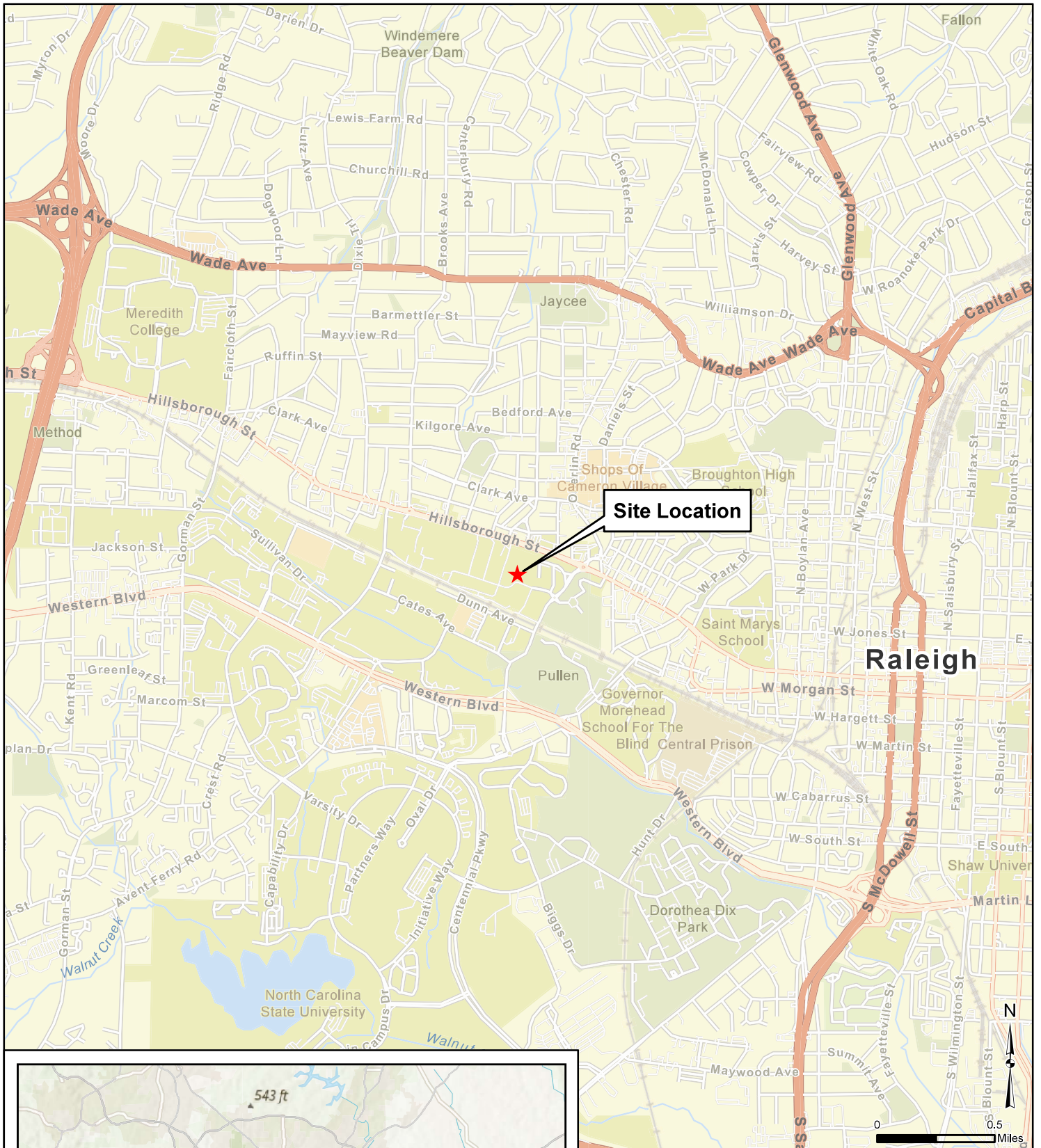
% = percentage

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

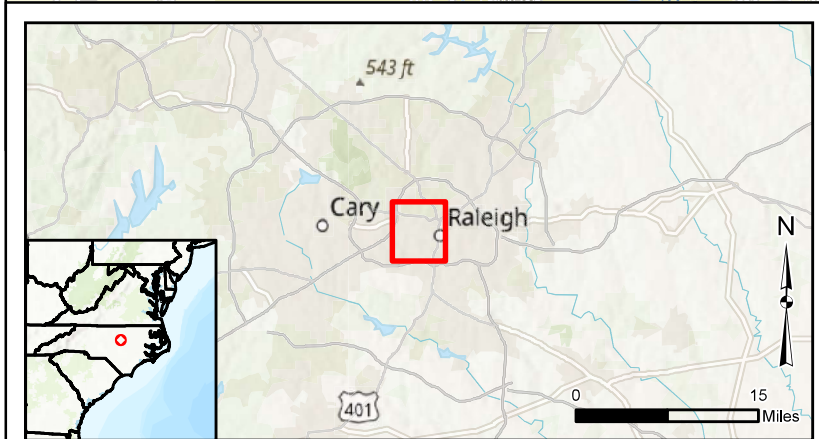
< RL: analyte was not detected at or above the reporting limit.

FIGURE



Site Location

Raleigh



Site Location Map

Poe Hall
2310 Katharine Stinson Drive
Raleigh, NC 27695

Geosyntec
consultants

Geosyntec Consultants of NC, P.C.
NC License No.: C-3500 and C-295

Figure

1

Charlotte, NC

January 2024

APPENDIX A1
AIR SAMPLING LAB REPORT



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/22/2023. The results are tabulated on the attached pages for the following client designated project:

n/a

The reference number for these samples is EMSL Order #: AB67731 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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Certifications	22
Qualifiers, Definitions and Disclaimer	23
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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731

LIMS Reference ID: AB67731

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 2.6 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67731-01	DUP-01-122123	Tubes	12/21/2023	12/22/2023
AB67731-02	A-13-106-122123	Tubes	12/21/2023	12/22/2023
AB67731-03	A-12-228-122123	Tubes	12/21/2023	12/22/2023
AB67731-04	A-11-209-122123	Tubes	12/21/2023	12/22/2023
AB67731-05	A-02-317F-122123	Tubes	12/21/2023	12/22/2023
AB67731-06	A-09-402G-122123	Tubes	12/21/2023	12/22/2023
AB67731-07	A-10-400-122123	Tubes	12/21/2023	12/22/2023
AB67731-08	A-07-510E-122123	Tubes	12/21/2023	12/22/2023
AB67731-09	A-08-526-122123	Tubes	12/21/2023	12/22/2023
AB67731-10	A-05-608J-122123	Tubes	12/21/2023	12/22/2023
AB67731-11	A-06-635-122123	Tubes	12/21/2023	12/22/2023
AB67731-12	A-04-714B-122123	Tubes	12/21/2023	12/22/2023
AB67731-13	A-14-ROOF-122123	Tubes	12/21/2023	12/22/2023

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Positive Hits Summary

Lab ID	Client ID					Sampled
AB67731-01	DUP-01-122123					12/21/23 12:00
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0131		µg/m³	12/29/2023 15:38	
AB67731-02	A-13-106-122123					12/21/23 14:40
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0193		µg/m³	12/29/2023 15:55	
AB67731-03	A-12-228-122123					12/21/23 14:10
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0250		µg/m³	12/29/2023 16:11	
AB67731-04	A-11-209-122123					12/21/23 13:50
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0341		µg/m³	12/29/2023 16:27	
AB67731-05	A-02-317F-122123					12/21/23 10:32
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0285		µg/m³	12/29/2023 16:43	
AB67731-06	A-09-402G-122123					12/21/23 13:00
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0384		µg/m³	12/29/2023 16:59	
AB67731-07	A-10-400-122123					12/21/23 13:30
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0457		µg/m³	12/29/2023 17:15	

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Positive Hits Summary (Continued)

Lab ID	Client ID					Sampled
AB67731-08	A-07-510E-122123					12/21/23 11:55
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0794		µg/m ³	12/29/2023 17:31	
AB67731-09	A-08-526-122123					12/21/23 12:09
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0451		µg/m ³	12/29/2023 17:48	
AB67731-10	A-05-608J-122123					12/21/23 11:14
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.121		µg/m ³	12/29/2023 18:04	
AB67731-11	A-06-635-122123					12/21/23 11:22
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0333		µg/m ³	12/29/2023 18:36	
AB67731-12	A-04-714B-122123					12/21/23 10:54
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.108		µg/m ³	12/29/2023 18:52	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results

Sample: DUP-01-122123
AB67731-01 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0131		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00695	µg/m ³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	84%			60-120		12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	102%			60-120		12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A



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EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-13-106-122123
AB67731-02 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0193		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	93%			60-120		12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	117%			60-120		12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-12-228-122123
AB67731-03 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0250		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	90%			60-120		12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	115%			60-120		12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-11-209-122123
AB67731-04 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0341		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	105%			60-120		12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	122%	R1		60-120		12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results (Continued)

**Sample: A-02-317F-122123
 AB67731-05 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0285		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	94%			60-120		12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	112%			60-120		12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A



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Sample Results
(Continued)

Sample: A-09-402G-122123
AB67731-06 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method	
GC-SVOA											
Aroclor-1016	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1221	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1232	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1242	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1248	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1254	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1260	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1262	0.0384		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Aroclor-1268	ND		1	0.00697	µg/m³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
Surrogate(s)	Recovery	Q		Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	95%			60-120		12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	
<i>Surrogate: Decachlorobiphenyl</i>	113%			60-120		12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A	

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Sample Results
 (Continued)

Sample: A-10-400-122123
AB67731-07 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0457		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	92%			60-120		12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	112%			60-120		12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a

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Reported: 01/09/2024 16:07

Sample Results (Continued)

**Sample: A-07-510E-122123
 AB67731-08 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0794		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	106%			60-120		12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	124%	R1		60-120		12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
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Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-08-526-122123
AB67731-09 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0451		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00707	µg/m³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	104%			60-120		12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	128%	R1		60-120		12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A

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Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: A-05-608J-122123
 AB67731-10 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.121		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	115%			60-120		12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	138%	R1		60-120		12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A

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Reported: 01/09/2024 16:07

Sample Results (Continued)

**Sample: A-06-635-122123
 AB67731-11 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0333		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	100%			60-120		12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	122% <i>R1</i>			60-120		12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results (Continued)

**Sample: A-04-714B-122123
 AB67731-12 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.108		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	106%			60-120		12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	128%	R1		60-120		12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A

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 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
 (Continued)

Sample: A-14-ROOF-122123
AB67731-13 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		104%		60-120		12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>		127%	R1	60-120		12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Customer ID: GSCH75

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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0915 - EPA TO-10A**Blank (BBL0915-BLK1)**

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		88	60-120		
Surrogate: Decachlorobiphenyl				100.0		113	60-120		

Blank (BBL0915-BLK2)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		101	60-120		
Surrogate: Decachlorobiphenyl				100.0		125	60-120		

LCS (BBL0915-BS1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1000	50.0	µg/m ³	1000		100	70-130		
Aroclor-1260	1090	50.0	µg/m ³	1000		109	70-130		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		99	60-120		
Surrogate: Decachlorobiphenyl				100.0		123	60-120		



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LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Quality Control
(Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0915 - EPA TO-10A (Continued)

LCS Dup (BBL0915-BSD1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1030	50.0	µg/m ³	1000		103	70-130	3	25
Aroclor-1260	1050	50.0	µg/m ³	1000		105	70-130	4	25

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		96	60-120		
Surrogate: Decachlorobiphenyl				100.0		123	60-120		

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EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA TO-10A in Tubes		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
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Attention: Jeff Ahrens
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Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Notes and Definitions

Item	Definition
R1	Recovery is outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
5 A-02-317F-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1032	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/21/23 1032
6 A-09-402G-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1300	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1300
7 A-10-400-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1330	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 MW 12/22 1315
8 A-07-510E-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1155	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1150
9 A-08-526-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1209	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1205
10 A-05-608J-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1114	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1114
11 A-06-635-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1122	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1122
12 A-04-714B-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1054	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1054

Method of Shipment:

Fedex

Sample Condition Upon Receipt:

Relinquished by:

John Trotter

Date/Time:

12/21/23 1800

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

ABU7731

Customer Information	Customer ID:		Billing Information	Billing ID:	Same as
	Company Name:	Geosyntec Consultants		Company Name:	
	Contact Name:	Jeff Ahrens		Billing Contact:	
	Street Address:	1300 S. Mint Street		Street Address:	
	City, State, Zip:	Charlotte, NC 28203		City, State, Zip:	
Phone:	704-227-0840	Country:		Phone:	
Email(s) for Report:	jahrens@geosyntec.com		Email(s) for Invoice:		

Project Name/No: _____ Purchase Order: _____

EMSL LIMS Project ID: _____ (If applicable, EMSL will provide)

US State where samples collected: NC State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: John Trotter Sampled By Signature: [Signature] No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
1 DUP-01-122123			1200 12/21/23	A	none	X								Start time 12/20/23
2 A-13-106-122123			1410 12/21/23	A	none	X								start 12/20/23 1420
3 A-12-228-122123			1410 12/21/23	A	none	X								Start 12/20/23 1350
4 A-11-209-122123			1350 12/21/23	A	none	X								start 12/20/23 1340

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

FX# 7884 1860 0279

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt: _____

Relinquished by: John Trotter Date/Time: 12/21/23 1800 Received by: [Signature] Date/Time: 12/22/23 10:20am

26°C onice



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

AB67731

Customer Information	Customer ID:	Billing ID:
	Company Name: <i>Geosyntec Consultants</i>	Company Name: <i>SAME AS</i>
	Contact Name: <i>Jeff Ahrens</i>	Billing Contact:
	Street Address: <i>1300 S. MINT FT. So. 300</i>	Street Address:
	City, State, Zip: <i>Charlotte, NC 28203</i> Country:	City, State, Zip: Country:
Phone: <i>704-227-0840</i>	Phone:	
Email(s) for Report: <i>jahrens@geosyntec.com</i>	Email(s) for Invoice:	

Project Name/No: *NCSU, PH* Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: *NC* State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: *John Trotter* Sampled By Signature: *[Signature]* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	Test 1: <i>Method TO-10A</i>	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
<i>13 A-14-R00F-122123</i>			<i>12/21/23 1505</i>	<i>A</i>	<i>NONE</i>	<input checked="" type="checkbox"/>									<i># 2/20/23 1435</i>

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: *FedEx* Sample Condition Upon Receipt:

Relinquished by: *[Signature]* Date/Time: *12-21-23, 1800* Received by: Date/Time:

Relinquished by: Date/Time: Received by: Date/Time:

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

January 11, 2024

Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]

1300 S Mint Street, Suite 300

Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/27/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67810 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 15.1 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00**Reported:** 01/11/2024 16:17**Samples in this Report**

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67810-01	A-01-216-122223	Tubes	12/22/2023	12/27/2023
AB67810-02	A-03-742-122223	Tubes	12/22/2023	12/27/2023
AB67810-03	A-15-117-122223	Tubes	12/22/2023	12/27/2023
AB67810-04	A-Blank-117-122223	Tubes	12/22/2023	12/27/2023

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200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Positive Hits Summary

Lab ID	Client ID					Sampled
AB67810-01	A-01-216-122223					12/22/23 11:21
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0704		µg/m ³	12/29/2023 19:24	
Lab ID	Client ID					Sampled
AB67810-02	A-03-742-122223					12/22/23 17:15
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0677		µg/m ³	12/29/2023 19:41	
Lab ID	Client ID					Sampled
AB67810-03	A-15-117-122223					12/22/23 10:02
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0436		µg/m ³	12/29/2023 19:57	



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 EMSL-CIN-01

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LIMS Reference ID: AB67810

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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00

Reported: 01/11/2024 16:17

Sample Results

Sample: A-01-216-122223
AB67810-01 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0704		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	109%			60-120		12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	133%	R1		60-120		12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00

Reported: 01/11/2024 16:17

Sample Results
 (Continued)

Sample: A-03-742-122223
AB67810-02 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0677		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	109%			60-120		12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	127%	R1		60-120		12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A

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 EMSL-CIN-01

EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00

Reported: 01/11/2024 16:17

Sample Results
 (Continued)

Sample: A-15-117-122223
AB67810-03 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0436		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	107%			60-120		12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	130%	R1		60-120		12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Sample Results
 (Continued)

Sample: A-Blank-117-12223
AB67810-04 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		109%		60-120		12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>		134%	R1	60-120		12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Customer ID: GSCH75

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 Charlotte, NC 28203-4168
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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Quality Control

GC-SVOA

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BBL0915 - EPA TO-10A
Blank (BBL0915-BLK1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro- <i>m</i> -xylene		100.0		88	60-120
Surrogate: Decachlorobiphenyl		100.0		113	60-120

Blank (BBL0915-BLK2)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro- <i>m</i> -xylene		100.0		101	60-120
Surrogate: Decachlorobiphenyl		100.0		125	60-120

LCS (BBL0915-BS1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1000	50.0	µg/m ³	1000	100	70-130
Aroclor-1260	1090	50.0	µg/m ³	1000	109	70-130

Surrogate(s)

Surrogate: Tetrachloro- <i>m</i> -xylene		100.0		99	60-120
Surrogate: Decachlorobiphenyl		100.0		123	60-120



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EMSL Customer ID: GSCH75

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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BBL0915 - EPA TO-10A (Continued)

LCS Dup (BBL0915-BSD1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1030	50.0	µg/m ³	1000		103	70-130	3	25
Aroclor-1260	1050	50.0	µg/m ³	1000		105	70-130	4	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				100.0		96	60-120		
<i>Surrogate: Decachlorobiphenyl</i>				100.0		123	60-120		

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Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA TO-10A in Tubes</i>		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
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Project Name: NCSU PH

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EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Notes and Definitions

Item	Definition
R1	Recovery is outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



MSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

ABU7810

Customer Information	Customer ID:	Billing ID:
	Company Name: <i>Geosyntec Consultants</i>	Company Name: <i>Same as</i>
	Contact Name: <i>Jeff Ahrens</i>	Billing Contact:
	Street Address: <i>1300 S Mint St.</i>	Street Address:
	City, State, Zip: <i>Charlotte, NC 28203</i> Country: <i>US</i>	City, State, Zip: Country:
	Phone: <i>704-227-0850</i>	Phone:
Email(s) for Report: <i>jahrens@geosyntec.com</i>	Email(s) for Invoice:	

Project Name/No: *NCSU PH* Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: *NC* State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: *John Trotter & Marc Welch* Sampled By Signature: *[Signature]* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
<i>1 A-01-216-122223</i>			<i>12/22/23 1121</i>	<i>A</i>	<i>none</i>	<input checked="" type="checkbox"/>									
<i>2 A-03-742-122223</i>			<i>12/22/23 1715</i>	<i>A</i>	<i>none</i>	<input checked="" type="checkbox"/>									
<i>3 A-15-117-122223</i>			<i>12/22/23 1002</i>	<i>A</i>	<i>none</i>	<input checked="" type="checkbox"/>									
<i>4 A-Blank-117-122223</i>			<i>12/22/23 1457</i>	<i>A</i>	<i>none</i>	<input checked="" type="checkbox"/>									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.) *15.0°C on ice 4 g/L*

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: *Fedex* Sample Condition Upon Receipt:

Relinquished by: *[Signature]* Date/Time: *12/26/2023 1130* Received by: *[Signature]* Date/Time: *12/27/23 9⁰⁰*

Relinquished by: Date/Time: Received by: *[Signature]* Date/Time: *12/27/23 9 AM*

APPENDIX A2
AIR SAMPLE FIELD DATA SHEETS

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 12/21-12/22
 SITE: _____ TIME PERIOD SAMPLED: 24 hrs 17 min 5
 LOCATION: 117 OPERATOR: ST MW
 INSTRUMENT MODEL NO.: 975 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: N/A RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type:	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Adsorbent:	<u>PUF</u>	_____	_____	_____
Serial No.:	<u>01859</u>	_____	_____	_____
Sample No.:	<u>A-Blank-117-122223</u>			

II. SAMPLING DATA BLANK

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>01859</u>				<u>4.4</u>	<u>N</u>	<u>0950</u>	<u>1002</u>	<u>1457</u>	

III. FIELD AUDIT

	<u>4.4</u>			
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>4.4</u>	_____	_____	_____
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 12/20, 12/21, 12/22/2023
 SITE: _____ TIME PERIOD SAMPLED: 24 hours
 LOCATION: 216 OPERATOR: John Trotter & Marc Webb
 INSTRUMENT MODEL NO.: 107 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20141130142 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube</u>	_____	_____	_____
Adsorbent:	<u>PVF</u>	_____	_____	_____
Serial No.:	<u>014033</u>	_____	_____	_____
Sample No.:	<u>A-01-216-122223</u>			

II. SAMPLING DATA

mw: Flow rates recorded as L/min

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>216-92</u>	<u>216</u>			<u>4.5</u>		<u>1015</u>	<u>2020</u>	<u>705</u>	
						<u>845</u>	<u>1700</u>	<u>495</u>	
						<u>741</u>	<u>1121</u>	<u>220</u>	

III. FIELD AUDIT

	<u>Cartridge 1</u>	<u>Cartridge 2</u>	<u>Cartridge 3</u>	<u>Cartridge 4</u>
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>4.5</u>	_____	_____	_____
	pre- <u>5.03</u>	pre- _____	pre- _____	pre- _____
	post- _____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

4.765

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12-21-23
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 317F OPERATOR: John Toller
 INSTRUMENT MODEL NO.: 110 CALIBRATED BY: John Toller
 PUMP SERIAL NO.: 20141130153 RAIN: YES / NO
 Gilvan - GilAir Plus. MODEL/P/N - 600901-1403-K
 ADSORBENT CARTRIDGE INFORMATION:

Type: Tube, Puff Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT 12-21-23
 Adsorbent: Polyurethane
 Serial No.: 014033 - on tube
 Sample No.: A-02-317F-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp, °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
014033	317F	60.3	30.48	5.0	N/A	1032	1032	24 hr	7,185.6
12-20									

III. FIELD AUDIT

Audit Flow Check Within 5.0 Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT 12-21-23
 10% of Set Point (Y/N)? pre- 4.99 pre- pre- pre-
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCU/PHI DATE(S) SAMPLED: 12/20, 12/21, 12/22/2023
 SITE: _____ TIME PERIOD SAMPLED: 24 hrs 19 min
 LOCATION: 742 OPERATOR: JT & MW
 INSTRUMENT MODEL NO.: 109 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20141130148 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube</u>	_____	_____	_____
Adsorbent:	<u>Pul</u>	_____	_____	_____
Serial No.:	<u>014033</u>	_____	_____	_____
Sample No.:	<u>A-03-742-122123</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>742</u>			<u>4.99</u>		<u>1042</u>	<u>1853</u>	<u>491</u>	
						<u>1000</u>	<u>1630</u>	<u>390</u>	
						<u>737</u>	<u>1715</u>	<u>578</u>	

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>4.99</u>	_____	_____	_____
pre-	<u>5.13</u>	pre-	pre-	pre-
post-	_____	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poethall DATE(S) SAMPLED: 12-20-20-12-21-23
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hr.
 LOCATION: 714B OPERATOR: John Trader
 INSTRUMENT MODEL NO.: 111 CALIBRATED BY: John Trader
 PUMP SERIAL NO.: 20141130156 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 FT, 12-20
tube, Puf.
 Adsorbent: Polyurethane
 Serial No.: 226-92 LOT # 14223 Exp. 9/24
 Sample No.: A-04-714B-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
D14033	714B	67.2	30.49	4.93	N/A	1054	1054	24 hr.	7,171.2
FT 12-20									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)? Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 FT, 12-20
 pre- 4.93 pre- pre- pre-
4.98 post- 5.04 post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23 - 12/21/23
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hr.
 LOCATION: 608J OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 115 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20141130238 RAIN: YES NO
P/N - 610-0601-03-K - Gilson - GilAir Plus.
 ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 Adsorbent: Tube PUF _____
 Serial No.: Polyurethane _____
014033 _____
 Sample No.: A-05-608J-122123 _____

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>608J</u>	<u>65.1</u>	<u>30.49</u>	<u>5.0</u>	<u>N/A</u>	<u>1114</u>	<u>1114</u>	<u>1,440</u>	<u>7,200</u>

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 5.0 _____
 post- 5.0 _____
 Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20

CHECKED BY: _____
 DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poetta 11 DATE(S) SAMPLED: 12/20/23 - 12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: 24hr.
 LOCATION: 635 OPERATOR: Yoha Trotter
 INSTRUMENT MODEL NO.: 112 CALIBRATED BY: Yoha Trotter
 PUMP SERIAL NO.: 20141130229 RAIN: YES / NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Tube 1 Port Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 Adsorbent: Polyurethane
 Serial No.: 014033
 Sample No.: A-06-635-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
014033	635	60.5	30.49	4.5	5.0	1122	1122	1,440	7,050

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 Cartridge 1 4.8 Cartridge 2 5.0 Cartridge 3 5.0 Cartridge 4 PT, 12-20
 pre- 5.0 pre- pre- pre-
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, POE HALL DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24hr. 5 min.
 LOCATION: S10E OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 133 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20151030240 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
Tube, Puf
 Adsorbent: Polyurethane
 Serial No.: 014033
 Sample No.: A-07-S10E-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
014033	S10E	66.9	30.48	5.0	N/A	1150	1155	1,445	7.152
PT 12-20									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)? 5.0 Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 pre- 4.9 pre- pre- pre-
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh 526 TIME PERIOD SAMPLED: 24 hr. 4 min.
 LOCATION: Women's Bathroom OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 134 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 2017103045 RAIN: YES NO
 P/N - G10-0901-07R

ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 Adsorbent: Type Pol _____
Polyurethane _____
 Serial No.: 014037 _____
 Sample No.: A-08-526-122123 _____
(WOMEN'S BATHROOM)

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp. °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L.
				Cartridge 1	Cartridge 2	12/20 Start	12/21 Stop		
014037	526	64.2	30.48	4.9	N/A	1205	1209	1444	7.0756
PT 12-20									

III. FIELD AUDIT

Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 4.9 pre- pre- pre-
 post- 4.9 post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poet Hall DATE(S) SAMPLED: 12/20/23 - 12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: 24 hr.
 LOCATION: 402G OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 135 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20190520069 RAIN: YES NO
11N 610-0901-02-K

ADSORBENT CARTRIDGE INFORMATION:

Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 Type: Type, Pat
 Adsorbent: Polyurethane
 Serial No.: 014033
 Sample No.: A-09-402G-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	12/20 Start	12/21 Stop		
014033	402G	56.0	30.42	5.0	N/A	1300	1300	1,440	7,178.4
PT 12-20									

III. FIELD AUDIT

Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 Audit Flow Check Within 5.0
 10% of Set Point (Y/N)? pre- 4.97 pre- pre- pre- pre-
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: 400# OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 69 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 2041130102 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 Adsorbent: like, but Polyurethane
 Serial No.: 014033
 Sample No.: A-10-400-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	12/20 Start	12/21 Stop		
014033	400	65.4	30.42	4.8	N/A	1315	1330	1,455	6,984
PT 12-20									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)? 4.8 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 pre- 4.8 pre- pre- pre-
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: 209 OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 141 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 2051020354 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: _____ Cartridge 1 Tube, PUF Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT, 12-20
 Adsorbent: Polystyrene
 Serial No.: 014033
 Sample No.: A-11-209-122123

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>209</u>	<u>58.4</u>	<u>30.42</u>	<u>4.97</u>	<u>N/A</u>	<u>1340</u>	<u>1350</u>	<u>1450</u>	<u>7.1847</u>
<u>PT, 12-20</u>									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 4.97 Cartridge 1 4.94 Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT, 12-20
 post- _____ pre- _____ post- _____ pre- _____ post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, PoC Hall DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: 228 OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 147 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20120230163 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 Adsorbent: Tube A/F _____
 Serial No.: Polyurethane _____
014033 _____
 Sample No.: A-12-228-122123 _____

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>228</u>	<u>57.1</u>	<u>30.42</u>	<u>4.8</u>	<u>N/A</u>	<u>1350</u>	<u>1410</u>	<u>1,460</u>	<u>7,008</u>
PT 12-20									

III. FIELD AUDIT

Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT, 12-20
 Audit Flow Check Within _____
 10% of Set Point (Y/N)? 4.8 pre- _____ post- _____
4.8 pre- _____ post- _____
 _____ pre- _____ post- _____
 _____ post- _____ post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: 106-106 OPERATOR: John Trotter
 INSTRUMENT MODEL NO.: 131 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20151030223 RAIN: YES NO
P/N 610-0901-03-R

ADSORBENT CARTRIDGE INFORMATION:

Type: _____ Cartridge 1 ~~Cartridge 2~~ Cartridge 3 Cartridge 4 PT, 12-20
 Adsorbent: Tube, Puf _____
 Serial No.: Polyurethane _____
014033 _____
 Sample No.: A-13-106-122123 _____

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>106</u>	<u>59.1</u>	<u>30.42</u>	<u>5.0</u>	<u>N/A</u>	<u>1420</u>	<u>1440</u>	<u>2,056</u>	<u>7,854</u>
								<u>1460</u>	
		<u>PT 12-20</u>							

III. FIELD AUDIT

Cartridge 1 ~~Cartridge 2~~ Cartridge 3 Cartridge 4 PT, 12-20
 Audit Flow Check Within _____
 10% of Set Point (Y/N)? 5.0 _____
 pre- 4.8 pre- _____
 post- _____ post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, POC HRC DATE(S) SAMPLED: 12/20/23-12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: lab-106 OPERATOR: John Tatter
 Dup- INSTRUMENT MODEL NO.: 149 CALIBRATED BY: John Tatter
 PUMP SERIAL NO.: 20120230165 RAIN: YES NO
P/N 610-0901-07-R
 ADSORBENT CARTRIDGE INFORMATION:

Type: _____ Cartridge 1 _____ Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT, 12-20
 Adsorbent: Tube, POF _____
 Serial No.: 014033 _____
 Sample No.: Dup-01-122123 _____

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp, °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>106</u>	<u>59.1</u>	<u>30.42</u>	<u>4.94</u>	<u>N/A</u>	<u>1420</u>	<u>1440</u>	<u>1,460</u>	<u>7,197.8</u>
PT 12-20									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 4.94 _____
 post- 4.92 _____
 Cartridge 1 4.94 Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT, 12-20

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Note: flow rates recorded as L/min (see page 2)

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU, Poe Hall DATE(S) SAMPLED: 12/20/23 - 12/21/23
 SITE: NCSU, Raleigh TIME PERIOD SAMPLED: _____
 LOCATION: Roof OPERATOR: Wade Toltz
 INSTRUMENT MODEL NO.: 119 CALIBRATED BY: Wade Toltz
 PUMP SERIAL NO.: 20141130220 RAIN: YES NO
P/N-610-0901-03-K

ADSORBENT CARTRIDGE INFORMATION:

Type: _____ Cartridge 1 _____ Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT 12-20
 Adsorbent: Tube, POF _____
 Serial No.: 014633 _____
 Sample No.: A-14-Roof-122123 _____

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>014033</u>	<u>Roof</u>	<u>69.8</u>	<u>32.42</u>	<u>4.94</u>	<u>N/A</u>	<u>1435</u>	<u>1505</u>	<u>1470</u>	<u>7.124</u>
<u>PT 12-20</u>									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 4.94 _____ pre- _____ pre- _____ pre- _____
 post- 4.90 _____ post- _____ post- _____ post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 12/21-12/22/2023
 SITE: _____ TIME PERIOD SAMPLED: 24 hrs 17 mins
 LOCATION: 117 OPERATOR: ST MW
 INSTRUMENT MODEL NO.: 477 CALIBRATED BY: John Trotter
 PUMP SERIAL NO.: 20141130259 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>PUF, tube</u>	_____	_____	_____
Adsorbent:	_____	_____	_____	_____
Serial No.:	<u>018859</u>	_____	_____	_____
Sample No.:	<u>A-15-117-122223</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>018859</u>				<u>4.92</u>		<u>0945</u>	<u>1002</u>	<u>1457</u>	

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>4.92</u>	_____	_____	_____
	pre- <u>4.91</u>	pre- _____	pre- _____	pre- _____
	post- _____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

4.915

APPENDIX B1
SURFACE WIPE LAB REPORT



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/21/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67620 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 6.7 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620**LIMS Reference ID:** AB67620**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67620-01	W-033-400-12202023	Wipe	12/20/2023	12/21/2023
AB67620-02	W-034-4026-12202023	Wipe	12/20/2023	12/21/2023
AB67620-03	W-035-406-122023	Wipe	12/20/2023	12/21/2023
AB67620-04	W-036-4126-12202023	Wipe	12/20/2023	12/21/2023
AB67620-05	W-037-413-12202023	Wipe	12/20/2023	12/21/2023
AB67620-06	W-038-414A-12202023	Wipe	12/20/2023	12/21/2023
AB67620-07	W-039-419-12202023	Wipe	12/20/2023	12/21/2023
AB67620-08	W-040-424-12202023	Wipe	12/20/2023	12/21/2023
AB67620-09	W-041-500-12202023	Wipe	12/20/2023	12/21/2023
AB67620-10	W-042-509-12202023	Wipe	12/20/2023	12/21/2023
AB67620-11	W-043-510E-12202023	Wipe	12/20/2023	12/21/2023
AB67620-12	W-044-514-12202023	Wipe	12/20/2023	12/21/2023
AB67620-13	W-045-518-12202023	Wipe	12/20/2023	12/21/2023
AB67620-14	W-046-526-12202023	Wipe	12/20/2023	12/21/2023
AB67620-15	W-047-532-12202023	Wipe	12/20/2023	12/21/2023
AB67620-16	W-048-529-12202023	Wipe	12/20/2023	12/21/2023
AB67620-17	W-049-604-12202023	Wipe	12/20/2023	12/21/2023
AB67620-18	W-050-605-12202023	Wipe	12/20/2023	12/21/2023
AB67620-19	W-051-607-12202023	Wipe	12/20/2023	12/21/2023
AB67620-20	W-052-608P-12202023	Wipe	12/20/2023	12/21/2023
AB67620-21	W-053-613-12202023	Wipe	12/20/2023	12/21/2023
AB67620-22	W-054-616A-12202023	Wipe	12/20/2023	12/21/2023
AB67620-23	W-055-630-12202023	Wipe	12/20/2023	12/21/2023
AB67620-24	W-056-700-12202023	Wipe	12/20/2023	12/21/2023
AB67620-25	W-057-719-12202023	Wipe	12/20/2023	12/21/2023
AB67620-26	W-058-729-12202023	Wipe	12/20/2023	12/21/2023
AB67620-27	W-059-734-12202023	Wipe	12/20/2023	12/21/2023
AB67620-28	W-060-742-12202023	Wipe	12/20/2023	12/21/2023
AB67620-29	W-061-744-12202023	Wipe	12/20/2023	12/21/2023
AB67620-30	W-062-761-12202023	Wipe	12/20/2023	12/21/2023
AB67620-31	W-001-Blank-12202023	Wipe	12/20/2023	12/21/2023

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Positive Hits Summary

Lab ID	Client ID				Sampled
AB67620-01	W-033-400-12202023				12/20/23 15:25
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.57		µg/100 cm ²	01/08/2024 14:56
AB67620-02	W-034-4026-12202023				12/20/23 15:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	7.75		µg/100 cm ²	01/08/2024 15:17
AB67620-05	W-037-413-12202023				12/20/23 14:40
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.43		µg/100 cm ²	01/08/2024 16:21
AB67620-07	W-039-419-12202023				12/20/23 14:55
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	3.10		µg/100 cm ²	01/08/2024 17:04
AB67620-08	W-040-424-12202023				12/20/23 15:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.766		µg/100 cm ²	01/08/2024 17:25
AB67620-09	W-041-500-12202023				12/20/23 14:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	4.50		µg/100 cm ²	01/08/2024 17:47
AB67620-12	W-044-514-12202023				12/20/23 13:35
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.62		µg/100 cm ²	01/04/2024 14:46

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620**LIMS Reference ID:** AB67620**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Positive Hits Summary (Continued)

Lab ID	Client ID				Sampled
AB67620-20	W-052-608P-12202023				12/20/23 12:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2.00		µg/100 cm ²	01/04/2024 17:35
AB67620-22	W-054-616A-12202023				12/20/23 13:25
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.91		µg/100 cm ²	01/04/2024 18:16
AB67620-28	W-060-742-12202023				12/20/23 11:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.573		µg/100 cm ²	01/04/2024 20:43

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results

Sample: W-033-400-12202023
AB67620-01 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.57		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	79%		21-123		01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	97%		17-128		01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-034-4026-12202023
 AB67620-02 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.75		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	81%			21-123		01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	99%			17-128		01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-035-406-122023
AB67620-03 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		77%		21-123		01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		96%		17-128		01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-036-4126-12202023
 AB67620-04 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		73%		21-123		01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		90%		17-128		01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-037-413-12202023
AB67620-05 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.43		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	74%			21-123		01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	93%			17-128		01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-038-414A-12202023
 AB67620-06 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		85%		17-128		01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-039-419-12202023
AB67620-07 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	3.10		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	75%			17-128		01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-040-424-12202023
AB67620-08 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.766		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	62%			21-123		01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	82%			17-128		01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-041-500-12202023
AB67620-09 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	4.50		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	87%			17-128		01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-042-509-12202023
 AB67620-10 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		70%		21-123		01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		88%		17-128		01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results
 (Continued)

Sample: W-043-510E-12202023
AB67620-11 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		73%		21-123		01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		89%		17-128		01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-044-514-12202023
AB67620-12 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.62		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	78%			17-128		01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-045-518-12202023
AB67620-13 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		64%		21-123		01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		85%		17-128		01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-046-526-12202023
AB67620-14 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		66%		21-123		01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		85%		17-128		01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-047-532-12202023
AB67620-15 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		67%		21-123		01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		91%		17-128		01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-048-529-12202023
 AB67620-16 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		58%		21-123		01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		86%		17-128		01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-049-604-12202023
AB67620-17 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
Surrogate: Tetrachloro-m-xylene	48%			21-123		01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl	81%			17-128		01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-050-605-12202023
 AB67620-18 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		66%		21-123		01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		83%		17-128		01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-051-607-12202023
 AB67620-19 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		66%		21-123		01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		86%		17-128		01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-052-608P-12202023
 AB67620-20 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	2.00		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	86%			17-128		01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-053-613-12202023
 AB67620-21 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		58%		21-123		01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		80%		17-128		01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-054-616A-12202023
 AB67620-22 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.91		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	66%			21-123		01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	92%			17-128		01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-055-630-12202023
 AB67620-23 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		63%		21-123		01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		87%		17-128		01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-056-700-12202023
 AB67620-24 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		62%		21-123		01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		84%		17-128		01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-057-719-12202023
AB67620-25 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		67%		21-123		01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		87%		17-128		01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-058-729-12202023
 AB67620-26 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		63%		21-123		01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		86%		17-128		01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-059-734-12202023
AB67620-27 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		71%		21-123		01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		93%		17-128		01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-060-742-12202023
 AB67620-28 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.573		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	63%			21-123		01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	85%			17-128		01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results
 (Continued)

Sample: W-061-744-12202023
AB67620-29 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		61%		21-123		01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		90%		17-128		01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-062-761-12202023
AB67620-30 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		70%		21-123		01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		79%		17-128		01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-001-Blank-12202023
 AB67620-31 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		87%		21-123		01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		107%		17-128		01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0010 - SW846 3540C**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						
Aroclor-1268	ND	0.500	µg/100 cm ²						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000		67	21-123
Surrogate: Decachlorobiphenyl		1.000		73	17-128

LCS (BCA0010-BS1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.47	0.500	µg/100 cm ²	10.00	75	37-120
Aroclor-1260	8.43	0.500	µg/100 cm ²	10.00	84	45-121

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000		68	21-123
Surrogate: Decachlorobiphenyl		1.000		72	17-128

LCS Dup (BCA0010-BSD1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.44	0.500	µg/100 cm ²	10.00	74	37-120	0.4	25
Aroclor-1260	8.45	0.500	µg/100 cm ²	10.00	85	45-121	0.3	25

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000		65	21-123
Surrogate: Decachlorobiphenyl		1.000		71	17-128

Batch: BCA0077 - SW846 3540C**Blank (BCA0077-BLK1)**

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0077 - SW846 3540C (Continued)**Blank (BCA0077-BLK1)**

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1268	ND	0.500	µg/100 cm ²						
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Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>		1.000		73	21-123
<i>Surrogate: Decachlorobiphenyl</i>		1.000		89	17-128

LCS (BCA0077-BS1)

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016	8.53	0.500	µg/100 cm ²	10.00	85	37-120
Aroclor-1260	9.86	0.500	µg/100 cm ²	10.00	99	45-121

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>		1.000		78	21-123
<i>Surrogate: Decachlorobiphenyl</i>		1.000		88	17-128

LCS Dup (BCA0077-BSD1)

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016	7.95	0.500	µg/100 cm ²	10.00	79	37-120	7	25
Aroclor-1260	9.48	0.500	µg/100 cm ²	10.00	95	45-121	4	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>		1.000		71	21-123
<i>Surrogate: Decachlorobiphenyl</i>		1.000		85	17-128

Batch: BCA0131 - SW846 3540C**Blank (BCA0131-BLK1)**

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016	ND	0.500	µg/100 cm ²			
Aroclor-1221	ND	0.500	µg/100 cm ²			
Aroclor-1232	ND	0.500	µg/100 cm ²			
Aroclor-1242	ND	0.500	µg/100 cm ²			
Aroclor-1248	ND	0.500	µg/100 cm ²			
Aroclor-1254	ND	0.500	µg/100 cm ²			
Aroclor-1260	ND	0.500	µg/100 cm ²			
Aroclor-1262	ND	0.500	µg/100 cm ²			
Aroclor-1268	ND	0.500	µg/100 cm ²			

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>		1.000		76	21-123
<i>Surrogate: Decachlorobiphenyl</i>		1.000		78	17-128



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Project Name: NCSU PH

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Quality Control
(Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0131 - SW846 3540C (Continued)

LCS (BCA0131-BS1)

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016	6.45	0.500	µg/100 cm ²	10.00		64	37-120		
Aroclor-1260	7.17	0.500	µg/100 cm ²	10.00		72	45-121		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		59	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		68	17-128		

LCS Dup (BCA0131-BSD1)

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016	8.58RO	0.500	µg/100 cm ²	10.00		86	37-120	28	25
Aroclor-1260	9.50RO	0.500	µg/100 cm ²	10.00		95	45-121	28	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		77	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		88	17-128		

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Received: 12/21/2023 09:00
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Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Wipe		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Notes and Definitions

Item	Definition
RO	RPD for this compound was outside of the control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

1 of 3

AB67620

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 South Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC 28203	Country:		USA	City, State, Zip:	
Phone:	704-227-0950		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: *Anna Brand / Marc Webb* No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8		
W-033-400-122023		X	12/20/23 1525	O	4, 5 AB	X									
W-034-4026-122023		X	12/20/23 1505	O	4, 5 AB	X									
W-035-406-122023		X	12/20/23 1515	O	4, 5 AB	X									
W-036-4126-122023		X	12/20/23 1520	O	4, 5 AB	X									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
 Preservative is acetone hexane AB 12/20/23 6.7°C on UCI

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt:

Relinquished by: <i>Anna Brand</i>	Date/Time: 12/20/23 1730	Received by: <i>Colleen Falladuro</i>	Date/Time: 12/21/23 9AM
Relinquished by:	Date/Time:	Received by:	Date/Time:



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

4867620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1: EPA 8082A / Method 3540C	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
5 W-037-413-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1440	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6 W-038-414A-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1445	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 W-039-419-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1455	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8 W-040-424-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1500	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9 W-041-500-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1400	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10 W-042-509-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1350	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11 W-043-510E-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1345	0	4 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: <i>Amal Brand</i>	Date/Time: 12/20/23 1730	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

AB67620

2 of 3

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer	
	Company Name:	Geosynta Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 S. Mint St. Unit 300			Street Address:		
	City, State, Zip:	Charlotte, NC	Country:		City, State, Zip:		Country:
Phone:	704-227-0840		Phone:				
Email(s) for Report:	jahrens@geosynta.com		Email(s) for Invoice:				

Project Name/No: NCSU, PM Purchase Order: _____

EMSL LIMS Project ID: _____ US State where samples collected: NC State of Connecticut (CT) must select project location:

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: Marc Webb, Anna Brand Sampled By Signature: Anna Brand No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
W-044-514-12202023		X	12/20/23 9355	O-Other	Hr									
W-045-518-12202023		X	12/20/23 1430	↓	Hr									
W-046-526-12202023		X	12/20/23 1420	↓	Hr									
W-047-532-12202023		X	12/20/23 1415	↓	Hr									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt: _____

Relinquished by: Anna Brand Date/Time: 12/20/23 1730 Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB1671620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
16 W-048-529-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1405	Other	4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17 W-049-604-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1310	↓	4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18 W-050-605-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1210		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19 W-051-607-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1300		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20 W-052-608P-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1205		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 W-053-613-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1155		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22 W-054-616A-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1325		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: Anna Brand	Date/Time: 12/20/23 1730	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

3 of 3

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

AB67620

Customer Information	Customer ID:	Billing ID:
	Company Name: <u>Geosyntec Consultants</u>	Company Name: <u>Same as customer info</u>
	Contact Name: <u>Jeff Ahrens</u>	Billing Contact:
	Street Address: <u>1300 South Mint St. Suite 300</u>	Street Address:
	City, State, Zip: <u>Charlotte NC 28203</u> Country:	City, State, Zip: Country:
Phone: <u>704-227-0850</u>	Phone:	Email(s) for Invoice:
Email(s) for Report: <u>JAhrens@geosyntec.com</u>		

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Marc Webb / Amy Brand Sampled By Signature: [Signatures] No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
<u>W-055-630-122023</u>			<u>12/20/23 1315</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-056-700-122023</u>			<u>12/20/23 1025</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-057-719-122023</u>			<u>12/20/23 1130</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-058-729-122023</u>			<u>12/20/23 1045</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt:

Relinquished by: Amy Brand Date/Time: 12/20/23 1730 Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB67620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (<i>Write in test below, then check on sample line:</i>)								Comments
						Test 1: <i>EPA 8082A Method 3540C</i>	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
27 W-059-734-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1100	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28 W-060-742-12202023 <i>Initials: MW</i>	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1105	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
29 W-061-744-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1120	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30 W-062-761-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1040	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
31 W-001-BLANK-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1005	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: <i>Fedex</i>		Sample Condition Upon Receipt:	
Relinquished by: <i>Anna Brand</i>	Date/Time: <i>12/20/23 1730</i>	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/22/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67733 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

Table of Contents

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733

LIMS Reference ID: AB67733

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 1.0 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733**LIMS Reference ID:** AB67733**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67733-01	W-030-325-12212023	Wipe	12/21/2023	12/22/2023
AB67733-02	W-025-300D-12212023	Wipe	12/21/2023	12/22/2023
AB67733-03	W-031-326S-12212023	Wipe	12/21/2023	12/22/2023
AB67733-04	W-026-309-12212023	Wipe	12/21/2023	12/22/2023
AB67733-05	W-024-310L-12212023	Wipe	12/21/2023	12/22/2023
AB67733-06	W-029-313-12212023	Wipe	12/21/2023	12/22/2023
AB67733-07	W-027-312-12212023	Wipe	12/21/2023	12/22/2023
AB67733-08	W-028-312-12212023	Wipe	12/21/2023	12/22/2023
AB67733-09	W-023-222-12212023	Wipe	12/21/2023	12/22/2023
AB67733-10	W-022-220-12212023	Wipe	12/21/2023	12/22/2023
AB67733-11	W-014-218-12212023	Wipe	12/21/2023	12/22/2023
AB67733-12	W-020-213-12212023	Wipe	12/21/2023	12/22/2023
AB67733-13	W-019-210-12212023	Wipe	12/21/2023	12/22/2023
AB67733-14	W-021-216-12212023	Wipe	12/21/2023	12/22/2023
AB67733-15	W-018-208Q-12212023	Wipe	12/21/2023	12/22/2023
AB67733-16	W-015-201-12212023	Wipe	12/21/2023	12/22/2023
AB67733-17	W-016-202-12212023	Wipe	12/21/2023	12/22/2023
AB67733-18	W-017--202-12212023	Wipe	12/21/2023	12/22/2023
AB67733-19	W-007-120-12212023	Wipe	12/21/2023	12/22/2023
AB67733-20	W-005-117-12212023	Wipe	12/21/2023	12/22/2023
AB67733-21	W-006-117-12212023	Wipe	12/21/2023	12/22/2023
AB67733-22	W-008-125-12212023	Wipe	12/21/2023	12/22/2023
AB67733-23	W-011-197-12212023	Wipe	12/21/2023	12/22/2023
AB67733-24	W-009-127-12212023	Wipe	12/21/2023	12/22/2023
AB67733-25	W-010-130-12212023	Wipe	12/21/2023	12/22/2023
AB67733-26	W-002-101-12212023	Wipe	12/21/2023	12/22/2023
AB67733-27	W-014-103B-12212023	Wipe	12/21/2023	12/22/2023
AB67733-28	W-004-103-12212023	Wipe	12/21/2023	12/22/2023
AB67733-29	W-003-102A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-30	W-012-198-12212023	Wipe	12/21/2023	12/22/2023
AB67733-31	W-064-P1001A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-32	W-063-P1000A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-33	W-065-P1004-12212023	Wipe	12/21/2023	12/22/2023
AB67733-34	W-066-P1003-12212023	Wipe	12/21/2023	12/22/2023
AB67733-35	W-067-116-12212023	Wipe	12/21/2023	12/22/2023
AB67733-36	W-068-100-12212023	Wipe	12/21/2023	12/22/2023
AB67733-37	W-013-199-12212023	Wipe	12/21/2023	12/22/2023

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Positive Hits Summary

Lab ID	Client ID				Sampled
AB67733-02	W-025-300D-12212023				12/21/23 08:55
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	74.6	D	µg/100 cm ²	01/03/2024 21:57
AB67733-05	W-024-310L-12212023				12/21/23 09:20
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.87		µg/100 cm ²	01/03/2024 16:42
AB67733-06	W-029-313-12212023				12/21/23 09:25
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.763		µg/100 cm ²	01/03/2024 17:03
AB67733-08	W-028-312-12212023				12/21/23 09:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.529		µg/100 cm ²	01/03/2024 17:45
AB67733-09	W-023-222-12212023				12/21/23 09:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.733		µg/100 cm ²	01/03/2024 18:06
AB67733-10	W-022-220-12212023				12/21/23 10:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	9.49		µg/100 cm ²	01/03/2024 18:27
AB67733-11	W-014-218-12212023				12/21/23 10:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.644		µg/100 cm ²	01/03/2024 18:48

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Positive Hits Summary
 (Continued)

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AB67733-12	W-020-213-12212023						12/21/23 10:15
SW846-8082A			Aroclor-1262	0.673		µg/100 cm ²	01/03/2024 19:09
AB67733-27	W-014-103B-12212023						12/21/23 12:15
SW846-8082A			Aroclor-1262	7.40		µg/100 cm ²	12/27/2023 14:44
AB67733-30	W-012-198-12212023						12/21/23 13:50
SW846-8082A			Aroclor-1262	0.592		µg/100 cm ²	12/27/2023 15:47
AB67733-33	W-065-P1004-12212023						12/21/23 14:30
SW846-8082A			Aroclor-1262	2.87		µg/100 cm ²	12/27/2023 16:51
AB67733-34	W-066-P1003-12212023						12/21/23 14:35
SW846-8082A			Aroclor-1262	7.88		µg/100 cm ²	12/27/2023 17:12
AB67733-35	W-067-116-12212023						12/21/23 14:45
SW846-8082A			Aroclor-1262	1.12		µg/100 cm ²	12/27/2023 17:33
AB67733-36	W-068-100-12212023						12/21/23 14:50
SW846-8082A			Aroclor-1262	1.95		µg/100 cm ²	12/27/2023 17:54

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Project Name: NCSU PH

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Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AB67733-37	W-013-199-12212023				12/21/23 13:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.573		µg/100 cm ²	12/27/2023 18:15

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results

Sample: W-030-325-12212023
AB67733-01 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		72%		21-123		01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		78%		17-128		01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-025-300D-12212023
 AB67733-02 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	74.6	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	95%		21-123		01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	109%		17-128		01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-031-326S-12212023
 AB67733-03 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		70%		21-123		01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		79%		17-128		01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

Sample: W-026-309-12212023
AB67733-04 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		67%		21-123		01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		77%		17-128		01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-024-310L-12212023
 AB67733-05 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.87		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	66%		21-123		01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	74%		17-128		01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A	

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Sample Results (Continued)

Sample: W-029-313-12212023
AB67733-06 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.763		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	77%			17-128		01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

Sample: W-027-312-12212023
AB67733-07 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		55%		21-123		01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		67%		17-128		01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-028-312-12212023
AB67733-08 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.529		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	63%		21-123			01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	80%		17-128			01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A

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200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-023-222-12212023
 AB67733-09 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.733		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	62%			21-123		01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	76%			17-128		01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-022-220-12212023
 AB67733-10 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	9.49		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	64%			21-123		01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	83%			17-128		01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-014-218-12212023
 AB67733-11 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.644		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	61%			21-123		01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	76%			17-128		01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-020-213-12212023
AB67733-12 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.673		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	57%			21-123		01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	71%			17-128		01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-019-210-12212023
 AB67733-13 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		63%		21-123		01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		76%		17-128		01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-021-216-12212023
 AB67733-14 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		62%		21-123		01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		73%		17-128		01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-018-208Q-12212023
 AB67733-15 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		71%		21-123		01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		83%		17-128		01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-015-201-12212023
AB67733-16 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		76%		17-128		01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-016-202-12212023
 AB67733-17 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		55%		21-123		01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		62%		17-128		01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-017--202-12212023
 AB67733-18 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		81%		17-128		01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-007-120-12212023
 AB67733-19 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		68%		21-123		12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		80%		17-128		12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
 (Continued)

Sample: W-005-117-12212023
AB67733-20 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		57%		21-123		12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		71%		17-128		12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

Sample: W-006-117-12212023
AB67733-21 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		84%		17-128		12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-008-125-12212023
AB67733-22 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		58%		21-123		12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		74%		17-128		12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
 (Continued)

Sample: W-011-197-12212023
AB67733-23 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-009-127-12212023
 AB67733-24 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A



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EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-010-130-12212023
AB67733-25 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		75%		17-128		12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A

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 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-002-101-12212023
 AB67733-26 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		52%		21-123		12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		70%		17-128		12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-014-103B-12212023
 AB67733-27 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.40		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	69%		21-123		12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	90%		17-128		12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-004-103-12212023
 AB67733-28 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		64%		21-123		12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		90%		17-128		12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-003-102A-12212023
 AB67733-29 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		61%		21-123		12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		89%		17-128		12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-012-198-12212023
 AB67733-30 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.592		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	100%			17-128		12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-064-P1001A-12212023
 AB67733-31 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		91%		17-128		12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-063-P1000A-12212023
 AB67733-32 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		72%		21-123		12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		95%		17-128		12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-065-P1004-12212023
 AB67733-33 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	2.87		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	68%			21-123		12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	95%			17-128		12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A

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 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

Sample: W-066-P1003-12212023
AB67733-34 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.88		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	70%		21-123		12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	94%		17-128		12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-067-116-12212023
 AB67733-35 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.12		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	67%		21-123		12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	91%		17-128		12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A	



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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-068-100-12212023
AB67733-36 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.95		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	63%			21-123		12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	88%			17-128		12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

Sample: W-013-199-12212023
AB67733-37 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.573		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	75%			21-123		12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	96%			17-128		12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0824 - SW846 3540C**Blank (BBL0824-BLK1)**

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						
Aroclor-1268	ND	0.500	µg/100 cm ²						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			61	21-123			
Surrogate: Decachlorobiphenyl		1.000			73	17-128			

LCS (BBL0824-BS1)

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	6.92	0.500	µg/100 cm ²	10.00	69	37-120			
Aroclor-1260	7.91	0.500	µg/100 cm ²	10.00	79	45-121			

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			66	21-123			
Surrogate: Decachlorobiphenyl		1.000			80	17-128			

LCS Dup (BBL0824-BSD1)

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	7.09	0.500	µg/100 cm ²	10.00	71	37-120	2	25	
Aroclor-1260	8.35	0.500	µg/100 cm ²	10.00	83	45-121	5	25	

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			63	21-123			
Surrogate: Decachlorobiphenyl		1.000			84	17-128			

Batch: BCA0010 - SW846 3540C**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0010 - SW846 3540C (Continued)**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1268	ND	0.500	µg/100 cm ²						
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Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		67	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		73	17-128		

LCS (BCA0010-BS1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.47	0.500	µg/100 cm ²	10.00		75	37-120		
Aroclor-1260	8.43	0.500	µg/100 cm ²	10.00		84	45-121		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		68	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		72	17-128		

LCS Dup (BCA0010-BSD1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.44	0.500	µg/100 cm ²	10.00		74	37-120	0.4	25
Aroclor-1260	8.45	0.500	µg/100 cm ²	10.00		85	45-121	0.3	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		65	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		71	17-128		

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367733
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Wipe		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Page 1 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB67733

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:	Billing ID:	Same as customer info	
	Company Name:	Company Name:	Geosyntec Consultants	
	Contact Name:	Billing Contact:	JEFF Ahrens	
	Street Address:	Street Address:	1300 South Mint St Suite 300	
	City, State, Zip:	City, State, Zip:	Country:	Charlotte, NC 28203 USA
Phone:	Phone:	704-227-0850		
Email(s) for Report:	Email(s) for Invoice:	JAhrens@geosyntec.com		

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: *Anna Brand* / *Marc Webb* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal. 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments		
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:			
1 W-030-325-12212023		X	12/21/23 0825	O	None	X										10x10cm wipe
2 W-025-300D-12212023		X	↓ 0840	↓	↓	X										↓
3 W-031-326S-12212023		X	↓ 0855	↓	↓	X										↓
4 W-026-309-12212023		X	↓ 0905	↓	↓	X										↓

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Ex# 7884 180 0280

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: FEDEX Sample Condition Upon Receipt:

Relinquished by: *Anna Brand* Date/Time: 12/21/23 1700 Received by: *L. Kennedy* Date/Time: 12/22/23 10:20am

Relinquished by: Date/Time: Received by: Date/Time:

1.0°C



EMSL ANALYTICAL, INC.

Page 2 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

[Empty box for Order Number / Lab Use Only]

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23 0910	O	None	EPA 8082A / Method 3540C	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0920				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0925				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0925				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0945				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0950				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1000				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: Amgbrand	Date/Time: 12/21/23 1700	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

Page 3 of 7

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer info	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 South Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC 28203	Country:		USA	City, State, Zip:	
Phone:	704-227-0850		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order: _____

EMSL LIMS Project ID: _____ (If applicable, EMSL will provide)

US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: Anna Brand Marc Webb No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
12 W-020-213-12212023		X	12/21/23 1005	0	None	X									10x10cm wipe
13 W-019-210-12212023		X	↓ 1015	↓	↓	X									↓
14 W-021-216-12212023		X	↓ 1020	↓	↓	X									↓
15 W-019-208Q-12212023		X	↓ 1030	↓	↓	X									↓

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: FEDEX Sample Condition Upon Receipt: _____

Relinquished by: Anna Brand Date/Time: 12/21/23 1700 Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____



EMSL ANALYTICAL, INC.

Page 4 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: <i>EPA 8002A / Method 3570C</i>	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
16 W-015-201-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23	1040 O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
17 W-016-202-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1045			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
18 W-017-202-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1045			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19 W-007-120-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1110			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20 W-005-117-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1120			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 W-006-117-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1120			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22 W-008-125-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1135			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: Anna Beard	Date/Time: 12/21/23 1700	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

EMSL ANALYTICAL, INC.

Customer Information	Customer ID:		Billing Information	Billing ID:	Same as customer info		
	Company Name:	Geosyntec Consultants		Company Name:			
	Contact Name:	Jeff Ahrens		Billing Contact:			
	Street Address:	1300 South Mint St Suite 300		Street Address:			
	City, State, Zip:	Charlotte, NC 28203		Country:	USA	City, State, Zip:	
Phone:	704-227-0850		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: *Anna Brand* *Marc Webb* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
W-011-197-12212023		X	12/21/23 1140	O	None	X									10x10cm wipe
W-009-127-12212023		X	1145			X									
W-010-130-12212023		X	1150			X									
W-002-101-12212023		X	1200			X									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: FEDEX Sample Condition Upon Receipt:

Relinquished by: <i>Anna Brand</i>	Date/Time: 12/21/23 1700	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:



EMSL ANALYTICAL, INC.

Page 6 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: EPA 8062A / Method 3540c	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
27 W-014-103B-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23 1210	O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
28 W-004-103-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1215			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
29 W-003-102A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1220			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30 W-013-199-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1345			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
31 W-012-198-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1350			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
32 W-064-P1001A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1415			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
33 W-063-R1000A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1420			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
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Customer Information	Customer ID:		Billing Information	Billing ID:	Same as customer info		
	Company Name:	Geosyntec Consultants		Company Name:			
	Contact Name:	Jeff Ahrens		Billing Contact:			
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	City, State, Zip:	Charlotte, NC 28203		Country:	USA	City, State, Zip:	
Phone:	704-227-0850		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order: _____

EMSL LIMS Project ID: _____ US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: Anna Brand Marc Webb No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
W-065-P1004-12212023		X	12/21/23 1430	O	None	X									10x10cm wipe
W-066-P1003-12212023		X	↓ 1435	↓	↓	X									↓
W-067-116-12212023		X	↓ 1445	↓	↓	X									↓
W-068-100-12212023		X	↓ 1450	↓	↓	X									↓

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.):

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Geosyntec 

consultants

Geosyntec Consultants of NC, P.C.

Prepared for

NC STATE UNIVERSITY

North Carolina State University

c/o

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**INDOOR ENVIRONMENTAL
INVESTIGATION REPORT -
SECOND PHASE**

**NORTH CAROLINA STATE UNIVERSITY
POE HALL, RALEIGH, NORTH CAROLINA**

Prepared by

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Project Number GN10263

June 3, 2024

CERTIFICATION PAGE

INDOOR ENVIRONMENTAL INVESTIGATION REPORT – SECOND PHASE

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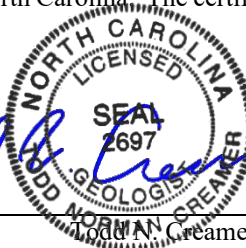
Jeffrey M. Ahrens

Jeffrey M. Ahrens, P.E.
Senior Principal

PROFESSIONAL GEOLOGIST SIGNATURE

I, Todd N. Creamer, a Licensed Professional Geologist for Geosyntec Consultants of NC, P.C., do certify that the information in this report is correct and accurate to the best of my knowledge.

Geosyntec Consultants of NC, P.C. is licensed to practice engineering in North Carolina. The certification number (Firm's License Number) is C-3500.

Todd N. Creamer


Todd N. Creamer, P.G.
Senior Principal Geologist
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EXECUTIVE SUMMARY

Geosyntec Consultants of NC, P.C. (Geosyntec) was retained to investigate the presence of polychlorinated biphenyl (PCB) compounds in Poe Hall on the NCSU campus in Raleigh, North Carolina. Geosyntec is supporting NCSU's inquiry into the presence of PCBs in Poe Hall through a phased investigation. During the first phase of the assessment with the heating, ventilation and air conditioning (HVAC) systems off, PCB Aroclor-1262 was reported in surficial dust and indoor air samples collected on each floor in Poe Hall in an initial phase indoor environmental investigation report (Geosyntec, 2024). This *Indoor Environmental Investigation Report—Second Phase* builds on the first phase and describes Geosyntec's review of historical building documents and visual inspections of mechanical systems, bulk and air sampling results, other relevant data, and presents a revised conceptual site model (CSM). Data collected during the second phase of the assessment confirmed the presence of PCBs in building materials in Poe Hall, primarily Aroclor-1262 in a gold-colored sealant used inside HVAC supply ducts, which diffused into adjacent materials and adsorbed onto dust particles circulated by the HVAC systems. Each of the indoor air samples collected during the second phase with the HVAC system operating was below U.S. Environmental Protection Agency (USEPA) Exposure Levels for Evaluating PCBs in School Indoor Air for adults and children ages three (3) years and older. Based on the findings of this investigation, Geosyntec has made recommendations.

In January and March 2024, Geosyntec visually inspected air handling units (AHUs); hot, cold, and mixed air supply ducts; and return ducts and return air plenums that service floors 1 through 7. Geosyntec collected 111 bulk material samples from locations that were accessed during visual inspections on January 4 to 5 and March 5 to 8, 2024. Bulk samples included insulation materials (mostly collected from the inside of supply ducts), caulking, and air filters.

NCSU restarted Poe Hall's HVAC systems on April 16, 2024, in preparation to collect air samples. Geosyntec began air sampling eight days after the return of Poe Hall's HVAC systems to service, beginning April 24 and ending April 27, 2024. Geosyntec collected 17 indoor air samples and 1 outdoor air sample from the same locations in Poe Hall that were sampled during the initial investigation phase in December 2023.

PCB Aroclor-1262 was detected in all but one bulk sample (concentrations ranged from 0.91–53,000 parts per million). Gold-colored insulation sealant inside supply ducts was likely manufactured with PCBs, and therefore, was likely the primary source of Aroclor-1262 PCBs detected on surficial dust and air samples collected in Poe Hall.

PCB Aroclor-1262 was detected in each indoor air sample (concentrations ranged from 0.077–0.155 $\mu\text{g}/\text{m}^3$). Indoor air concentrations of Aroclor-1262 measured with HVAC systems on in April 2024 were about twice the concentrations measured when the HVAC systems were off in December 2023. All indoor air sampling results were below the USEPA Exposure Levels for Evaluating PCBs in School Indoor Air for adults and age cohorts three years and older.

The presence of PCBs in building materials at any concentration does not translate directly to either exceedance of a risk-based threshold or to exposure that is atypical. Data show that where PCBs were detected in surficial dust, nearly all results were below the USEPA PCB threshold for non-porous surfaces in high occupancy areas; and all results in air samples showed PCB concentrations below the USEPA Exposure Levels for Evaluating PCBs in School Indoor Air for adults and age cohorts 3 years and older both with the HVAC systems off and with them running.

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ACRONYMS AND ABBREVIATIONS

µg	microgram(s)
µg/m ³	micrograms per cubic meter
µg/cm ²	micrograms per square centimeter
AHU	air handling unit
CFR	Code of Federal Regulations
cm	centimeter
CSM	conceptual site model
ESML	EMSL Analytical, Inc.
Geosyntec	Geosyntec Consultants of NC, P.C.
HEPA	high efficiency particulate air filter
HVAC	heating, ventilation, and air conditioning
NCSU	North Carolina State University
NIOSH	National Institute for Occupational Safety and Health
PCB	polychlorinated biphenyl
ppm	parts per million
PUF	polyurethane foam
RfD	reference dose
TSCA	Toxic Substances Control Act
Turner	Turner Environmental Consultants, LLC
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

North Carolina State University's (NCSU's) outside counsel, Kilpatrick Townsend & Stockton LLP, retained Geosyntec Consultants of NC, P.C. (Geosyntec) on December 7, 2023, to provide environmental consulting services in a matter at Poe Hall on the NCSU campus in Raleigh, North Carolina (**Figure 1**). Geosyntec's consulting services focused on identifying the sources of polychlorinated biphenyl (PCB) compounds that could be accessible or could be made accessible to building occupants, understanding the distribution of accessible PCBs in the building, and presenting options to mitigate potential human exposure and options to remediate PCBs in accordance with applicable regulations. This second phase indoor environmental investigation report describes Geosyntec's review of historical building documents and visual inspections of mechanical systems, bulk and air sampling results, other relevant data, and presents a revised conceptual site model (CSM).

1.1. Background

Geosyntec understands that in the fall of 2023, NCSU collected samples of surficial dust, air, and some bulk materials from components of the heating, ventilation, and air conditioning (HVAC) systems for laboratory PCB analyses, in response to concerns from Poe Hall occupants about environmental conditions in the building. After receiving analytical results from the laboratory in November that reported detections of PCBs in some dust and some bulk samples, NCSU voluntarily closed Poe Hall and shut down the HVAC systems out of an abundance of caution, pending further investigation. Since NCSU closed the building, access has been restricted to authorized personnel. Authorized personnel include selected NCSU employees and contractors who are trained regarding hazards posed by hazardous materials, appropriate personal protective equipment, and other applicable subjects such as those included under the Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response trainings.

Poe Hall is a seven-story academic building constructed in approximately 1971, when PCBs were widely used in building materials, such as paint, caulk, and sealants, across the United States. Historically, PCBs were used in materials to improve their chemical stability, flexibility, and flame resistance. PCBs are no longer produced or used in the United States. Before 1974, PCBs were used in capacitors, transformers, plasticizers, surface coatings, inks, adhesives, pesticide extenders, carbonless duplicating paper, and other products. After 1974, use of PCBs was restricted to the production of capacitors and transformers, and after 1979 PCBs were no longer used in the production of capacitors and transformers. The United States Environmental Protection Agency (USEPA) believes that there was potential widespread use of PCB-containing building materials in schools and other buildings built or renovated between about 1950 and 1979 (USEPA, 2015a), and that potentially tens of thousands of buildings may be affected in the United States (USEPA, 2021). Based on the age of construction and on preliminary data collected by NCSU in 2023, and by Geosyntec in 2023, Poe Hall was suspected to contain building materials manufactured with PCBs. Geosyntec is supporting NCSU's inquiry into the presence of PCBs in Poe Hall through a phased investigation and has written this *Indoor Environmental Investigation Report—Second Phase* to describe the sampling approach and report investigation findings. This second phase builds on the first phase conducted in December 2023 (Geosyntec, 2024) and incorporates historical data supplied by NCSU.

The investigation is focused on understanding the sources of PCBs that could be accessible to building occupants and the distribution of accessible PCBs in the building. The data from this investigation are being provided to the National Institute for Occupational Safety and Health (NIOSH) simultaneously with this report's release to support their ongoing Health Hazard Evaluation. As described in the preliminary CSM in the initial phase report (Geosyntec 2024), the primary mechanism by which building occupants potentially could be exposed to PCBs would be through contacting or respiring PCBs adsorbed to dust. That dust is conveyed and distributed by the building's six air handling units, which are combined into four HVAC circulation zones. The air handling units and HVAC circulation zones are depicted in the schematic shown on **Figure 2** and described in Sections 3 and 4.

1.2. Investigation Components

Between December 2023 and publication of this report, NCSU and Geosyntec have investigated the potential presence of PCBs inside Poe Hall in response to concerns raised by Poe Hall occupants. This investigation has included collecting and analyzing samples of bulk building materials, surficial dust, and air, reviewing historical building design and renovation plans, visually inspecting Poe Hall's mechanical HVAC systems, returning Poe Hall's HVAC systems to operation for indoor air testing, developing a CSM to put the data in context, communicating with the USEPA about testing methods and results, and presenting recommendations for next steps.

NCSU's Environmental Health and Safety Department conducted sampling between October and November 2023, and subsequent work from December 2023 through issuance of this report has been conducted by Geosyntec and its subcontractor Turner Environmental Consultants, LLC (Turner) who reviewed historical building records, supported the design of the second phase of investigation, opened ducts for visual inspections, and patched system ductwork post-inspection. Field work in 2024 included visually inspecting mechanical systems and sampling bulk building materials while the HVAC systems were turned off, followed by returning Poe Hall's HVAC systems to operation and then sampling indoor air.

1.3. Key Considerations

Four important considerations regarding this investigation are noted below.

1.3.1. Building Preservation and Facilitating Interim Access

USEPA recommends that all schools and other buildings built or renovated between about 1950 and 1979 implement practical actions to minimize potential building occupant exposure to PCBs. Recommendations include removing PCB-containing light ballasts and transformers and following best management practices, such as frequent indoor cleaning to reduce dust and residue using a damp cloth or mop, using vacuums with high efficiency particulate air (HEPA) filters and not sweeping with dry brooms for dusting. Prior to November 2023, as part of maintaining a healthy and safe environment on campus, NCSU reported that they were complying with each of these recommendations and best management practices at Poe Hall. Furthermore, since closure of the building, NCSU has not modified or altered any source or potential source of PCBs (*i.e.*, HVAC components, caulking, paint, light ballasts, etc.) other than sampling bulk materials for laboratory analysis. Collecting these samples will not impede future collection of samples by NCSU or other

authorized third parties. In addition, NCSU will consult with USEPA to assemble and weigh options to comply with 40 Code of Federal Regulations (CFR) part 761 (the regulation that governs the uses of PCBs), and work to address the needs of the university community regarding the Poe Hall matter.

In December 2023, NCSU hired Contaminant Control, Inc., (CCI) to clean surficial dust in a portion of the first floor (room 110,¹ a hallway and a bathroom) to facilitate completion of critical north campus computing center. Also in December 2023, CCI assisted NCSU to retrieve and clean individual personal items belonging to faculty and staff for return to their owners.

1.3.2. Briefings to the USEPA

Geosyntec informed the USEPA of planned field work prior to sample collection in December 2023. Geosyntec and NCSU briefed the USEPA about the CSM, bulk materials data and air analytical data in February, March, April and May 2024, and about plans to return Poe Hall's HVAC systems to service prior to turning HVAC systems back on.

1.3.3. Scope of this Phased Investigation

The purpose of collecting and analyzing surficial dust and indoor air samples during the initial phase conducted in December 2023 was to understand the conditions in Poe Hall at the time of sampling to support NCSU's decisions about building access for near-term activities such as maintenance, inspections, and emergency services. Additional near-term purposes included facilitating completion of a critical project to upgrade the Main Distribution Frame Room located on the first floor and retrieving items left behind by faculty and staff in their Poe Hall offices and classrooms. Therefore, the scope of investigation in December was limited to testing surfaces for dust that were likely to be touched in the near term (such as windowsills, desktops, computer components, books, and surfaces in rooms that house key building infrastructure such as elevator machine rooms), and excluded testing surfaces for dust that are inaccessible or otherwise unlikely to be touched (such as building materials above drop ceilings or floors behind bookshelves). Similarly, the scope of indoor air testing conducted in December 2023 was limited to collecting samples with the HVAC systems off because that was the condition under which near-term activities occurred. Information gleaned from this initial phase of work also supported investigation scoping for the second phase, as expressed in recommendations from the first phase report.

The purposes for collecting data in this second phase of investigation were to: address recommendations from the initial phase report (Geosyntec, 2024); generate sufficient information for NCSU to weigh options to comply with 40 CFR part 761; support NIOSH's ongoing efforts to understand potential historical exposure for former occupants of Poe Hall; and to support NCSU's long-term planning for Poe Hall. Another purpose was to characterize a snapshot of indoor air quality under an approximation of typical weekday building conditions; this characterization will help to inform NCSU's staffing and training plans to execute continuing near-term activities such as maintenance, inspections, emergency services, computing system operation, and further item retrieval. Therefore, the scope of the second phase of the investigation was targeted at sampling bulk materials for PCBs mostly in the HVAC systems, and at sampling indoor air for PCBs with

¹ Room 110 is serviced by an independent HVAC unit located on the ground outside of the first floor to meet room conditioning requirements of the computing system housed there.

the HVAC systems operating. Indoor air data offer a snapshot of PCBs in indoor air in Poe Hall today without occupancy, an approximation of conditions prior to November 2023 when the building was closed.

1.3.4. Making Building Characterization Data Public

NCSU directed that Geosyntec conduct a systematic and objective investigation of Poe Hall's indoor conditions, whose findings would be put into the public domain for the understanding of the university community. Scientific and engineering investigations take objective planning, with methodical and often iterative steps to develop representative datasets that can be interpreted by professionals. Relevant data collected inside Poe Hall recently and historically are herein presented and interpreted into a picture of current building conditions regarding PCBs.

1.4. Summary of the Initial Phase Indoor Environmental Investigation Report

Geosyntec collected surface wipe and indoor air samples in December 2023 and reported findings in February 2024 in an initial phase indoor environmental investigation report (Geosyntec, 2024). PCB Aroclor-1262 was reported in surficial dust and indoor air samples collected on each floor in Poe Hall at concentrations that were generally very low and almost entirely below USEPA exposure levels and thresholds. Nearly two-thirds of surficial dust samples had undetectable concentrations of PCBs at reporting limits well below the USEPA threshold for non-porous surfaces in high occupancy areas ($10 \mu\text{g}/100 \text{ cm}^2$), with only one detected result exceeding the threshold. For each of the 14 indoor air samples collected, all results were below USEPA exposure levels for evaluating PCBs in school indoor air for adults and children ages three (3) years and older (USEPA, 2015b). Air sample and wipe sample lab reports from the initial phase indoor environmental investigation are appended in **Appendix A1** and **Appendix A2**. Data from December 2023 air samples are also tabulated with data from this second phase as discussed in Section 3.

Based on the results of the first phase of the investigation, Geosyntec recommended additional steps and investigation activities, focused on developing a better understanding of PCB distribution and transport within Poe Hall. The recommendations are summarized as follows:

1. Review historical documents and visually inspect HVAC systems to identify building materials that may contain PCBs (potential sources). Collect and analyze bulk samples.
2. Revise the preliminary CSM.
3. Use the revised CSM to identify potential data gaps in our understanding of sources and transport of Aroclor-1262 to dust.
4. Conduct follow-up indoor air and surficial wipe sampling to evaluate air and surficial dust conditions in the building while the HVAC systems are operating.
5. Review relevant toxicological and epidemiological scientific studies on PCBs to support a current understanding of the potential human health effects associated with exposure.

Notably, surficial wipe samples were not collected during the second phase of investigation as indicated in recommendation #4 because surficial dust conditions in the building were already well

characterized by the December 2023 dataset. We expect that surficial dust sampled in December would reflect dust conditions in the building prior to building closure because surfaces had not been disturbed, except for the limited surface cleaning on the first floor, as described above. The short duration (approximately four weeks) that the HVAC systems had been off at the time surficial dust sample collection would not have diminished the effects of decades of typical activities in the building that affected dust accumulation (such as HVAC operation, routine housekeeping, daily activities by students, staff and faculty).

1.5. Objectives for the Second Phase of Investigation

This second phase of the investigation aimed to address recommendations from the first phase of the investigation (Geosyntec, 2024), to generate a dataset that NCSU can use to support regulatory compliance and long-term decision-making for Poe Hall, and to contribute to the NIOSH health hazard evaluation. The objectives for the second phase of the investigation were as follows:

- Follow up on information collected during the initial phase to examine Poe Hall's HVAC systems and the nature and extent of PCBs in Poe Hall that may be available to building occupants, as described in the preliminary CSM.
- Generate a data set that can form the basis of NCSU's plan for compliance with 40 CFR part 761, which, in turn, will inform NCSU's long-term plan for Poe Hall.
- Generate a data set that can support the health hazard evaluation ongoing by NIOSH to evaluate potential exposures for former occupants, as requested by NCSU.
- Summarize relevant toxicological and epidemiological scientific studies on PCBs to support a current understanding of the potential human health effects associated with exposure, including an evaluation of the strength and consistency of such associations with the relative magnitude of exposures.

2. INVESTIGATION METHODS

This section describes the documents that were reviewed to prepare for the second phase of investigation. It also describes the steps, equipment, and methods used for visually inspecting Poe Hall's mechanical ventilation systems and for collecting and analyzing bulk and air samples.

2.1. Historical Document Review

Turner and Geosyntec reviewed documents supplied by NCSU that spanned from Poe Hall's planning stage in the late 1960s through design, renovations, and periodic building assessments.

2.2. Mechanical Systems Visual Inspection

In January and March 2024, Turner and Geosyntec visually inspected the HVAC systems in Poe Hall, following up on information gathered from document reviews described above. Inspection locations included air handling units (AHUs); hot, cold, and mixed air supply ducts; and return ducts and return air plenums that service floors 1 through 7. Field crews used existing access points and installed temporary access points by cutting through duct metal and finished walls. Where temporary access points were used, NCSU cut into finished surfaces, and Turner cut into ductwork. Note that a generalized discussion and conceptual schematics of Poe Hall's HVAC system components are presented in Section 3; however, names and general locations of system components are used in this section for clarity and reproducibility. Visual inspection method descriptions below are grouped (floors 1 and 2 together, floors 3 through 7 together) in the same manner as Poe Hall's HVAC circulation zones are grouped (see **Figure 2**).

- **Air Handling Unit Compartments:** To inspect internal compartments of the AHU components, field crews removed access doors and metal panels to access filters, fan boxes, and other components. Components were inspected using a flashlight and photographed.
- **Supply Ducts (Floors 1–2):** To access cold and hot air supply ducts that service interior and perimeter rooms, field crews located ducts above ceiling tiles in classrooms, offices, and corridors upstream of mixing boxes. Crews cut approximately 8-by-8-inch holes into each duct using a drill, sheet metal nibbler and metal snips. Insulation materials obstructing the duct opening were cut using a utility knife with disposable blade and then placed on an adjacent surface with the sheet metal exterior on the surface and insulation placed on top of the sheet metal as it was within the ductwork. With duct interiors exposed, they were inspected using a flashlight and photographed. Mechanical rooms do not have drop ceilings, so ducts were accessed and inspected using a ladder and their interiors were accessed through existing duct access panels.
- **Perimeter Room Supply Ducts (Floors 3–7):** Perimeter rooms are serviced by supply ducts housed in the five, exterior concrete “rib” façade features that connect to mixing boxes and diffusers housed in windowsill casework. Crews removed panels on windowsill casework to access mixing boxes and cold supply ducts as described here. Hot air supply ducts required a separate access close to the ceiling, which is also described.
 - **Perimeter Cold Air Supply Ducts (Floors 3–7):** Once cold air supply ducts were accessed by removing the windowsill casework panel, an approximately 8-by-8-inch hole was cut using a drill, sheet metal nibbler and metal snips. Insulation

materials obstructing the duct opening were cut using a utility knife with a disposable blade and then placed on the windowsill with the sheet metal exterior on the surface and insulation placed on the sheet metal as it had been within the ductwork. The duct interior was inspected using a flashlight and photographed.

- **Perimeter Hot Air Supply Ducts (Floors 3–7):** Hot air supply ducts were accessed using a ladder to reach pre-existing duct access panels upstream of elbows as indicated in project specifications. NCSU removed perforated metal panels on finished walls to gain access to existing hot air supply duct access panels. Crews then removed the access panels and inspected the duct interiors using a flashlight and photographed it.
- **Interior Cold and Hot Air Supply Ducts (Floors 3–7):** Interior rooms are serviced by separate hot and cold air supply ducts located above drop ceilings which connect to mixing boxes. A mixed air supply duct extends from the mixing boxes to each corresponding room. Using a ladder, crews accessed hot, cold and mixed air supply ducts by moving aside ceiling tiles and then cutting an approximately 8-by-8-inch hole into each duct using a drill, sheet metal nibbler, and metal snips. Insulation materials obstructing the duct opening were cut using a utility knife with a disposable blade and placed to the side as described in the perimeter ducts above. With duct interiors exposed, they were inspected using a flashlight and photographed. Additionally, crews accessed mixed air supply ducts at the diffusers using a ladder to reach and remove supply grille diffusers located high on the walls. With the diffuser removed, the duct interior was inspected using a flashlight and photographed.
- **Return Air Ducts:** Crews accessed return ducts using a ladder to access and remove return grille diffusers located high on walls. With the diffuser removed, the return duct interior was inspected using a flashlight and photographed. No interior insulation was present to inspect.

Following the visual inspection and sample collection, Turner sealed freshly exposed insulation edges with duct sealant (Design Polymerics Gray Duct Sealant, Model #KK0326), and patched the duct openings created with sheet metal panels, secured with screws. Example photos of duct patchwork are provided in **Appendix B1**. Other than samples sent to the laboratory for analysis, the small amount of waste materials generated during inspections were placed in a labelled drum in the building. The field crew documented the visual inspection in a daily field record and an electronic photolog.

2.3. Bulk Sampling

Bulk samples were collected from locations that were accessed during visual inspections of air handlers, ductwork and selected other materials on January 4 to 5 and March 5 to 8, 2024, as described below. Note that a generalized discussion and conceptual schematics of Poe Hall's HVAC system components are presented in Section 3; however, names and general locations of system components are used in this section for clarity and reproducibility. Sealants located outside ducts are herein referred to as “duct sealants,” whereas sealants located inside of supply ducts are referred to as “insulation sealants.”

- **Pleated Return Air filters:** Using gloved hands, one of 16 pleated air filters was removed from each of the 6 AHU returns. Filter material was removed from its cardboard and metal frame and placed into a labelled sample jar and weighed on a digital pocket scale. The filter frames were placed into a labeled drum within the building.
- **Pocket Return Air Filters:** Using gloved hands and a pair of scissors, a corner of one of 15 filter pockets was cut from the filter material and the cut-out was removed from the AHU return. The cutout filter material was loaded into a labelled sample jar and weighed on a digital pocket scale. The pocket filter that was cut during sampling was placed in a labelled plastic bag and stored on site by NCSU.
- **Insulation Sealants:** Using gloved hands and a utility knife with disposable blades, insulation sealants from the inside of supply air ducts were carefully cut away from fiberglass insulation fibers and insulation facing. Sealant was loaded into a labelled sample jar and weighed on a digital pocket scale.
- **Insulation Facing:** Using gloved hands and a utility knife with disposable blades, insulation facing from the inside of supply air ducts was cut away from fiberglass insulation fibers and insulation sealants. Insulation facing was loaded into a labelled sample jar and weighed on a digital pocket scale.
- **Insulation Fibers:** Using gloved hands and a utility knife with disposable blades, fiberglass insulation fibers from the inside of supply air ducts were cut away from insulation sealants and facing. Insulation fibers were loaded into a labelled sample jar and weighed on a digital pocket scale.
- **Insulation Adhesives:** Using gloved hands and a disposable razor blade, exposed insulation adhesives were scrapped from the AHU fan box floor and access panels to mixing boxes, then loaded into labelled samples jars and weighed on a digital pocket scale.
- **Supply Air Filters:** Using gloved hands, eight of more than 100 pleated air filters were removed from windowsill supply grilles in perimeter spaces. The filter material was removed from its cardboard and metal frame and placed into a labelled sample jar and weighed on a digital pocket scale. The filter frames were placed into a labeled drum within the building.
- **Duct Sealants:** Using gloved hands and a disposable razor blade, duct sealants on the exterior seams of supply air duct sections were scraped from duct sheet metal and loaded into labelled sample jars, then weighed on a digital pocket scale.
- **Foamboard Construction Adhesive:** Using gloved hands, construction adhesive on the wall from a detached foamboard wall panel in a mechanical room was chipped away from the wall and loaded into labelled sample jar and weighed on a digital pocket scale.
- **Indoor Window Caulk:** Using gloved hands, window caulk from perimeter rooms was cut with a utility knife with disposable blades and pried upwards at the edge of the windowsill. Then, the cut edge was firmly grasped with gloved fingers and pulled while simultaneously scrapping underneath with a screwdriver to remove from the windowsill.

Then, the window caulk was loaded into a labelled sample jar and weighed on a digital pocket scale.

At least 10 grams of each sampled bulk material were collected in 4-ounce glass jars provided by EMSL Analytical, Inc. (EMSL); the empty glass jars were used as tare weights for the digital pocket scale. To avoid cross-contamination, gloves were replaced and cutting tools were either replaced or cleaned with alcohol-moistened paper towels between samples. After collection, samples were shipped on ice under chain-of-custody protocol to EMSL of Cinnaminson, New Jersey, to be extracted by USEPA method SW846/3540C and analyzed for the nine common PCB Aroclors (Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, and Aroclor-1268) by USEPA method SW846/8082A.² Sample IDs included information to identify material types and locations. Two sample identification nomenclatures were used as follows: Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-##-TYPE-####-mmddyyyy) or Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-##-TYPE-TYPE-LOC-####-mmddyyyy). Field crews applied new duct sealant inside supply ducts to areas where insulation materials were cut during sample collection. Example photos of duct patchwork are provided in **Appendix B1**. The small amount of waste materials that were generated during sampling were placed in a labelled drum and stored inside the building.

2.4. Air Sampling

Collecting air samples involved first returning HVAC systems to operation and then deploying air sampling equipment.

2.4.1. Plan for HVAC Return to Service

After consulting with USEPA, NCSU restarted Poe Hall’s HVAC systems on April 16, 2024 in preparation to collect air samples. Each AHU was inspected following a checklist, started, and then set to run continuously for approximately two days while the systems worked to achieve set points for flow and temperature, and to identify any component failures and repair them as needed. Existing filters were left in place and the original temperature set points for rooms that were input by faculty and staff remained. After the two-day startup period, systems were switched to operate in alternating “occupied” (4 a.m. to 11 p.m.) and “unoccupied” (11 p.m. to 4 a.m.) modes for another five to seven days when indoor air sampling would begin. The systems remained in alternating “occupied” and “unoccupied” modes through air sampling completion, the same modes used when Poe Hall was in service and fully occupied.

2.4.2. Air Sampling Methods

Geosyntec began air sampling eight days after the return of Poe Hall’s HVAC systems to service, beginning April 24 and ending April 27, 2024. This separation between startup and sampling is appropriate for approximating the long-term conditions which all building occupants prior to

² In USEPA’s Technical Guidance (2021), the agency recommends that all samples should be analyzed by EPA SW-846 Method 8082A for the nine common Aroclors and cautions that congener analysis by Clean Water Act Method 1668C may be used with EPA approval. However, “this method is not one of the determinative methods in the PCB regulations... and is more likely to experience laboratory background contamination which could lead to data interpretation problems.” Therefore, samples for this investigation were analyzed for the 9 common Aroclors and not for congeners.

November 2023 had experienced. Sampling air at the time of HVAC startup would have included conditions in the building that rarely, if ever, existed while it was occupied prior to November 2023.

Geosyntec sampled indoor and outdoor air from the same locations in Poe Hall that were sampled in December 2023. Sample locations were selected to include multiple samples from each of the seven building floors and rooftop, from most types of rooms, and from each of the four HVAC circulation zones. Offices, classrooms, laboratories, a library, and a bathroom were sampled. These room types constitute the majority of rooms and square-footage of the building.

Air samples were collected by drawing air through a laboratory-provided low-volume sampling cartridge with a calibrated Gillian GilAir Plus air sampling pump. Sampling cartridges contained either a polyurethane foam (PUF) or a PUF/XAD® material and were attached to the continuous-flow air sampling pump for a total of 24 hours. Both sorbent media are compatible with USEPA Method TO-10A. Air was sampled within the time window when the HVAC system operated in occupied mode (4 a.m. and 11 p.m.). Typically, each air sample was collected over 12 hours the first day and 12 hours the following day for a total sampling period of 24 hours. The pumps were paused, and sampling cartridges were sealed with aluminum foil overnight after the first 12-hour sampling period. Aluminum foil was removed from the sampling cartridges and pumps were restarted the following morning for the second 12-hour sampling period. The 24-hour sampling duration was selected to achieve laboratory reporting limits that were lower than the most stringent of USEPA's risk-based Exposure Levels for Evaluating PCBs in School Indoor Air (0.100 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] for most PCBs). The PUF cartridges capture pollutants from air that is pumped through them. Each PUF sample cartridge was positioned on a tripod set approximately 1–2 meters above floor level with the intake pointed downward or horizontally. Pumps were placed on flat surfaces that were covered in plastic sheeting and connected to a PUF sampling cartridge with tubing. Air sample designations were generated as (A [for air sample] – unique sample identifier [01 through 15] – room # - date [MMDDYY]). After collection, samples were shipped on ice under chain-of-custody protocol to EMSL of Cinnaminson, New Jersey, to be extracted by USEPA Method TO-10A and analyzed for PCB Aroclors by USEPA Method TO-10A.

3. INVESTIGATION RESULTS AND OTHER RELEVANT DATA

This section describes the findings from reviewing historical documents, and results of the visual inspections and bulk and air sampling.

3.1. Historical Document Review Results

The findings from document reviews are presented, followed by a generalized description of HVAC zones and air circulation in Poe Hall.

3.1.1. Document Reviews

Poe Hall's original design plans show how the system's ducts were designed to be laid out, identified equipment locations, established intended airflow pathways, and specified that supply ducts were to be lined on their interiors with insulation, and that exposed insulation faces were to be sealed. Poe Hall was built with a mechanical system that uses separate hot and cold air supply ducts mixed at the point of use to maintain individual space temperatures. Both hot and cold air are produced at each air handler simultaneously. It is atypical both for HVAC mechanical systems to be configured with dedicated hot and cold supply ducts and for insulation to line their entire lengths, but it is especially uncommon practice to include both elements in the same system. Six air handlers feed four separate building zones with ductwork passing through mechanical shafts, exterior ribs, and interior ceilings. Poe Hall has four air handler mechanical spaces that correspond with each of the four HVAC zones (**Figure 2**). Six air handlers are present within the four mechanical spaces. Two air handlers are on the first floor and four air handlers are in penthouse mechanical spaces on the roof. Hot and cold air supply duct mixing boxes can be found around the perimeter casework of the building as well as in ceilings.

Air handler mechanical rooms function as open plenums where outside air is mixed with return air. Air handlers distribute supply air through supply ductwork to occupied spaces. Return air travels from the occupied space through ducts that terminate at shaft walls. Return air is released into the open mechanical shafts leading to the mechanical space. Original project specifications indicate widespread use of duct liner, fire-retardant insulations adhesives, fire-resistant breather mastics, and, in general, "sealants." Documents indicate these materials will be on both the interiors and exteriors of ductwork throughout the building.

A 2010 controls upgrade project indicated the replacement of many mixing boxes and air control valves. Most new mixing boxes serve interior rooms as well as some perimeter rooms on the second floor. Most new air valves serve existing mixing boxes in perimeter rooms.

Construction documents provided information useful to selecting HVAC sampling locations that broadly cover system components in all four HVAC zones. Project specifications provided insight into materials used and where they may be found.

3.1.2. HVAC Zones and Air Circulation

Based on the document review, Turner constructed generalized schematics of Poe Hall's HVAC systems to conceptualize air circulation in the building. Schematics are shown on **Figures 3, 4 and 5** and described as follows. Poe Hall's HVAC systems use commercial AHUs to direct air flow through hot and cold coils. The air is either heated or cooled and dehumidified by flowing over the respective coils before entering dedicated hot and cold air supply ducts. Hot and cold air travel

separately in their respective ducts until they reach mixing boxes located near or inside rooms. Room occupants set a desired temperature, and, in response, hot and cold dampers on the mixing box open or close to achieve the desired temperature in the mixing box. Mixing box air is then supplied to the room. Air circulating in the room is subsequently drawn into an independent set of return ducts. Return ducts from multiple floors tie into a vertical mechanical shaft. Return air flows back to the AHU within the open shaft space outside of ductwork. During occupied conditions, outdoor air (fresh air) is mixed with return air in the mechanical room before it is drawn through two sets of filters in the air handler and redistributed to hot and cold coils and their respective supply ducts. Relief fans (not shown) are used as needed to remove air from the penthouse mechanical spaces and offset the incoming volume of outside air.

Poe Hall is divided into four (4) HVAC circulation zones (**Figure 2**) that each function as described above with some differences. Air circulation Zone 1 covers approximately the eastern half of floors 1 and 2 and is served by AHU number 1 in its own mechanical room on the first floor. AHU number 2, also in its own mechanical room on the first floor, serves the western half of floors 1 and 2. Return air is drawn into vertical shafts, one on the east and one on the west side, that span both floors 1 and 2. Similarly, service to floors 3 through 7 is split east and west; return air is drawn to separate vertical shafts that span floors 3 through 7 and each zone (Zone 3 to the east and Zone 4 to the west) is served by AHUs housed in penthouse mechanical rooms. Return shafts serving floors 1 and 2 are directly below return shafts serving floors 3 through 7. The third floor separates the vertical shafts. Zones 3 and 4 are each served by two AHUs that work in tandem (**Figure 2**). Hot and cold air supply duct interiors are lined with insulation, and main supply air ducts are run inside of all four return shafts. Branch supply ducts exit the shafts at each floor.

3.2. Mechanical Systems

The results of the visual inspections from January and March 2024 are summarized, followed by the steps that NCSU followed when restarting and operating Poe Hall's HVAC systems in April 2024.

3.2.1. Visual Inspection Results

Various ventilation system components and building materials were observed throughout Poe Hall. Insulation was observed on the exterior of return ducts and in the interior of supply ducts. Insulation and insulation adhesives were found on the inside surfaces of metal access panels to mixing boxes, as well as inside AHUs in mechanical rooms. Sealants were found applied to metal duct surfaces where two segments of duct were joined. Sealants were observed on the cut edges of insulation inside of supply ducts at insulation seams. Various colors of sealants were observed including red, gold, gray and black. Filters were found on the influent side of air handling units in mechanical rooms and inside supply vents on perimeter room terminal mixing boxes on floors 3 through 7.

As part of the investigation, Geosyntec and Turner visually inspected bulk materials in the four air handler mechanical rooms, six AHUs, 12 hot air supply ducts, 19 cold air supply ducts, five mixed air supply ducts, three perimeter mixing boxes housed under windowsill casework, and one return duct. Ductwork was inspected on floors 1 through 7 in all four HVAC zones, in hallways and in interior and perimeter rooms. Visual inspection results are summarized in **Table 1**. Example photos are provided in **Appendix B2**. Visual Inspection results are described in the following

subsections (Supply ducts, Air Handlers, Return Ducts, Sealants and Other Locations and Materials):

3.2.1.1. Supply Ducts

Geosyntec and Turner visually assessed the nature and areal extent of insulation materials within the interior of supply ducts. The design drawings specified insulation along the entire lengths supply ducts, and Geosyntec observed it at all 37 supply duct visual inspection locations on all floors in all zones (see photograph ID 1-12 in **Appendix B2**). Insulation materials that line the internal surface areas of supply ducts contain 5 components (see **Figure 6**):

- **Insulation sealants:** various elastic sealants applied to exposed edges of insulation at the seams of duct sections
- **Insulation pins:** metal pins used to mechanically anchor insulation to the galvanized duct
- **Insulation facing:** a black textile material bonded to the top side of the insulation
- **Insulation fibers:** thermal/acoustic yellow fiberglass
- **Insulation adhesive:** various glues used to adhere fiberglass insulation to galvanized duct and to mechanical insulation pin tops

The insulation material inside supply ducts was almost completely intact where observed, with some signs of wear. The insulation fibers and insulation sealants along edges appeared intact, and the insulation facing was often discolored and occasionally torn. Discoloration was frequently observed on the surface of insulation facing, including fading, darkening and discoloration associated with dust/debris deposits (see photograph ID 15 - 19 **Appendix B2**). Most of the observed surface area of the facing was intact, but various tears and patches of different sizes were present (see photograph ID 20 - 25 in **Appendix B2**). While occasional small tears (smaller than approximately 3 centimeters) were observed in 32 inspected ducts, larger torn patches were observed in eight inspected ducts. Insulation was compressed forming a small dent in the insulation facing and fibers in two inspected ducts (see photograph ID 26 in **Appendix B2**). The insulation sealants were almost universally in good condition. They covered the seams between sections of insulation, and exposed insulation was only observed where the facing material was torn. The sealants were generally sturdy and difficult to peel away from the insulation materials (see photograph ID 31 - 36 in **Appendix B2**). A greenish insulation adhesive was also observed under insulation fibers where Geosyntec and Turner pulled back insulation from duct sheet metal to inspect them (see photograph ID 13 in **Appendix B2**). Ducts sealants were observed at the exterior seams of every duct section including red, gold, gray and yellow sealants (see photograph ID 37 - 40 in **Appendix B2**). Air turning vanes were observed at duct elbows (see photographs ID 10 and 11 in **Appendix B2**).

3.2.1.2. Air Handlers

Internal insulation was observed in each AHU. The insulation fibers on the walls and ceiling of the fan box were intact with discolored insulation facings. However, the insulated floor inside fan boxes was significantly worn. Patches of insulation fibers and insulation facing had torn away from the insulated floor of each AHU fan box. Due to the patches of missing insulation materials,

the pink insulation adhesive used to adhere the original insulation was exposed on the fan box floor (see photograph ID 27 in **Appendix B2**). Insulation sealants and insulation pins were not observed inside the fan box or coil sections.

3.2.1.3. Return Ducts

The design drawings specified return ducts to be insulated externally, and Geosyntec did not observe internal insulation in one return duct interior that was visually inspected. Behind the return grille on the inspected return duct, exterior insulation materials were visible on the exterior of the ductwork (see photograph ID 29 in **Appendix B2**). Foil-faced insulation was frequently observed on return duct exteriors above ceiling tiles when inspecting nearby supply ducts.

3.2.1.4. Sealants

Various colors of insulation and ducts sealants were observed on the interior and exterior of all visually inspected supply ducts. Sealants, in good condition, were observed on interior duct sections, insulation pins, and exterior ducts sections, and were observed approximately every 1–4 feet of interior supply duct length. The most abundant insulation sealant observed was gold in color (see photograph ID 31 in **Appendix B2**). Gold, red, black, and gray colored insulation sealants were observed in 35, 21, 3, and 1 location(s), respectively (see photograph ID 31 - 36 in **Appendix B2**). The sealants were found around the seams of duct sections and access panel door frames. Gold sealant around seams and red sealant on the interior door frames of access panels was common (see photograph ID 33 in **Appendix B2**). Red sealant overlaid on gold sealant on the interior seams at duct sections was common and observed in 14 inspected supply ducts (see photograph ID 34 in **Appendix B2**). Black sealant was rare and observed on seams at two locations and on insulation fasteners at one location (see photograph ID 35 in **Appendix B2**). Red, gold, and gray duct sealants were also observed on the exterior seams of ducts sections (see photograph ID 37 - 40 in **Appendix B2**). The most common duct sealant was red and was often overlaid with gold colored duct sealant (see photograph ID 38 in **Appendix B2**). Gray duct sealant was only observed in AHU mechanical rooms (see photograph ID 39 in **Appendix B2**). In some cases, it appeared that both insulation adhesives and insulation sealants had been used to adhere insulation pins (see photograph ID 14 in **Appendix B2**). A schematic cutaway of typical supply ducts is shown on **Figure 6**.

3.2.1.5. Other Locations and Materials

Mixing boxes, filters, construction adhesives and window caulk were also observed during the visual inspections (see **Appendix B2** for example photos). Insulation was observed in three out of three inspected mixing boxes under supply grille diffusers in windowsill casework. The insulation around the mixing boxes was fiberglass with foil scrim kraft facing. On the backside of some mixing box access panels, the insulation was either unfaced or was missing. Where insulation was missing, a pink insulation adhesive was observed (see photograph ID 28 in **Appendix B2**). In addition, a white foamboard insulation material was observed on the precast concrete ribs in windowsill casework along the building perimeter. Black window caulk was observed on windows in perimeter offices and classrooms (see photograph ID 45 - 46 in **Appendix B2**).

The walls of mechanical rooms where air handlers are housed are insulated with foamboard. Foamboard insulation panels are adhered to the wall with a foamboard construction adhesive. In the mechanical room housing AHU 1, some foamboard panels lost adhesion to the wall and the

dried and cracked adhesive was exposed (see photograph ID 30 in **Appendix B2**). The adhesive was flakey, and deposited flakes were observed on the floor and a nearby ledge. Foamboard insulation was visible in mechanical shafts. Each air handler has a return section with rows of pleated air filters (see photograph ID 41 in **Appendix B2**) followed by rows of pocket air filter (see photograph ID 42 in **Appendix B2**), whereas terminal supply filters were only observed in perimeter windowsill supply grilles on floors 3-7 (see photograph ID 43 - 44 in **Appendix B2**).

3.2.2. Restart and Operation of HVAC Systems

After consulting with USEPA, NCSU Facilities restarted Poe Hall's HVAC systems on April 16, 2024 in coordination with Geosyntec and Turner to prepare for collecting air samples. NCSU Facilities inspected and restarted the six AHUs using the steps described here and in accordance with a checklist. Before startup, checks included turning on the steam and chilled water pumps and verifying that control valves were operating properly. A visual inspection was performed on pulleys and belts, cooling and heating coils, piping and valves, dampers and actuators, and on the drain and condensate pan. The motor and fan bearings were lubricated, and the fan and blades were inspected. Filters were visually inspected for mold or damage; no mold or damage was noted other than the pleated and bag filters that had been cut for bulk sampling in March 2024. On AHUs 1 and 2, one of the 16 pleated filters and one of the 15 pocket filters were replaced on each. On AHUs 3-6, one pleated filter was replaced on each; NCSU ordered replacement bag filters for AHUs 3-6 and left the cut bag filters in place. Completed startup checklists are included in **Appendix C**.

After the AHUs were turned on, NCSU monitored system performance for approximately two days (April 16–18, 2024) running in occupied mode until setpoints were reached and maintained. On April 16, 2024, AHU 6 switched off by itself and was restarted manually on April 17, 2024. AHU 1 would not operate continuously at full speed so it was set to operate at 30 Hertz, which is 50% run speed. On April 17, 2024 NCSU replaced a 24-volt power supply (Schneider Electric SpaceLogic Model PS-24V) that had failed. The power supply allows the building automation system graphics and status of relief fans 1 and 2 to be visible on-line for AHUs 3 and 4. No other materials or components were removed or replaced.

On April 18, 2024 the systems were switched to the typical weekday operating schedule of alternating occupied and unoccupied modes. Occupied mode runs from 4 a.m. to 11 p.m. and unoccupied mode runs from 11 p.m. to 4 a.m., the same operating schedule that NCSU used in Poe Hall before the building was closed in November 2023. This alternating occupied/unoccupied schedule was maintained from April 18, 2024 through the start of air sampling on Wednesday April 24 to Saturday April 27, 2024 when air sampling was completed. On Saturday April 27, 2024, the units were set to continue the same schedule so that it would not switch to an energy-saving weekend mode according to the automated schedule. HVAC systems were operated using the existing space temperature settings that faculty and staff had used in each room prior to building closure. HVAC systems were set to override the “economizer” mode which typically would make use of temperate, dry outdoor air when available by opening outdoor air dampers to reduce energy consumption. Instead, during use of the occupied mode, the outdoor air damper was set to 10% and during use of the unoccupied mode the outdoor damper was set to 0%.

As of April 18, 2024:

- AHUs were running at 100% except AHU #1 running at 50%
- Relief fans on the mechanical penthouses were functional
- Outdoor air damper was set to 10% when in occupied mode and 0% in unoccupied mode

On April 30, 2024, HVAC operation was set to an energy savings schedule.

3.3. Bulk Sampling Results

Geosyntec collected 111 samples of bulk materials from floors 1 to 7. These samples included insulation sealants (39); insulation facing (36); pleated supply air filters (8); pleated return air filters (6); pocket return air filters (6); insulation fibers (6); interior window caulk (4); insulation adhesives (3); duct sealants (2); and foamboard construction adhesive (1). Sealants are present in five colors with gold being the most abundant and most frequently sampled. The colors of sealants that were sampled were gold (20), red overlaid on gold mixtures (14), red (3), black (2), and gray (2). **Figures 7a through 7h** show bulk sample collection locations on each floor.

The laboratory (EMSL) reported results for the nine common PCB Aroclors. Laboratory reporting limits for bulk samples (0.50 parts per million [ppm]) were well below the Toxic Substances Control Act (TSCA) “PCB Bulk Product Waste” criterion for total PCBs (50 ppm). Geosyntec checked each laboratory sample data group using a level 1 data quality checklist. Results are summarized in **Table 2**. Laboratory reports are included in **Appendix D**. Example photos of bulk sample locations for each material type are in **Appendix B3**.

PCBs were detected in all bulk samples collected from January 4 to 5 and March 5 to 8, 2024. The laboratory reported Aroclor-1262 detections in 110 out of 111 bulk samples (including 1 duplicate) with concentrations ranging from 0.91–53,000 ppm, and reported other Aroclors in a small number of samples. Aroclor-1242 was detected twice, and Aroclor-1254 and Aroclor-1260 were each detected once. Aroclor-1242, Aroclor-1254, and Aroclor-1262 were each detected in a single sample of foamboard construction adhesive from an air handler mechanical room; concentrations ranged from 8–13 ppm. Aroclor-1242 and Aroclor-1262 were both detected in a single sample of gray insulation sealant at concentrations of 1.9 ppm and 11 ppm, respectively. Aroclor-1260 was detected in a single sample of pink insulation adhesive from the AHU 1 fan box with a concentration of 2,500 ppm; Aroclor-1262 was not detected in this sample. Of the 111 unique bulk samples analyzed, PCB concentrations exceeded the TSCA “PCB Bulk Product Waste” criterion in 103 samples (USEPA 2021).

Concentrations of Aroclor-1262 were greatest in insulation sealants and lined duct insulation facing. Average concentrations of Aroclor-1262 in insulation sealants and insulation facing were at least one to two orders of magnitude higher than concentrations in other materials (**Tables 3 and 4**). Aroclor-1262 concentrations in insulation sealants were 14,485 ppm, on average, and ranged from 11–53,000 ppm. Gold sealant concentrations ranged from 900–53,000 ppm, with an average of 15,169 ppm, and gold/red sealant mixture concentrations ranged from 330–48,000 ppm, with an average of 18,552 ppm. Red and black sealant generally had lower concentrations, with averages of 395 ppm and 495 ppm, respectively. Analysis of a single sample of gray insulation sealant produced a result of 11 ppm. The Aroclor-1262 concentration in the black insulation facing was 2,762 ppm, on average, and ranged from 82–24,000 ppm. Three insulation facing samples had

concentrations between 21,000–24,000 ppm, but concentrations in the remaining 33 samples of facing were much lower, ranging from 82–2,400 ppm.

Concentrations of Aroclor-1262 in red and gray duct sealants, insulation fibers, insulation adhesives, supply/return filters, construction adhesives, and indoor window caulk were all less than 1,000 ppm. Insulation fibers, insulation adhesives, and duct sealants had Aroclor-1262 concentrations in the range of 1–480 ppm, 260–770 ppm, and 19–240 ppm, respectively. PCB concentrations on pleated return filters and pocket return filters ranged from 11–93 ppm and 110–340 ppm, respectively, which were approximately 25%–75% lower, on average, than pleated supply filters which ranged from 50–570 ppm. Interior window caulk and foamboard construction adhesive also contained Aroclor-1262 in the range of 46–190 ppm for caulking and 8 ppm for the adhesive. The results organized by material type are summarized in **Table 3**.

Concentrations of PCBs in bulk materials were generally higher in HVAC zone 4, which is serviced by AHUs 5 and 6. The average concentration of PCBs in gold sealant and red overlaid on gold sealant mixtures was 25,923 ppm in HVAC zone 4 and ranged from 9,374–15,025 in the other HVAC zones. Except for the three samples of insulation facing with concentrations ranging from 21,000–24,000 ppm from HVAC zone 3, the average PCB concentration in insulation facing was 1,073 ppm in HVAC zone 4 and ranged from 541–894 ppm in the other HVAC zones. When the three samples are included, the average PCB concentration in insulation facing was highest in HVAC zone 3 at 4,795 ppm. A similar trend was observed for pleated supply filters that ranged from 50–400 ppm and 120–570 ppm in HVAC zones 3 and zone 4, respectively; supply grilles did not contain filters on floors 1 and 2, which are serviced by HVAC zones 1 and 2. The bulk sample results summarized by HVAC zone for selected material are summarized in **Table 4**.

3.4. Air Sampling Results

Geosyntec collected air samples in April 2024 from the same locations in Poe Hall that were sampled in December 2023. The April 2024 sample set included 14 indoor air samples, one outdoor air sample from the rooftop, three duplicates, and one blank. Sample locations were selected to include multiple samples from each of the seven building floors and rooftop, from most types of rooms, and for each of the four HVAC circulation zones. Room types sampled included offices, classrooms, laboratories, a library, and a bathroom. **Figures 7a** through **7h** show air sample collection locations on each floor.

Geosyntec collected air samples on PUF/XAD® cartridges for a total of 24 hours spanning different time periods from April 24 to April 27. Twelve indoor air samples, three indoor air duplicates (collected from Rooms 106, 402G, and 742) and one outdoor air sample were collected on April 25; one indoor air sample was collected on April 26; and one indoor air sample was collected on April 27. Typically, indoor air was sampled for 12 hours on April 24 and 12 hours on April 25 when the HVAC operated in occupied mode. One indoor air sample (Room 510E) had a sampling period that spanned 8.3 hours on April 24, 12.6 hours on April 25, and 3.1 hours on April 26 because the pumps used to draw air through the sampler stopped pumping several hours after beginning on April 24. Geosyntec accessed the electronic log in each pump that recorded the start and stop times and used the logs to restart the pump to run for the balance of hours needed to complete a 24-hour sample time. One indoor air sample and its duplicate (Room 402G) were sampled for 13.7 hours on April 26 and 10.3 hours on April 27, using PUF/ XAD® resin collection medium. Due to market supply limitations for the cartridges used to collect samples, PUF

cartridges were used to collect 16 samples, and PUF/XAD® resin cartridges were used to collect two samples. Both sorbent media are compatible with USEPA Method TO-10A.

Aroclor-1262 was detected in each indoor air sample (concentrations ranged from 0.077-0.155 µg/m³) and was not detected in the outdoor air sample. No other Aroclors were detected in air samples. A summary of laboratory data is presented in **Table 5**. Geosyntec checked each laboratory sample data group using a level 1 data quality checklist. Laboratory reports are included in **Appendix E1**, and air sampling field forms are included in **Appendix E2**.

All indoor air sampling results from both April 2024 and December 2023 were below the USEPA Exposure Levels for Evaluating PCBs in School Indoor Air for adults and age cohorts three years and older (USEPA, 2015b). USEPA notes that these exposure levels are not intended to be “bright line” or “not-to-exceed” criteria and are intended to maintain PCB exposures below the oral reference dose (RfD) of 20 nanograms of PCBs per kilogram of body weight per day, which is a daily exposure that is unlikely to pose a significant risk of harm over a lifetime of exposure (USEPA, 2015b). USEPA calculated the school indoor air PCB concentrations that would result in an estimated total exposure equal to the RfD when all other school and non-school PCB exposure pathways were set to average background levels (USEPA 2015b).

Concentrations of Aroclor-1262 in indoor air varied very little by floor or HVAC zone. The average Aroclor-1262 concentration in air was 0.103 µg/m³ on floors 1-2 and 0.120 µg/m³ on floors 3-7. Indoor air results for Aroclor-1262 grouped by floors 1–2, floors 3–7, and HVAC zone are presented in **Table 6**.

Indoor air results obtained in April 2024 when the HVAC was in operation were compared to results obtained in December 2023 when the HVAC systems were off. Indoor air concentrations of Aroclor-1262 measured with HVAC systems on were higher than the concentrations measured when the HVAC systems were off. A narrower range of concentrations were observed across building zones in April 2024, which indicates a higher degree of air mixing and circulation with the HVAC system enabled, as expected. Indoor air results from December 2023 and April 2024 are both presented in **Tables 5 and 6**.

3.5. Summary of Other Relevant Data

Other environmental data from Poe Hall that are relevant to this investigation are summarized in **Appendix F**. **Figures 7a** through **7h** show wipe sample collection locations on each floor.

4. DISCUSSION AND REVISED CONCEPTUAL SITE MODEL

The information collected during the initial and second phases of this investigation and other relevant data referenced above are analyzed and presented in a revised CSM comprising an updated discussion of PCB sources, PCB transport and considerations for potential human exposure. The preliminary CSM in the initial phase report assumed that the primary mechanism by which building occupants potentially could be exposed to PCBs would be through contacting or respiring PCBs adsorbed to dust, and that dust is conveyed and distributed by the building's six AHUs and duct network. Sources of PCBs to dust would be located inside the HVAC system components, in contact with flowing air.

4.1. PCB Sources

Data from the second phase of investigation and from earlier sampling conducted by NCSU are consistent with the presence of PCB-containing materials throughout supply ducts in contact with flowing air that could act as sources of PCBs to dust in Poe Hall. Data show that bulk materials (including fiberglass insulation, insulation facing and sealants) are present on the interior of air supply ducts at all inspected locations consistent with the design drawings that specified insulation lining the inside of supply ducts along their entire lengths (**Figure 6**). Analytical data and this evaluation indicated that PCBs were present in all bulk material types tested, but the gold-colored insulation sealant inside supply ducts was the most prevalent and was likely manufactured with PCBs; therefore, the gold-colored sealant was likely the primary source of Aroclor-1262 PCBs detected in Poe Hall. The gold-colored sealant was the most frequently observed sealant, and more than half of the gold sealant samples analyzed contained Aroclor-1262 at concentrations of approximately 10,000 to 50,000 ppm.

Other potential sources of PCBs (such as transformer oil, light ballast, adhesive and caulk) are unlikely to have been significant contributors to the observed distribution of Aroclor-1262 in surficial dust or air in the building. For example, PCBs were known to be present historically in an electrical transformer and in light ballasts, and were detected in some bulk materials that are not on the interior of supply ducts, such as duct sealants, exterior insulation, filters, caulk and foamboard adhesives. PCBs were also detected in other bulk materials collected inside of supply ducts including insulation, insulation facing and insulation adhesive. None of these potential sources of PCBs likely contributed significantly to PCBs on dust distributed in Poe Hall based on the following rationale:

1. The transformer's oil was replaced in 1991 and only contained a trace of PCBs at that time. It was replaced in 2012 with a non-PCB containing transformer that was manufactured in 2008; therefore, the transformer could not have acted as a source of PCBs to the building.
2. All light ballasts were replaced by 2010, which means that lighting systems cannot act as a continuing source of PCBs.
3. If either the transformer or the light ballasts were acting as sources of PCBs to Poe Hall in 2023 and 2024, the resulting distribution of PCBs in the building would be expected to be more uneven than what was observed in air or surficial dust samples collected since 2023. Rather, the distribution would likely be focused on areas where transformer oil could enter the building or where a PCB-containing light ballast had been missed or had leaked. Furthermore, more than a decade of routine housekeeping would likely have reduced PCB

concentrations below detectable levels in much of the building if these sources were important.

4. All analyses of bulk samples collected in 2024 (except for three insulation facing samples discussed in Section 4.2) reported much lower concentrations of Aroclor-1262 than in gold insulation sealant samples.
5. Window caulk samples from 2018 that did report relatively high total PCB concentrations, reported Aroclors-1254 and -1268, which were not detected in any air sample. Aroclor-1254 was detected in 1 of 77 surface dust samples at 2 ppm.
6. An insulation adhesive sampled from an AHU fan box reported Aroclor-1260 at 2,500 ppm; and trace amounts of Aroclors-1242 and -1254 were reported in foamboard adhesive in a mechanical room. These Aroclors were not detected in any air or gold-colored sealant sample, and Aroclor-1254 was detected in 1 of 77 surface dust samples at 2 ppm.

Based on this review, we presume that the widely-distributed gold-colored insulation sealant was the primary source of PCBs, that the gold sealant was manufactured to contain Aroclor-1262, and that both the fiberglass insulation and insulation facing were not manufactured with PCBs.

4.2. PCB Transport

The data collected during this investigation support the hypothesis that PCBs from bulk materials in supply ducts diffused into materials in direct contact with the sealant, adsorbed onto dust, and were transported via the HVAC systems to air and surfaces of Poe Hall.

Aroclor-1262 PCBs in the gold-colored sealant began their transport by diffusing into materials in direct contact with the sealant. The first such materials would have been some insulation facing and some red-colored sealant. This conclusion is supported by laboratory results from 11 red overlaid on gold sealant mixtures and from three samples of insulation facing. These samples that had been in contact with gold sealant averaged approximately 10,000–50,000 ppm Aroclor-1262, overlapping with the upper concentration range of gold sealant. From the insulation facing, some PCBs diffused into insulation fibers underneath. From gold and red sealants and some insulation facing, some PCBs also diffused into dust that came into contact as it migrated through supply ducts. In addition, insulation facing eroded after many years of airflow in supply ducts, also forming dust with PCBs adsorbed.

Other lines of evidence are also consistent with transport of PCBs dust from bulk materials in supply ducts to air and surfaces in Poe Hall. Aroclor-1262 was by far the most frequently detected Aroclor in bulk samples collected from inside supply ducts, in surficial dust wipe samples, and in indoor air samples. Aroclor-1262 was detected on dust collected from surfaces and in air samples collected in all four HVAC circulation zones and on all floors. All filters tested had only Aroclor-1262 reported, and in a narrow range of concentrations similar to other bulk materials like insulation fibers and exterior duct sealants. Pleated filters used in supply grille diffusers in individual rooms had slightly higher concentrations than either the pleated or pocket filters used at AHU returns. This result on filters is consistent with the fact that all filters were manufactured

without PCBs, decades after 1979, and with the mix of air that each type of filter would encounter during its life. Filters used in diffusers would have encountered 100% of their air that was just exiting supply duct systems, whereas filters at AHU returns would encounter a mix of return air and outdoor air. Outdoor air would introduce dust containing no PCBs. These results are consistent with filters tested having acquired PCBs by collecting PCB-bearing dust.

PCB-bearing dust migration from supply ducts may be a more recent change in conditions relative to the age of the building. Diffusion is a slow mass transport process, and the insulating facing's function was to stay intact for years to resist erosion of insulation fibers.

The discussion in Section 3.1 and conceptual schematics shown on **Figures 3, 4 and 5** present how air circulation works in Poe Hall. This understanding of HVAC systems and the observed PCB concentrations in sealants, insulation facing, other bulk materials, surficial dust and air are consistent with the following sequence that likely took years to progress:

1. PCB Aroclor-1262 originated in gold-colored insulation sealant.
2. PCBs migrated by diffusion into adjacent materials where they were in contact, including insulation facing and overlaid red sealant.
3. PCBs diffused onto dust where it settled on gold and red sealants and insulation facing. That dust originated from both (a) outside the HVAC system by getting through or around filters as very small particles and (b) inside the HVAC system, for example as insulation facing inside of supply ducts that contained some PCBs began to erode and break away as dust.
4. Dust with adsorbed PCBs circulated in the building, and some dust settled onto surfaces.

4.3. Considerations for Potential Human Exposure

The Aroclor-1262 PCBs present in sealants and insulation facing at higher concentrations were not accessible to Poe Hall occupants because those sealants and insulation facing materials are present inside ducts, on the outside of ducts, and in mechanical rooms behind locked doors.

Although relatively high concentrations of Aroclor-1262 PCBs were detected in source materials, such as sealants and insulation facing, the data do not support that PCB concentrations in air exceed applicable risk-based thresholds. The data are consistent with the revised CSM discussed in this report, supporting the concept that the primary mechanism by which building occupants potentially could be exposed to PCBs would be through contacting or respiring PCBs adsorbed to dust. The presence of PCBs in building materials at any concentration does not translate directly to either exceedance of a risk-based threshold or to exposure that is atypical. Typical PCB uptake in people nationwide comes from a combination of air in tens of thousands of buildings and from foods. Here, the data show that where PCBs were detected in surficial dust, nearly all results were below the USEPA PCB threshold for non-porous surfaces in high occupancy areas. All results in air samples showed PCB concentrations below the USEPA exposure levels for evaluating PCBs in school indoor air for adults and cohorts age three years and above both with the HVAC systems

off and with them running. Dust is the relevant medium to sample in air and on surfaces because PCB congeners with higher molecular weights, such as those comprising Aroclor-1260, Aroclor-1262 and Aroclor-1268, have very low volatility and therefore, are not expected to be present in air as a gas. In addition, and for context, Geosyntec reviewed relevant toxicological and epidemiological scientific studies on PCBs to support a current understanding of the potential human health effects associated with exposure, including an evaluation of the strength and consistency of such associations with the relative magnitude of exposures. This work is summarized in a memorandum attached as **Appendix G**.

5. RECOMMENDATIONS

Based on the findings of this investigation, we recommend the following:

1. That Poe Hall remain closed until PCBs can be mitigated or remediated, and that access to Poe Hall remain limited to authorized personnel. Authorized personnel include selected NCSU employees and contractors who are trained regarding hazards posed by hazardous materials, appropriate personal protective equipment, and other applicable subjects such as those included under the Occupational Safety and Health Administration's Hazardous Waste Operations and Emergency Response trainings.
2. That NCSU share an electronic version of the dataset from this investigation with NIOSH, in furtherance of the university's request that NIOSH conduct an independent health hazard evaluation.
3. That NCSU share this report with relevant regulatory agencies.
4. That NCSU continue regular communication with USEPA and consult with USEPA on PCB cleanup options.
5. That NCSU develop plans and schedules to be shared with USEPA that will describe a sequence of events leading to mitigation and/or remediation of PCBs in Poe Hall in compliance with 40 CFR part 761. An interim plan and schedule should address continued interim operation of HVAC systems containing PCBs, and a long-term plan and schedule will describe remediation plans.

6. REFERENCES

Geosyntec Consultants. 2024. *Indoor Environmental Investigation Report – Initial Phase. North Carolina State University Poe Hall, Raleigh, North Carolina.* February.

USEPA. 2015a. *Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings—Guidance for school administrators and other building managers: July 28, 2015.* https://www.epa.gov/sites/default/files/2016-03/documents/practical_actions_for_reducing_exposure_to_pcb_in_schools_and_other_buildings.pdf

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TABLES

**Table 1. Summary of Mechanical Systems Visual Inspection
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	Room Location	HVAC Circulation Zone	Room	Type of Duct	Was the Interior Insulated?	Was there Insulation Facing?	Was there Insulation Sealant?	What was the Condition of the Insulation?	Sample-IDs of Bulk Material Sampled	
1st	Perimeter	1	100	AHU 1 Fan Box	Yes, fiberglass	Yes, black textile	No	Patch(es) in Insulation Facing Discolored Insulation Facing Patch(es) in Insulation Fibers	B-01-100-INS-01042024 B-02-100-ADH-01042024	
				Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gray	Intact Insulation Fibers and Sealants Discolored Insulation Facing	B-03-100-SEA-01042024	
	Interior	1	106	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-63-FAC-HS-PER-106-03072024 B-64-ISEA-HS-PER-106-03072024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-61-FAC-CS-PER-106-03072024 B-62-ISEA-CS-PER-106-03072024	
	Perimeter	2	116	AHU 2 Fan Box	Yes, fiberglass	Yes, black textile	No	Intact Insulation Fibers and Sealants Patch(es) in Insulation Facing Discolored Insulation Facing	No Bulk Material Sampled	
	Interior	2	122	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-67-FAC-HS-PER-122-03072024 B-68-ISEA-HS-PER-122-03072024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-65-FAC-CS-PER-122-03072024 B-66-ISEA-CS-PER-122-03072024	
	2nd	Interior	2	213 (hallway)	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-71-FAC-HS-INT-213-03072024 B-72-ISEA-HS-INT-213-03072024
Cold Supply Duct					Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-69-FAC-CS-INT-213-03072024 B-70-ISEA-CS-INT-213-03072024	
3rd	Perimeter	4	300D	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-14-FAC-CS-PER-300D-03052024 B-15-ISEA-CS-PER-300D-03052024	
				300P	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-20-FAC-CS-PER-300P-03062024 B-21-ISEA-CS-PER-300P-03062024
	Interior	4	309 (hallway)	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-18-FAC-HS-PER-309-03052024 B-19-ISEA-HS-INT-309-03052024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Black	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-16-FAC-CS-INT-309-03052024 B-17-ISEA-CS-INT-309-03052024	
	Perimeter	4	310G	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-12-FAC-CS-PER-310G-03052024 B-13-ISEA-CS-PER-310G-03052024	
				317C	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Discolored Insulation Facing	B-26-FAC-HS-PER-317C-03062024 B-27-ISEA-HS-PER-317C-03062024
	Perimeter	4	317L		Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-8-FAC-CS-PER-317C-03052024 B-9-ISEA-CS-PER-317C-03052024
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Black	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-10-ISEA-CS-PER-317L-03052024 B-11-FAC-CS-PER-317L-03052024	
	Interior	3	325 (hallway)	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-24-FAC-HS-INT-325-03062024 B-25-ISEA-HS-INT-325-03062024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-22-FAC-CS-INT-325-03062024 B-23-ISEA-CS-INT-325-03062024	
	Interior	3	326 (hallway)	Mixed Air Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-6-FAC-MB-INT-326-03052024 B-7-ISEA-MB-INT-326-03052024	
	Perimeter	4	326H	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold, Red & Black	Intact Insulation Fibers and Sealants Discolored Insulation Facing	B-3-ISEA-CS-PER-326H-03052024 B-4-FAC-MB-PER-326H-03052024 B-5-ISEA-CS-PER-326H-03052024	
	Interior	4	326J	Mixed Air Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Discolored Insulation Facing Dent(s) in Insulation Fibers and Facing	B-1-ISEA-MB-INT-326J-03052024 B-2-FAC-MB-INT-326J-03052024	
	4th	Perimeter	4	402S	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-57-FAC-HS-PER-402S-03072024 B-58-ISEA-HS-PER-402S-03072024
			3	417	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-55-FAC-HS-PER-417-03072024 B-56-ISEA-HS-PER-417-03072024

Notes:
 HVAC: Heating, Ventilation, and Air Conditioning
 AHU: Air Handling Unit
 N/A: Not applicable
 FSK: foil skim kraft insulation wrap
 HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.
 All sealant colors that were observed in the viewable area at the sample location are listed.
 Tear(s) - one or more tears in the insulation facing observed.
 Patch(es) - one or more patches in the insulation facing observed.
 Discolored - faded and darkened areas on the insulation facing and discoloration associated with dust/debris deposits.
 Dent(s) - one or more areas where insulation was caved in observed.
 Sample ID Nomenclature (Jan 2024): Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-###-TYPE-####-mmddyyyy)
 Sample ID Nomenclature (March 2024): Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-###-TYPE-TYPE-LOC-####-mmddyyyy)

**Table 1. Summary of Mechanical Systems Visual Inspection
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	Room Location	HVAC Circulation Zone	Room	Type of Duct	Was the Interior Insulated?	Was there Insulation Facing?	Was there Insulation Sealant?	What was the Condition of the Insulation?	Sample-IDs of Bulk Material Sampled	
5th	Perimeter	4	502O	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-59-FAC-HS-PER-502O-03072024 B-60-ISEA-HS-PER-502O-03072024	
	Interior		510	Mixed Air Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-09-510-INS-01052024 B-10-510-ADH-01052024 B-11-510-COAT-01052024	
			510	Return Duct	No, exterior fiberglass	Yes, FSK jacket	No	N/A	No Bulk Material Sampled	
	Perimeter		510E	Mixing Box	Yes, fiberglass	Yes, FSK jacket	No	Intact Insulation Fibers and Facing	B-07-510E-INS-01052024	
			3	520B	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-53-FAC-HS-PER-520B-03072024 B-54-ISEA-HS-PER-520B-03072024
			4	520E	Mixing Box	Yes, fiberglass	Yes, FSK jacket	No	Intact Insulation Fibers and Facing	B-12-520E-INS-01052024
6th	Perimeter	4	602F	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-34-FAC-CS-PER-602F-03062024 B-35-ISEA-CS-PER-602F-03062024	
			602M	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing Dent(s) in Insulation Fibers and Facing	B-36-FAC-CS-PER-602M-03062024 B-37-ISEA-CS-PER-602M-03062024	
	Interior	4	607 (hallway)	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-51-FAC-HS-INT-607-03062024 B-52-ISEA-HS-INT-607-03062024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-49-FAC-CS-INT-607-03062024 B-50-ISEA-CS-INT-607-03062024	
	Perimeter		608D	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-38-FAC-CS-PER-608D-03062024 B-39-ISEA-CS-PER-608D-03062024	
	Interior	3	630 (hallway)	Hot Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-44-FAC-HS-INT-630-03062024 B-45-ISEA-HS-INT-630-03062024	
				Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-42-FAC-CS-INT-630-03062024 B-43-ISEA-CS-INT-630-03062024	
			634A (hallway)	Mixed Air Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-46-FAC-MB-INT-634A-03062024 B-47-ISEA-MB-INT-634A-03062024 B-48-ISEA-MB-INT-634A-03062024	
	Perimeter	3	635	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-30-FAC-CS-PER-635-03062024 B-31-ISEA-CS-PER-635-03062024	
				636	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-32-FAC-CS-PER-636-03062024 B-33-ISEA-CS-PER-636-03062024
	Interior		638	Mixed Air Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Discolored Insulation Facing	B-40-FAC-MB-INT-638-03062024 B-41-ISEA-MB-INT-638-03062024	
	Perimeter		640C	Cold Supply Duct	Yes, fiberglass	Yes, black textile	Yes, Gold & Red	Intact Insulation Fibers and Sealants Tear(s) in Insulation Facing Patch(es) in Insulation Facing Discolored Insulation Facing	B-28-FAC-CS-PER-640C-03062024 B-29-ISEA-CS-INT-640C-03062024	
	7th	Perimeter	3	742	Mixing Box	Yes, fiberglass	Yes, FSK jacket	No	Intact Insulation Fibers and Facing	No Bulk Material Sampled
	Roof	Penthouse	4	P1003	AHU 5 Fan Box	Yes, fiberglass	Yes, black textile	No	Patch(es) in Insulation Facing Discolored Insulation Facing Patch(es) in Insulation Fibers	No Bulk Material Sampled
AHU 6 Fan Box					Yes, fiberglass	Yes, black textile	No	Patch(es) in Insulation Facing Discolored Insulation Facing Patch(es) in Insulation Fibers	No Bulk Material Sampled	
Penthouse		3	P1004	AHU 3 Fan Box	Yes, fiberglass	Yes, black textile	No	Patch(es) in Insulation Facing Discolored Insulation Facing Patch(es) in Insulation Fibers	No Bulk Material Sampled	
				AHU 4 Fan Box	Yes, fiberglass	Yes, black textile	No	Patch(es) in Insulation Facing Discolored Insulation Facing Patch(es) in Insulation Fibers	No Bulk Material Sampled	

Notes:
HVAC: Heating, Ventilation, and Air Conditioning
AHU: Air Handling Unit
N/A: Not applicable
FSK: foil skim kraft insulation wrap
HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.
All sealant colors that were observed in the viewable area at the sample location are listed.
Tear(s) - one or more tears in the insulation facing observed.
Patch(es) - one or more patches in the insulation facing observed.
Discolored - faded and darkened areas on the insulation facing and discoloration associated with dust/debris deposits.
Dent(s) - one or more areas where insulation was caved in observed.
Sample ID Nomenclature (Jan 2024): Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-###-TYPE-####-mmddyyyy)
Sample ID Nomenclature (March 2024): Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-###-TYPE-TYPE-LOC-####-mmddyyyy)

**Table 2. Summary of Detected PCB Aroclors in Bulk Material Samples
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Room Location	Room	Sample Location	Type of Material Sampled	Material Color	Aroclor-1262 (mg/kg)	Aroclor-1242 (mg/kg)	Aroclor-1260 (mg/kg)	Aroclor-1254 (mg/kg)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1248, & Aroclor-1268 (mg/kg)	TSCA "PCB Bulk Product Waste" criterion (mg/kg)	
1st	1	B-01-100-INS-01042024	Perimeter	100	AHU 1 fan box	Insulation Fibers	Yellow	480 (D)	ND	ND	ND	ND	50	
		B-02-100-ADH-01042024	Perimeter	100	AHU 1 fan box	Insulation Adhesive	Pink	ND	ND	2,500 (D, B)	ND	ND	50	
		B-03-100-SEA-01042024	Perimeter	100	Hot Supply Duct	Insulation Sealant	Gray	11 (D)	1.9 (D)	ND	ND	ND	50	
		B-04-100-SXG-01042024	Perimeter	100	Hot Supply Duct	Duct Sealant	Gray	19 (D)	ND	ND	ND	ND	50	
		B-19-100-FIL-0105204	Perimeter	100	AHU 1 Return	Pleated Air Filter	White	93 (D)	ND	ND	ND	ND	50	
		B-77-FIL-RD-PER-100-03082024	Perimeter	100	AHU 1 Return	Pocket Filter	Pink	160 (D)	ND	ND	ND	ND	50	
		B-78-XSEA-RD-PER-100-03082024	Perimeter	100	Interior Wall	Foamboard Adhesive	White	7.7 (D)	11 (D)	ND	13 (D)	ND	50	
		B-64-ISEA-HS-PER-106-03072024	Interior	106	Hot Supply Duct	Insulation Sealant	Gold	1,400 (D)	ND	ND	ND	ND	50	
		B-63-FAC-HS-PER-106-03072024	Interior	106	Hot Supply Duct	Insulation Facing	Black	82 (D)	ND	ND	ND	ND	50	
	B-62-ISEA-CS-PER-106-03072024	Interior	106	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	24,000 (D)	ND	ND	ND	ND	50		
	B-61-FAC-CS-PER-106-03072024	Interior	106	Cold Supply Duct	Insulation Facing	Black	1,000 (D)	ND	ND	ND	ND	50		
	B-79-FIL-RD-PER-116-03082024	Perimeter	116	AHU 2 Return	Pocket Filter	Pink	150 (D)	ND	ND	ND	ND	50		
	B-20-116-FIL-01052024	Perimeter	116	AHU 2 Return	Pleated Air Filter	White	54 (D)	ND	ND	ND	ND	50		
	B-68-ISEA-HS-PER-122-03072024	Interior	122	Hot Supply Duct	Insulation Sealant	Gold	2,100 (D)	ND	ND	ND	ND	50		
	B-67-FAC-HS-PER-122-03072024	Interior	122	Hot Supply Duct	Insulation Facing	Black	210 (D)	ND	ND	ND	ND	50		
	B-66-ISEA-CS-PER-122-03072024	Interior	122	Cold Supply Duct	Insulation Sealant	Gold	16,000 (D)	ND	ND	ND	ND	50		
	B-65-FAC-CS-PER-122-03072024	Interior	122	Cold Supply Duct	Insulation Facing	Black	1,200 (D)	ND	ND	ND	ND	50		
	2nd	2	B-72-ISEA-HS-INT-213-03072024	Interior	213 (hallway)	Hot Supply Duct	Insulation Sealant	Gold	24,000 (D)	ND	ND	ND	ND	50
			B-71-FAC-HS-INT-213-03072024	Interior	213 (hallway)	Hot Supply Duct	Insulation Facing	Black	1,100 (D)	ND	ND	ND	ND	50
B-70-ISEA-CS-INT-213-03072024			Interior	213 (hallway)	Cold Supply Duct	Insulation Sealant	Gold	18,000 (D)	ND	ND	ND	ND	50	
B-69-FAC-CS-INT-213-03072024			Interior	213 (hallway)	Cold Supply Duct	Insulation Facing	Black	380 (D)	ND	ND	ND	ND	50	
3rd	4	B-15-ISEA-CS-PER-300D-03052024	Perimeter	300D	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	28,000 (D)	ND	ND	ND	ND	50	
		B-14-FAC-CS-PER-300D-03052024	Perimeter	300D	Cold Supply Duct	Insulation Facing	Black	1,100 (D)	ND	ND	ND	ND	50	
		B-91-XSEA-MB-PER-300M-03082024	Perimeter (NW)	300M	Windowsill	Window Caulk	Black	190 (D)	ND	ND	ND	ND	50	
		B-21-ISEA-CS-PER-300P-03062024	Perimeter	300P	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	11,000 (D)	ND	ND	ND	ND	50	
		B-20-FAC-CS-PER-300P-03062024	Perimeter	300P	Cold Supply Duct	Insulation Facing	Black	1,800 (D)	ND	ND	ND	ND	50	
		B-19-ISEA-HS-INT-309-03052024	Interior	309 (hallway)	Hot Supply Duct	Insulation Sealant	Gold	31,000 (D)	ND	ND	ND	ND	50	
		B-18-FAC-HS-INT-309-03052024	Interior	309 (hallway)	Hot Supply Duct	Insulation Facing	Black	280 (D)	ND	ND	ND	ND	50	
		B-17-ISEA-CS-INT-309-03052024	Interior	309 (hallway)	Cold Supply Duct	Insulation Sealant	Gold	27,000 (D)	ND	ND	ND	ND	50	
B-16-FAC-CS-INT-309-03052024	Interior	309 (hallway)	Cold Supply Duct	Insulation Facing	Black	1,200 (D)	ND	ND	ND	ND	50			

Notes:
Sample ID Nomenclature (Jan 2024): Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-###-TYPE-####-mmddyyyy)
Sample ID Nomenclature (March 2024): Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-###-TYPE-TYPE-LOC-####-mmddyyyy)
Toxic Substances Control Act (TSCA) states materials that contains ≥ 50 mg/kg PCB are unauthorized for use and must be removed and disposed of as PCB bulk product
Values in bold exceed TSCA criteria for bulk PCBs
HVAC - Heating, Ventilation, and Air Conditioning
PCB - Polychlorinated Biphenyls
mg/kg - Milligrams of PCBs per kilogram of material
AHU - Air Handling Unit
(D) - Analyte was reported from a dilution run

**Table 2. Summary of Detected PCB Aroclors in Bulk Material Samples
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Building Location	Room	Sample Location	Type of Material Sampled	Material Color	Aroclor-1262 (mg/kg)	Aroclor-1242 (mg/kg)	Aroclor-1260 (mg/kg)	Aroclor-1254 (mg/kg)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1248, & Aroclor-1268 (mg/kg)	TSCA "PCB Bulk Product Waste" criterion (mg/kg)
3rd	4	B-13-ISEA-CS-PER-310G-03052024	Perimeter	310G	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	25,000 (D)	ND	ND	ND	ND	50
		B-12-FAC-CS-PER-310G-03052024	Perimeter	310G	Cold Supply Duct	Insulation Facing	Black	1,500 (D)	ND	ND	ND	ND	50
		B-90-XSEA-MB-PER-310G-03152024	Perimeter (SW)	310G	Windowill	Window Caulk	Black	83 (D)	ND	ND	ND	ND	50
		B-73-FIL-MB-PER-310L-03082024	Perimeter	310L	Windowsill Supply Grille	Pleated Air Filter	White	120 (D)	ND	ND	ND	ND	50
		B-88-XSEA-MB-PER-310N-03082024	Perimeter (SE)	310N	Windowill	Window Caulk	Black	92 (D)	ND	ND	ND	ND	50
	3	B-9-ISEA-CS-PER-317C-03052024	Perimeter	317C	Cold Supply Duct	Insulation Sealant	Red	510 (D)	ND	ND	ND	ND	50
		B-8-FAC-CS-PER-317C-03052024	Perimeter	317C	Cold Supply Duct	Insulation Facing	Black	1,200 (D)	ND	ND	ND	ND	50
		B-27-ISEA-HS-PER-317C-03062024	Perimeter	317C	Hot Supply Duct	Insulation Sealant	Gold	2,500 (D)	ND	ND	ND	ND	50
		B-26-FAC-HS-PER-317C-03062024	Perimeter	317C	Hot Supply Duct	Insulation Facing	Black	320 (D)	ND	ND	ND	ND	50
		B-11-FAC-CS-PER-317L-03052024	Perimeter	317L	Cold Supply Duct	Insulation Facing	Black	800 (D)	ND	ND	ND	ND	50
		B-10-ISEA-CS-PER-317L-03052024	Perimeter	317L	Cold Supply Duct	Insulation Sealant	Black	220 (D)	ND	ND	ND	ND	50
		B-25-ISEA-HS-INT-325-03062024	Interior	325 (hallway)	Hot Supply Duct	Insulation Sealant	Gold	24,000 (D)	ND	ND	ND	ND	50
		B-24-FAC-HS-INT-325-03062024	Interior	325 (hallway)	Hot Supply Duct	Insulation Facing	Black	24,000 (D)	ND	ND	ND	ND	50
		B-23-ISEA-CS-INT-325-03062024	Interior	325 (hallway)	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	330 (D)	ND	ND	ND	ND	50
		B-22-FAC-CS-INT-325-03062024	Interior	325 (hallway)	Cold Supply Duct	Insulation Facing	Black	940 (D)	ND	ND	ND	ND	50
		B-7-ISEA-MB-INT-326-03052024	Interior	326 (hallway)	Mixed Air Supply Duct	Insulation Sealant	Gold	900 (D)	ND	ND	ND	ND	50
		B-6-FAC-MB-INT-326-03052024	Interior	326 (hallway)	Mixed Air Supply Duct	Insulation Facing	Black	21,000 (D)	ND	ND	ND	ND	50
		B-74-FIL-MB-PER-326D-03082024	Perimeter	326D	Windowsill Supply Grille	Pleated Air Filter	White	50 (D)	ND	ND	ND	ND	50
		B-5-ISEA-CS-PER-326H-03052024	Perimeter	326H	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	400 (D)	ND	ND	ND	ND	50
		B-4-FAC-CS-PER-326H-03052024	Perimeter	326H	Cold Supply Duct	Insulation Facing	Black	24,000 (D)	ND	ND	ND	ND	50
B-3-ISEA-CS-PER-326H-03052024	Perimeter	326H	Cold Supply Duct	Insulation Sealant	Black	770 (D)	ND	ND	ND	ND	50		
B-89-XSEA-MB-PER-326H-03082024	Perimeter (NE)	326H	Windowsill	Window Caulk	Black	46 (D)	ND	ND	ND	ND	50		
4th	3	B-56-ISEA-HS-PER-417-03072024	Perimeter	417	Hot Supply Duct	Insulation Sealant	Gold	2,000 (D)	ND	ND	ND	ND	50
		B-55-FAC-HS-PER-417-03072024	Perimeter	417	Hot Supply Duct	Insulation Facing	Black	490 (D)	ND	ND	ND	ND	50
	4	B-58-ISEA-HS-PER-402S-03072024	Perimeter	402S	Hot Supply Duct	Insulation Sealant	Gold	25,000 (D)	ND	ND	ND	ND	50
		B-57-FAC-HS-PER-402S-03072024	Perimeter	402S	Hot Supply Duct	Insulation Facing	Black	240 (D)	ND	ND	ND	ND	50
		B-16-500-FIL-01052024	Perimeter	500	Windowsill Supply Grille	Pleated Air Filter	White	250 (D)	ND	ND	ND	ND	50
5th	4	B-60-ISEA-HS-PER-502O-03072024	Perimeter	502O	Hot Supply Duct	Insulation Sealant	Gold	20,000 (D)	ND	ND	ND	ND	50
		B-59-FAC-HS-PER-502O-03072024	Perimeter	502O	Hot Supply Duct	Insulation Facing	Black	380 (D)	ND	ND	ND	ND	50
		B-10-510-ADH-01052024	Interior	510	Mixed Air Supply Duct	Insulation Sealant	Gold	53,000 (D)	ND	ND	ND	ND	50
		B-11-510-COAT-01052024	Interior	510	Mixed Air Supply Duct	Insulation Facing	Black	1,300 (D)	ND	ND	ND	ND	50
		B-09-510-INS-01052024	Interior	510	Mixed Air Supply Duct	Insulation Fibers	Yellow	310 (D)	ND	ND	ND	ND	50
		B-06-510E-ADH-01052024	Interior	510E	Mixing Box Access Panel	Insulation Adhesive	Yellow	770 (D)	ND	ND	ND	ND	50
		B-07-510E-INS-01052024	Interior	510E	Mixing Box Access Panel	Insulation Fibers	Yellow	0.91	ND	ND	ND	ND	50
		DUP-08-510E-INS-01052024	Interior	510E	Mixing Box Access Panel	Insulation Fibers	Yellow	1.6	ND	ND	ND	ND	50
B-05-510S-ADH-01052024	Interior	510S	Mixing Box Access Panel	Insulation Adhesive	Pink	260 (D)	ND	ND	ND	ND	50		

Notes:
Sample ID Nomenclature (Jan 2024): Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-##-TYPE-####-mmdyyy)
Sample ID Nomenclature (March 2024): Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-##-TYPE-TYPE-LOC-####-mmdyyy)
Toxic Substances Control Act (TSCA) states materials that contains ≥ 50 mg/kg PCB are unauthorized for use and must be removed and disposed of as PCB bulk product
Values in bold exceed TSCA criteria for bulk PCBs
HVAC - Heating, Ventilation, and Air Conditioning
PCB - Polychlorinated Biphenyls
mg/kg - Milligrams of PCBs per kilogram of material
AHU - Air Handling Unit
(D) - Analyte was reported from a dilution run

**Table 2. Summary of Detected PCB Aroclors in Bulk Material Samples
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Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Building Location	Room	Sample Location	Type of Material Sampled	Material Color	Aroclor-1262 (mg/kg)	Aroclor-1242 (mg/kg)	Aroclor-1260 (mg/kg)	Aroclor-1254 (mg/kg)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1248, & Aroclor-1268 (mg/kg)	TSCA "PCB Bulk Product Waste" criterion (mg/kg)
5th	3	B-54-ISEA-HS-PER-520B-03072024	Perimeter	520B	Hot Supply Duct	Insulation Sealant	Gold	4,200 (D)	ND	ND	ND	ND	50
		B-53-FAC-HS-PER-520B-03072024	Perimeter	520B	Hot Supply Duct	Insulation Facing	Black	310 (D)	ND	ND	ND	ND	50
		B-12-520E-INS-01052024	Perimeter	520E	Mixing Box Access Panel	Insulation Fibers	Yellow	1.3	ND	ND	ND	ND	50
		B-13-526-INS-01052024	Interior	526	Return Duct Exterior	Insulation Fibers	Yellow	18 (D)	ND	ND	ND	ND	50
		B-14-526-SXR-01052024	Interior	526	Hot Supply Duct	Duct Sealant	Red	240 (D)	ND	ND	ND	ND	50
		B-15-528-FIL-01052024	Perimeter	528	Windowsill Supply Grille	Pleated Air Filter	White	71 (D)	ND	ND	ND	ND	50
6th	4	B-35-ISEA-CS-PER-602F-03062024	Perimeter	602F	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	16,000 (D)	ND	ND	ND	ND	50
		B-34-FAC-CS-PER-602F-03062024	Perimeter	602F	Cold Supply Duct	Insulation Facing	Black	860 (D)	ND	ND	ND	ND	50
		B-37-ISEA-CS-PER-602M-03062024	Perimeter	602M	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	19,000 (D)	ND	ND	ND	ND	50
		B-36-FAC-CS-PER-602M-03062024	Perimeter	602M	Cold Supply Duct	Insulation Facing	Black	1,000 (D)	ND	ND	ND	ND	50
		B-52-ISEA-HS-INT-607-03062024	Interior	607 (hallway)	Hot Supply Duct	Insulation Sealant	Gold	11,000 (D)	ND	ND	ND	ND	50
		B-51-FAC-HS-INT-607-03062024	Interior	607 (hallway)	Hot Supply Duct	Insulation Facing	Black	290 (D)	ND	ND	ND	ND	50
		B-50-ISEA-CS-INT-607-03062024	Interior	607 (hallway)	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	48,000 (D)	ND	ND	ND	ND	50
		B-49-FAC-CS-INT-607-03062024	Interior	607 (hallway)	Cold Supply Duct	Insulation Facing	Black	2,400 (D)	ND	ND	ND	ND	50
		B-39-ISEA-CS-PER-608D-03062024	Perimeter	608D	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	23,000 (D)	ND	ND	ND	ND	50
		B-38-FAC-CS-PER-608D-03062024	Perimeter	608D	Cold Supply Duct	Insulation Facing	Black	1,600 (D)	ND	ND	ND	ND	50
	B-75-FIL-MB-PER-608M-03082024	Perimeter	608M	Windowsill Supply Grille	Pleated Air Filter	White	280 (D)	ND	ND	ND	ND	50	
	B-76-FIL-MB-PER-625-03082024	Perimeter	625	Windowsill Supply Grille	Pleated Air Filter	White	75 (D)	ND	ND	ND	ND	50	
	B-45-ISEA-HS-INT-630-03062024	Interior	630 (hallway)	Hot Supply Duct	Insulation Sealant	Gold	2,000 (D)	ND	ND	ND	ND	50	
	B-44-FAC-HS-INT-630-03062024	Interior	630 (hallway)	Hot Supply Duct	Insulation Facing	Black	200 (D)	ND	ND	ND	ND	50	
	B-43-ISEA-CS-INT-630-03062024	Interior	630 (hallway)	Cold Supply Duct	Insulation Sealant	Gold	6,300 (D)	ND	ND	ND	ND	50	
	B-42-FAC-CS-INT-630-03062024	Interior	630 (hallway)	Cold Supply Duct	Insulation Facing	Black	1,900 (D)	ND	ND	ND	ND	50	
	B-48-ISEA-MB-INT-634A-03062024	Interior	634A (hallway)	Mixed Air Supply Duct	Insulation Sealant	Red	280 (D)	ND	ND	ND	ND	50	
	B-47-ISEA-MB-INT-634A-03062024	Interior	634A (hallway)	Mixed Air Supply Duct	Insulation Sealant	Gold	32,000 (D)	ND	ND	ND	ND	50	
	B-46-FAC-MB-INT-634A-03062024	Interior	634A (hallway)	Mixed Air Supply Duct	Insulation Facing	Black	560 (D)	ND	ND	ND	ND	50	
	B-31-ISEA-CS-PER-635-03062024	Perimeter	635	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	12,000 (D)	ND	ND	ND	ND	50	
B-30-FAC-CS-PER-635-03062024	Perimeter	635	Cold Supply Duct	Insulation Facing	Black	1,100 (D)	ND	ND	ND	ND	50		
B-33-ISEA-CS-PER-636-03062024	Perimeter	636	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	22,000 (D)	ND	ND	ND	ND	50		
B-32-FAC-CS-PER-636-03062024	Perimeter	636	Cold Supply Duct	Insulation Facing	Black	1,100 (D)	ND	ND	ND	ND	50		
B-41-ISEA-MB-INT-638-03062024	Interior	638	Mixed Air Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	13,000 (D)	ND	ND	ND	ND	50		
B-40-FAC-MB-INT-638-03062024	Interior	638	Mixed Air Supply Duct	Insulation Facing	Black	870 (D)	ND	ND	ND	ND	50		
B-29-ISEA-CS-PER-640C-03062024	Perimeter	640C	Cold Supply Duct	Insulation Sealant	Red Overlaid on Gold (Mix)	18,000 (D)	ND	ND	ND	ND	50		
B-28-FAC-CS-PER-640C-03062024	Perimeter	640C	Cold Supply Duct	Insulation Facing	Black	820 (D)	ND	ND	ND	ND	50		
7th	4	B-17-724-FIL-01052024	Perimeter	724	Windowsill Supply Grille	Pleated Air Filter	Blue	570 (D)	ND	ND	ND	ND	50
	3	B-18-736-FIL-01052024	Perimeter	736	Windowsill Supply Grille	Pleated Air Filter	Blue	400 (D)	ND	ND	ND	ND	50
Roof	4	B-87-FIL-RD-PER-P1003-03082024	Penthouse	P1003	AHU 6 Return	Pocket Filter	Pink	110 (D)	ND	ND	ND	ND	50
		B-86-FIL-RD-PER-P1003-03082024	Penthouse	P1004	AHU 6 Return	Pleated Air Filter	White	11 (D)	ND	ND	ND	ND	50
		B-85-FIL-RD-PER-P1003-03082024	Penthouse	P1003	AHU 5 Return	Pocket Filter	Pink	340 (D)	ND	ND	ND	ND	50
		B-84-FIL-RD-PER-P1003-03082024	Penthouse	P1003	AHU 5 Return	Pleated Air Filter	White	21 (D)	ND	ND	ND	ND	50
	B-81-FIL-RD-PER-P1004-03082024	Penthouse	P1004	AHU 4 Return	Pocket Filter	Pink	140 (D)	ND	ND	ND	ND	50	
	B-80-FIL-RD-PER-P1004-03082024	Penthouse	P1004	AHU 4 Return	Pleated Air Filter	White	88 (D)	ND	ND	ND	ND	50	
	B-83-FIL-RD-PER-P1004-03082024	Penthouse	P1004	AHU 3 Return	Pocket Filter	Green	120 (D)	ND	ND	ND	ND	50	
B-82-FIL-RD-PER-P1004-03082024	Penthouse	P1004	AHU 3 Return	Pleated Air Filter	White	25 (D)	ND	ND	ND	ND	50		

Notes:
Sample ID Nomenclature (Jan 2024): Bulk Sample-Sample Number-Material Type-Sample Room Number-Sample Date (B-##-TYPE-####-mmddyyyy)
Sample ID Nomenclature (March 2024): Bulk Sample-Sample Number-Material Type-Type of Duct-Building Location-Sample Room Number-Sample Date (B-##-TYPE-TYPE-LOC-####-mmddyyyy)
Toxic Substances Control Act (TSCA) states materials that contains ≥ 50 mg/kg PCB are unauthorized for use and must be removed and disposed of as PCB bulk product
Values in bold exceed TSCA criteria for bulk PCBs
HVAC - Heating, Ventilation, and Air Conditioning
PCB - Polychlorinated Biphenyls
mg/kg - Milligrams of PCBs per kilogram of material
AHU - Air Handling Unit
(D) - Analyte was reported from a dilution run

**Table 3. Summary of Aroclor-1262 in Bulk Material Samples
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Type of Material Sampled		Average Aroclor-1262 (mg/kg)	Minimum Aroclor-1262 (mg/kg)	Maximum Aroclor-1262 (mg/kg)	Number of Samples	Detection Frequency	TSCA "PCB Bulk Product Waste" criterion (mg/kg)
Insulation Sealants	All Colors	14,485	11	53,000	39	100%	50
	Gold	15,169	900	53,000	20	100%	50
	Red Overlayed on Gold (Mix)	18,552	330	48,000	14	100%	50
	Red	395	280	510	2	100%	50
	Black	495	220	770	2	100%	50
	Gray	11	11	11	1	100%	50
Insulation Facing*		2,762	82	24,000	36	100%	50
Insulation Adhesive		515	260	770	3	75%	50
Exterior Duct Sealants	Red	240	240	240	1	100%	50
	Gray	19	19	19	1	100%	50
Insulation Fibers	Yellow fibers – AHU fan box	480	480	480	1	100%	50
	Yellow fibers – Supply Duct Interior	310	310	310	1	100%	50
	Yellow fibers – Exterior to duct	5	1	18	4	100%	50
Filters	Pleated - Supply diffuser	227	50	570	8	100%	50
	Pocket - AHU return	170	110	340	6	100%	50
	Pleated - AHU return	49	11	93	6	100%	50
Indoor Window Caulk		103	46	190	4	100%	50
Foamboard Construction Adhesive		8	8	8	1	100%	50

Notes:

TSCA - Toxic Substances Control Act

Values in bold exceed TSCA criterion for bulk PCBs

PCB - Polychlorinated Biphenyls

mg/kg - miliigrams of PCBs per kilogram of material

AHU - Air Handling Unit

*3 samples reported concentrations of 24,000, 24,000, & 21,000 mg/kg (see Table 2). If excluded the statistics are 903 mg/kg (average), 75 mg/kg (minimum), & 2,300 (maximum)

**Table 4. Summary of Aroclor-1262 in Select Bulk Materials per HVAC Zone
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Type of Material Sampled	Statistic	Aroclor-1262 (mg/kg)			
		HVAC Zone 1	HVAC Zone 2	HVAC Zone 3	HVAC Zone 4
Gold & Red Overlaid on Gold (Mix) Insulation Sealants	Average	12,700	15,025	9,374	25,923
	Minimum	1,400	2100	330	11,000
	Maximum	24,000	24,000	32,000	53,000
	N	2	4	15	13
Insulation Facing	Average	541	723	4,795	1,073
	Minimum	82	210	200	240
	Maximum	1,000	1,200	24,000	2,400
	N	2	4	17	13
Pleated Supply Filters	Average	N/A	N/A	149	305
	Minimum	N/A	N/A	50	120
	Maximum	N/A	N/A	400	570
	N	N/A	N/A	4	4
Pleated Return Filters	Average	AHU 1: 93	AHU 2: 54	AHU 3: 25 AHU 4: 88	AHU 5: 21 AHU 6: 11
	N	1	1	2	2
Pocket Return Filters	Average	AHU 1: 160	AHU 2: 150	AHU 3: 120 AHU 4: 140	AHU 5: 340 AHU 6: 110
	N	1	1	2	2

Notes:

Largest concentration for each category are in bold.

HVAC: Heating, Ventilation, and Air Conditioning

AHU: Air Handling Unit

mg/kg - miliigrams of PCBs per kilogram of material

N - number of samples

N/A - Not Applicable (supply vent diffusers on 1st and 2nd floor did not contain filters.)

Table 5 – Summary of Detected PCB Aroclors in Air samples, December 2023 and April 2024
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Room Number	Room Type	First Phase, December 2023 (HVAC Off)				Second Phase, April 2024 (HVAC On)				US EPA Exposure Levels for Evaluating PCBs in School Indoor Air ($\mu\text{g}/\text{m}^3$) ¹						
				Room Temperature (°F)	Sample-ID	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 concentration ($\mu\text{g}/\text{m}^3$)	Aroclor-1262 Concentration ($\mu\text{g}/\text{m}^3$)	Room Temperature (°F)	Sample-ID	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 concentration ($\mu\text{g}/\text{m}^3$)	Aroclor-1262 Concentration ($\mu\text{g}/\text{m}^3$)	Age: 1 - <2 yr	Age: 2 - <3 yr	Age: 3 - <6 yr	Age: 6 - <12 yr	Age: 12 - <15 yr	Age: 15 - <19 yr	Adult >19 yr
				1st	1	106	Laboratory	59.1	A-13-106-122123	< RL	0.0193	67.6	A-13-106-042424	< RL	0.0766	0.100	0.100	0.200
	1	106 (dup)	Laboratory	59.1	DUP-01-122123	< RL	0.0131	67.6	DUP-01-106-042424	< RL	0.0905	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	2	117	Laboratory	NR	A-15-117-122223	< RL	0.0436	71.0	A-15-117-042424	< RL	0.104	0.100	0.100	0.200	0.300	0.500	0.600	0.500
2nd	2	209	Classroom	58.6	A-11-209-122123	< RL	0.0341	68.8	A-11-209-042424	< RL	0.125	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	1	228	Classroom	57.1	A-12-228-122123	< RL	0.0250	69.2	A-12-228-042424	< RL	0.1170	0.100	0.100	0.200	0.300	0.500	0.600	0.500
3rd	4	216	Auditorium	NR	A-01-216-122223	< RL	0.0704	70.0	A-01-216-042424	< RL	0.133	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3	317F	Office	60.3	A-02-317F-122123	< RL	0.0285	69.5	A-02-317F-042424	< RL	0.109	0.100	0.100	0.200	0.300	0.500	0.600	0.500
4th	3	400	Classroom	65.6	A-10-400-122123	< RL	0.0457	69.9	A-10-400-042424	< RL	0.119	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	4	402G	Office	56.0	A-09-402G-122123	< RL	0.0384	68.4	A-09-402G-042624	< RL	0.155	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	4	402G (dup)	Office	56.0	N/A	NM	NM	68.4	DUP-02-402G-042624	< RL	0.145	0.100	0.100	0.200	0.300	0.500	0.600	0.500
5th	4	510E	Office	66.9	A-07-510E-122123	< RL	0.0794	68.3	A-07-510E-042424	< RL	0.0981	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3	526	Bathroom	64.2	A-08-526-122123	< RL	0.0451	69.6	A-08-526-042424	< RL	0.0972	0.100	0.100	0.200	0.300	0.500	0.600	0.500
6th	4	608J	Office	65.1	A-05-608J-122123	< RL	0.121	67.9	A-05-608J-042424	< RL	0.133	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3	635	Laboratory	60.5	A-06-635-122123	< RL	0.0333	69.1	A-06-635-042424	< RL	0.132	0.100	0.100	0.200	0.300	0.500	0.600	0.500
7th	4	714B	Office	67.2	A-04-714B-122123	< RL	0.108	67.5	A-04-714B-042424	< RL	0.153	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3	742	Laboratory	NR	A-03-742-122223	< RL	0.0677	70.2	A-03-742-042424	< RL	0.0879	0.100	0.100	0.200	0.300	0.500	0.600	0.500
	3	742 (dup)	Laboratory	NR	N/A	NM	NM	70.2	DUP-03-742-042424	< RL	0.0798	0.100	0.100	0.200	0.300	0.500	0.600	0.500
Roof	N/A	N/A	Outdoor air	69.8	A-14-ROOF-122123	< RL	< RL	60.7	A-14-ROOF-042424	< RL	< RL	0.100	0.100	0.200	0.300	0.500	0.600	0.500

¹Exposure Levels for Evaluating Polychlorinated Biphenyls (PCBs) in Indoor School Air | US EPA

Notes:
Sample ID nomenclature: Air Sample-Sample Number-Sample Room Number-Sample Date (A-###-####-mmddyy)
HVAC: heating, ventilation and air conditioning
°F: degrees fahrenheit
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
US EPA: United States Environmental Protection Agency
PCB: Polychlorinated Biphenyls
The method reporting limit (RL) ranges from 0.00659 to 0.00700 $\mu\text{g}/\text{m}^3$.
< RL: analyte was not detected at or above the reporting limit.
NM: Not measured
NR: Not recorded
N/A: Not applicable
Exposure levels are rounded to the nearest 0.1 micrograms per cubic meter.
HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.

**Table 6 – Summary of Aroclor-1262 Air Sample Results Organized by Building Zones, December 2023 and April 2024
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Building Zones	First Phase, December 2023		Second Phase, April 2024	
Floors	HVAC Status	Average Aroclor-1262 Concentration in Indoor Air Samples ($\mu\text{g}/\text{m}^3$)	HVAC Status	Average Aroclor-1262 Concentration in Indoor Air Samples ($\mu\text{g}/\text{m}^3$)
1 to 2	Off	0.027	On, Occupied Mode	0.103
3 to 7	Off	0.064	On, Occupied Mode	0.120
HVAC Circulation Zone	HVAC Status	Average Aroclor-1262 Concentration in Indoor Air Samples ($\mu\text{g}/\text{m}^3$)	HVAC Status	Average Aroclor-1262 Concentration in Indoor Air Samples ($\mu\text{g}/\text{m}^3$)
1	Off	0.019	On, Occupied Mode	0.095
2	Off	0.039	On, Occupied Mode	0.115
3	Off	0.044	On, Occupied Mode	0.104
4	Off	0.083	On, Occupied Mode	0.136

Notes:

HVAC: Heating, Ventilation, and Air Conditioning

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Occupied Mode - operating mode used when Poe Hall was in service and fully occupied.

The method reporting limit (RL) ranges from 0.00659 to 0.00700 $\mu\text{g}/\text{m}^3$.

< RL: analyte was not detected at or above the reporting limit.

HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.

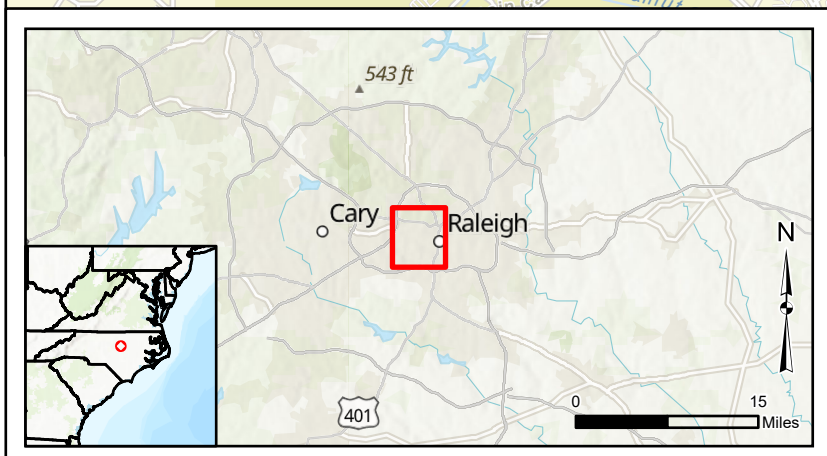
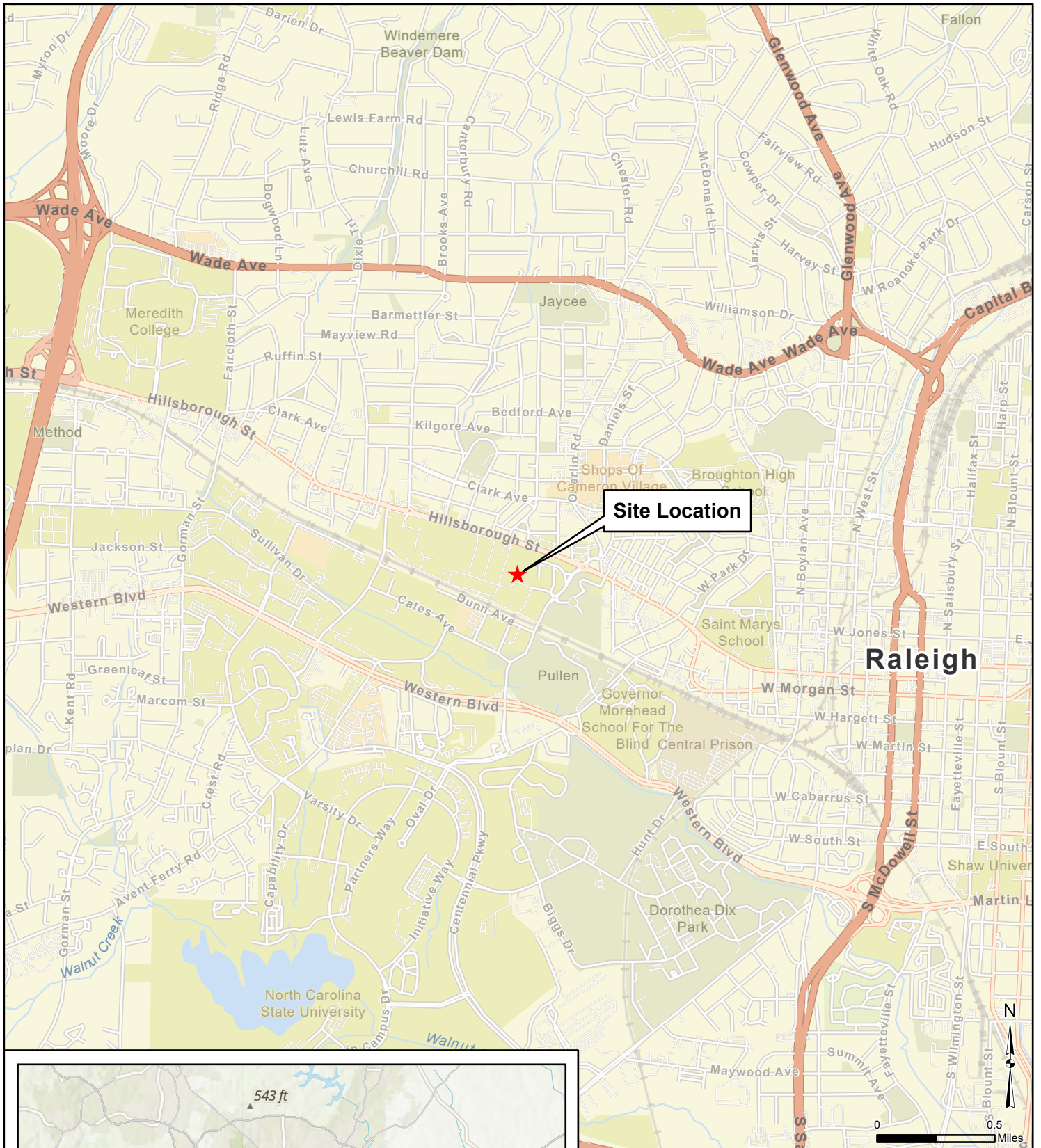
Floors 1 to 2 are serviced by HVAC circulation zones 1 & 2

Floors 3 to 7 are serviced by HVAC circulation zones 3 & 4

Temperatures inside sampled rooms on floors 1-2 ranged from 57.1°F to 59.1°F in December 2023 (HVAC Off) and from 67.6°F to 71.0°F in April 2024 (HVAC On)

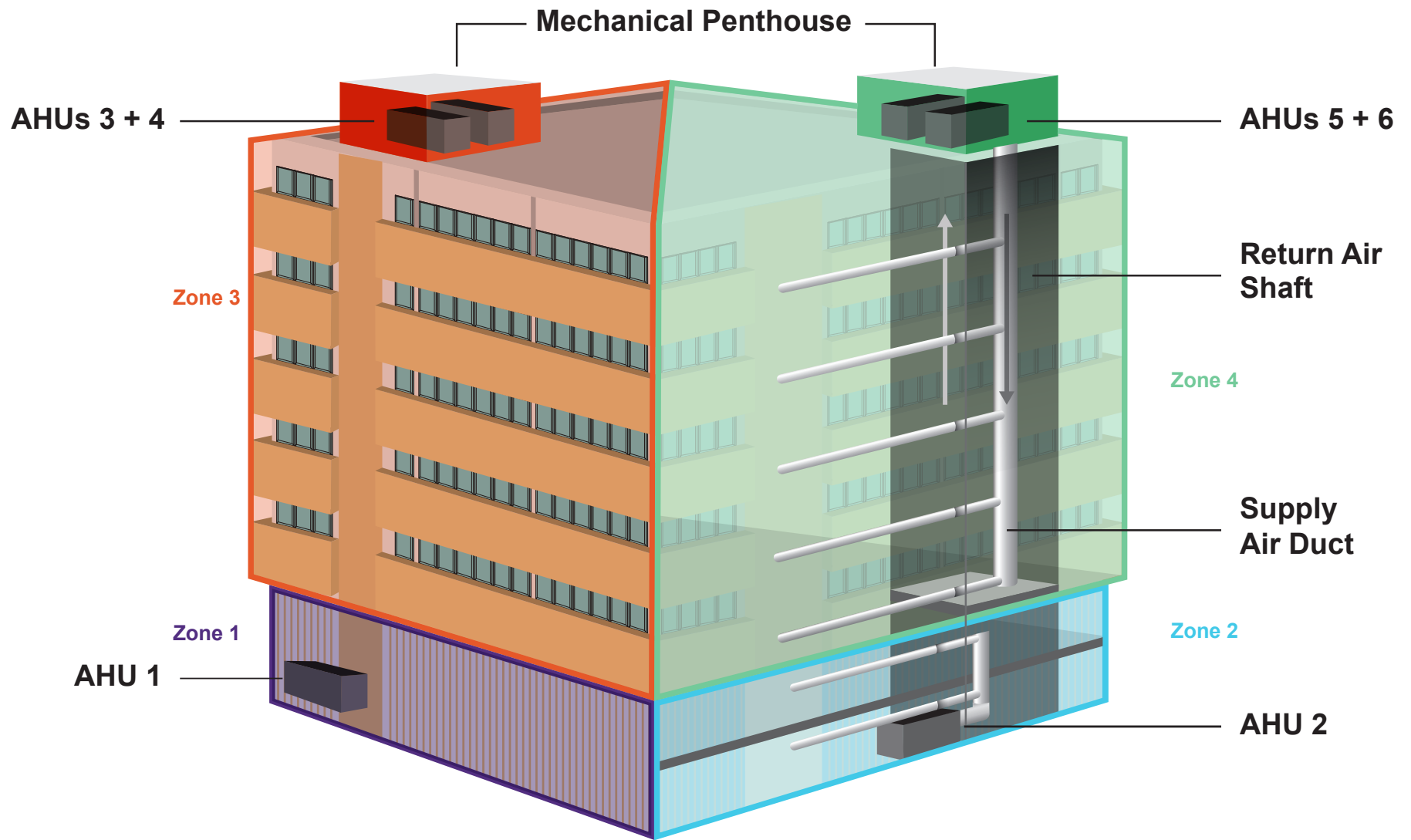
Temperatures inside sampled rooms on floors 3-7 ranged from 56.0°F to 67.2°F in December 2023 (HVAC Off) and from 67.5°F to 70.2°F in April 2024 (HVAC On)

FIGURES



Site Location Map
 Poe Hall
 2310 Katharine Stinson Drive
 Raleigh, NC 27695

		Figure 1
Raleigh, NC	June 2024	



The computing center on the first floor, located in Zone 2, has an independent heating, ventilation and air conditioning system.

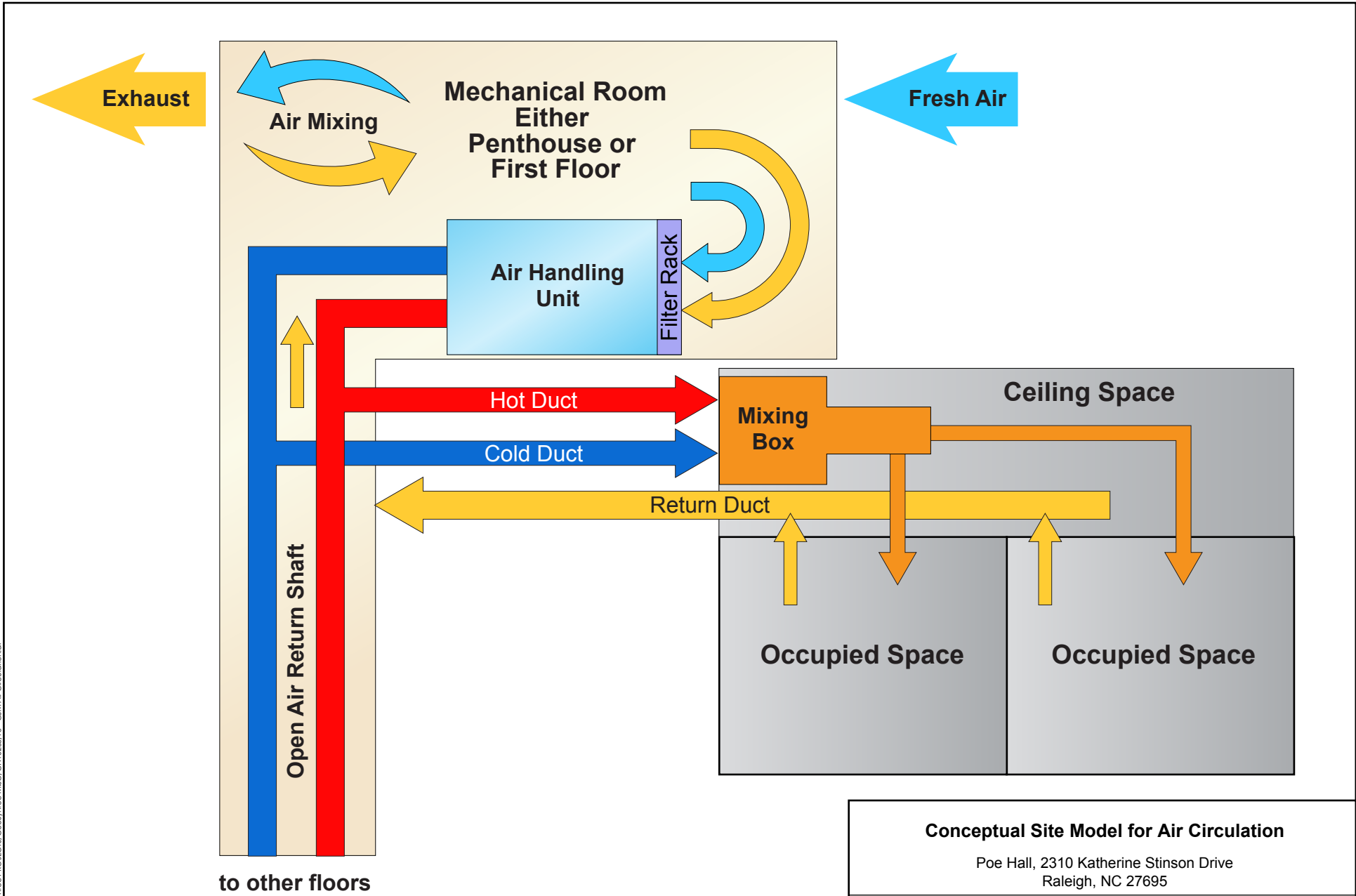
Conceptual Schematic: Poe Hall HVAC Systems and Air Circulation Zones
 Poe Hall
 2310 Katherine Stinson Drive, Raleigh, NC 27695

Geosyntec
 consultants

Figure
2

Raleigh, NC

June 2024



This schematic reflects the mechanical system configuration for typical interior rooms on floors 3-7 and on floors 1-2.

Conceptual Site Model for Air Circulation

Poe Hall, 2310 Katherine Stinson Drive
Raleigh, NC 27695

Geosyntec
consultants

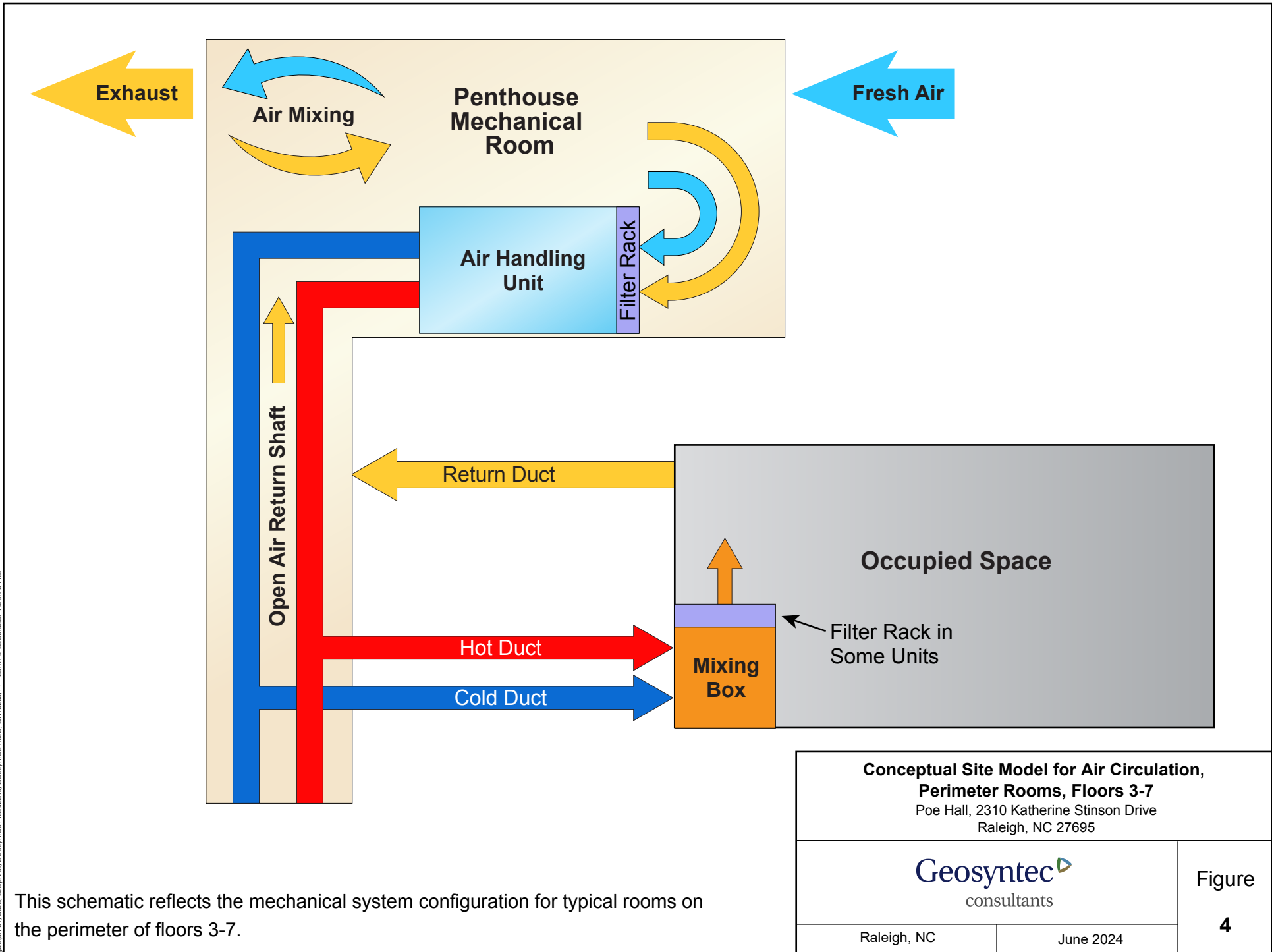
Raleigh, NC

June 2024

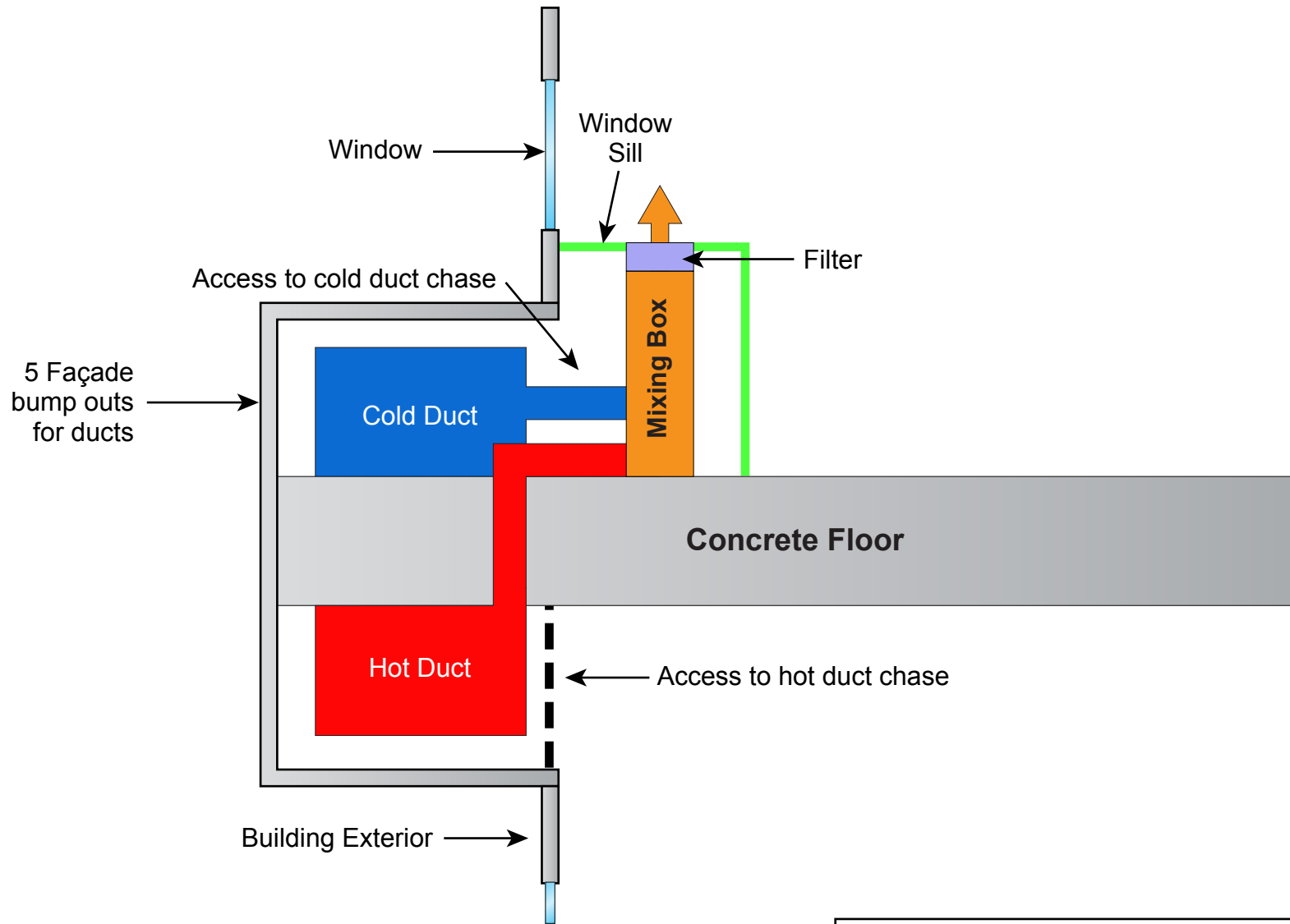
Figure

3

g:\e\p\01\data\Graphics\Geosyntec-PRD\ECTS\Geosyntec-MBC\GN\226\F3 - CSMA Circulational



g:\p\01\data\Graphics\Geosyntec-PRD\ECTS\Geosyntec-MBC\GN1268\F4 - CSM Air Circulation Floors 3-7.dwg



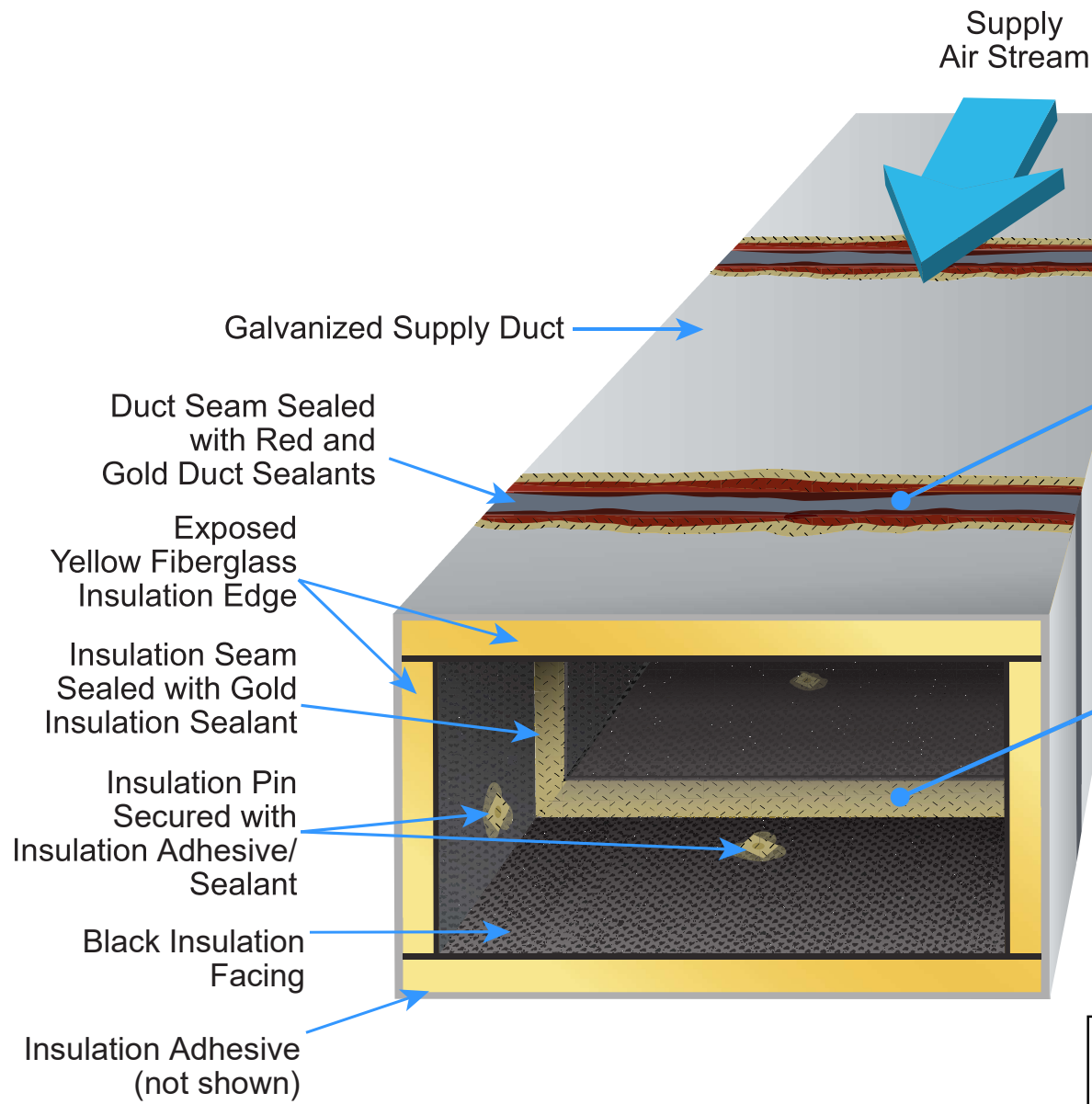
**Detail of HVAC Supply –
Perimeter Rooms, Floors 3-7**
Poe Hall, 2310 Katherine Stinson Drive
Raleigh, NC 27695



Figure
5

Raleigh, NC

June 2024



Schematic Cutaway of Typical Supply Duct
 Poe Hall
 2310 Katherine Stinson Drive
 Raleigh, NC 27695

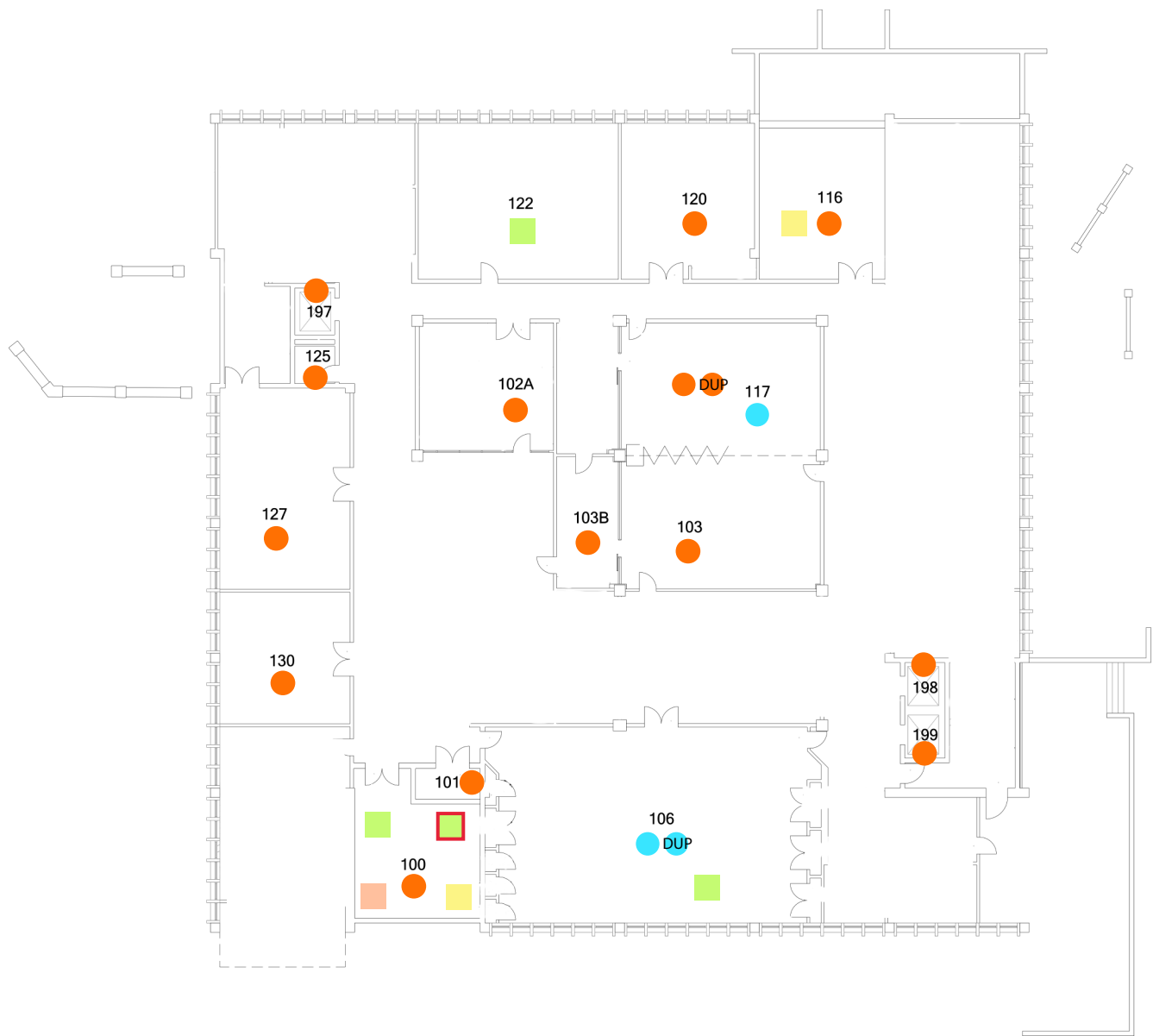
Geosyntec
 consultants

Figure
6

Raleigh, NC

June 2024

Schematic Cutaway of Typical Hot or Cold Supply Ducts.dwg



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers

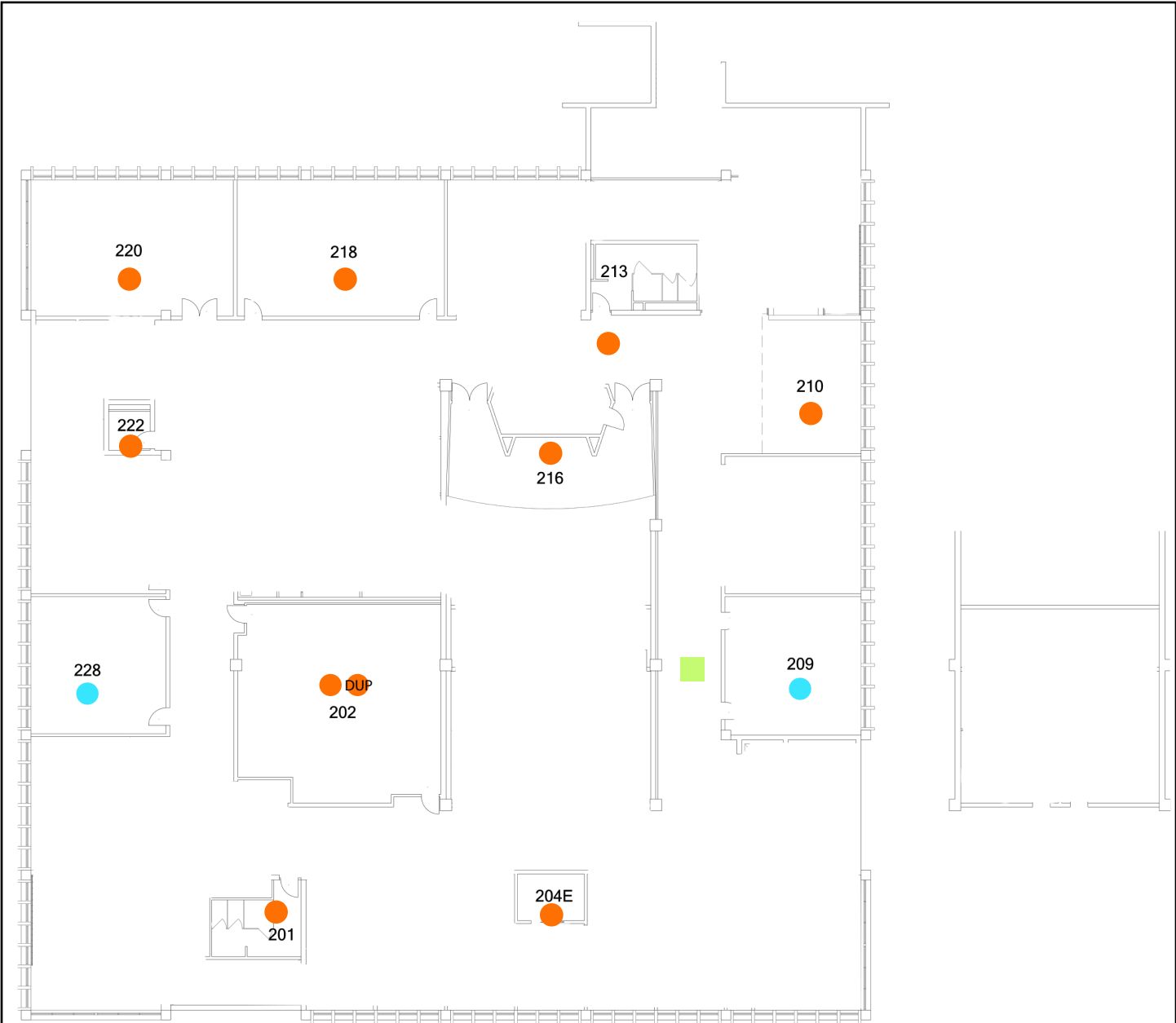


This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Figure 7a

First Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Raleigh, NC	June 2024
Figure 7a	



Sample Type

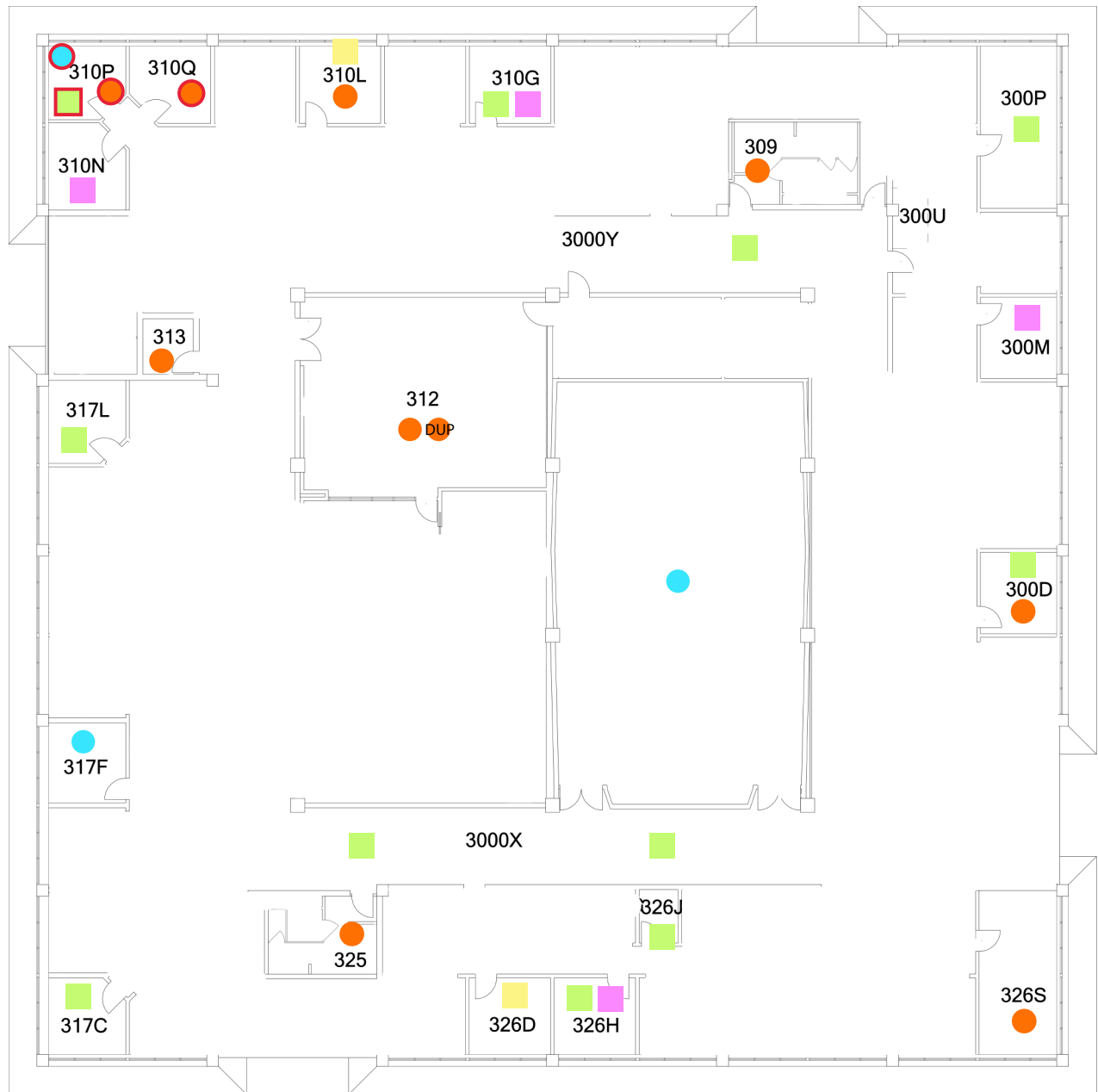
- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers



This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Second Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
consultants	
Raleigh, NC	June 2024
Figure 7b	



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers

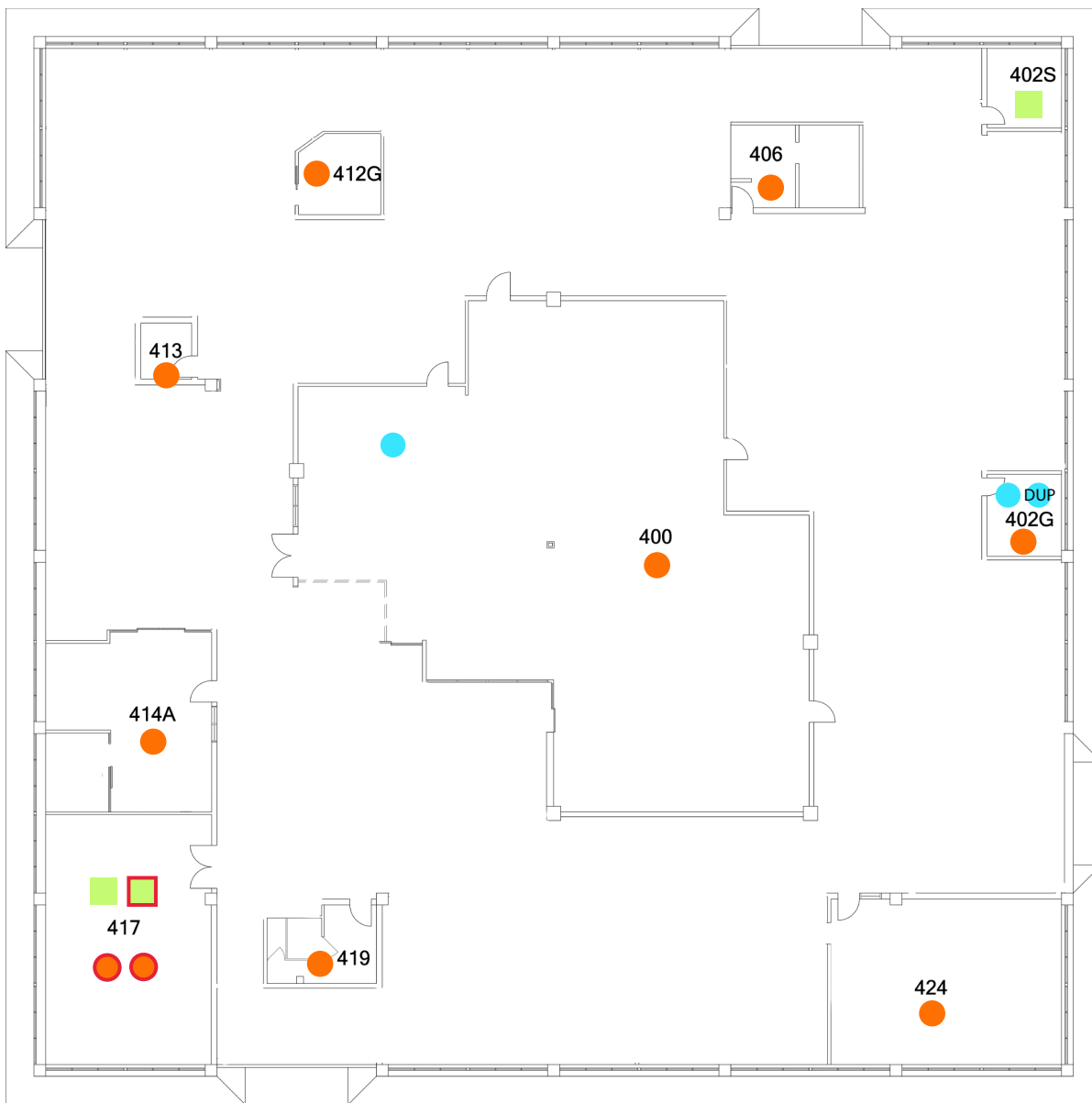


This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Figure 7c

Third Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Raleigh, NC	June 2024
Figure 7c	



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers

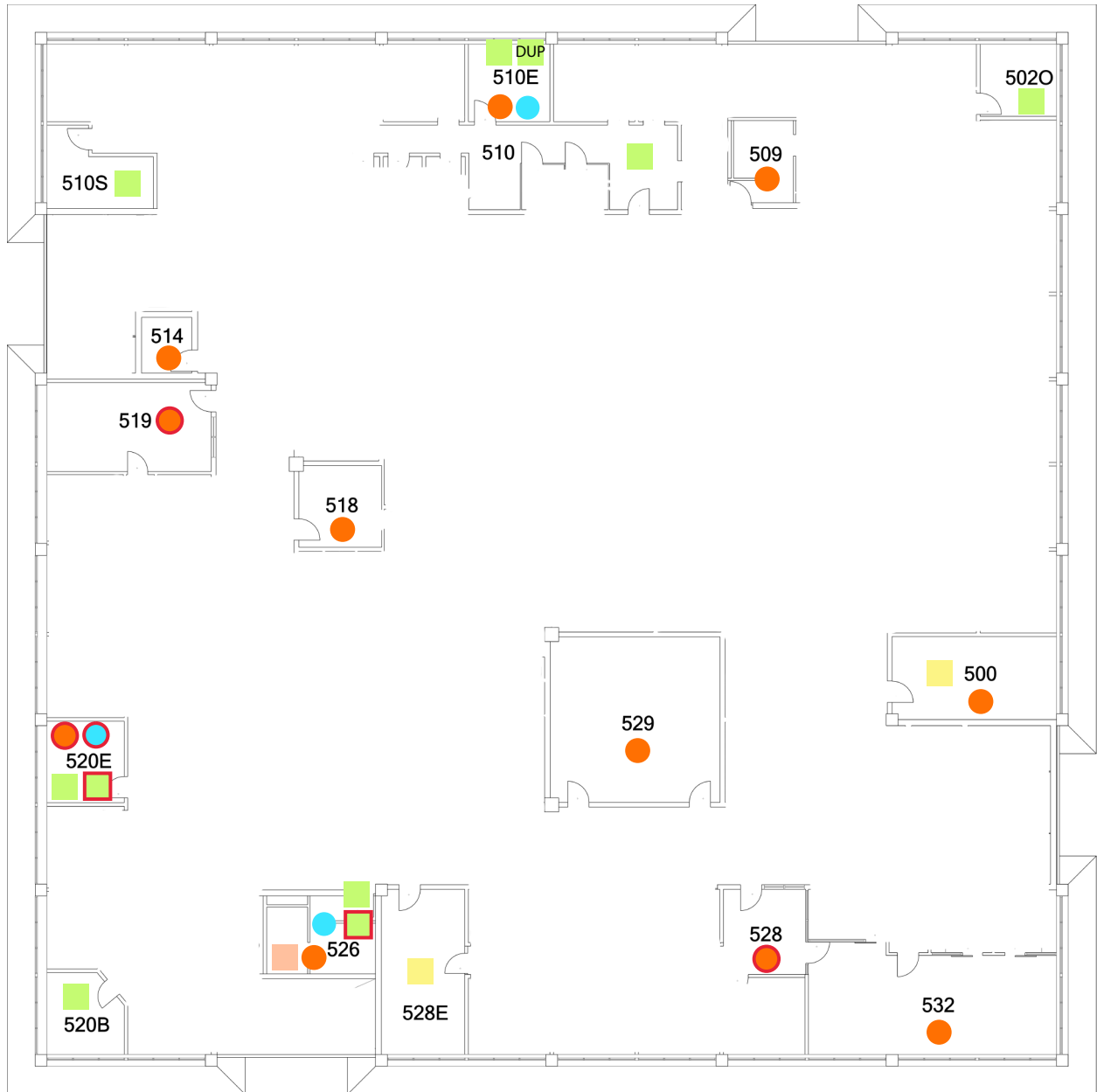


This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Figure 7d.ai

Fourth Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Raleigh, NC	June 2024
Figure 7d	



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers



This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Fifth Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Raleigh, NC	June 2024
Figure 7e	



Sample Type

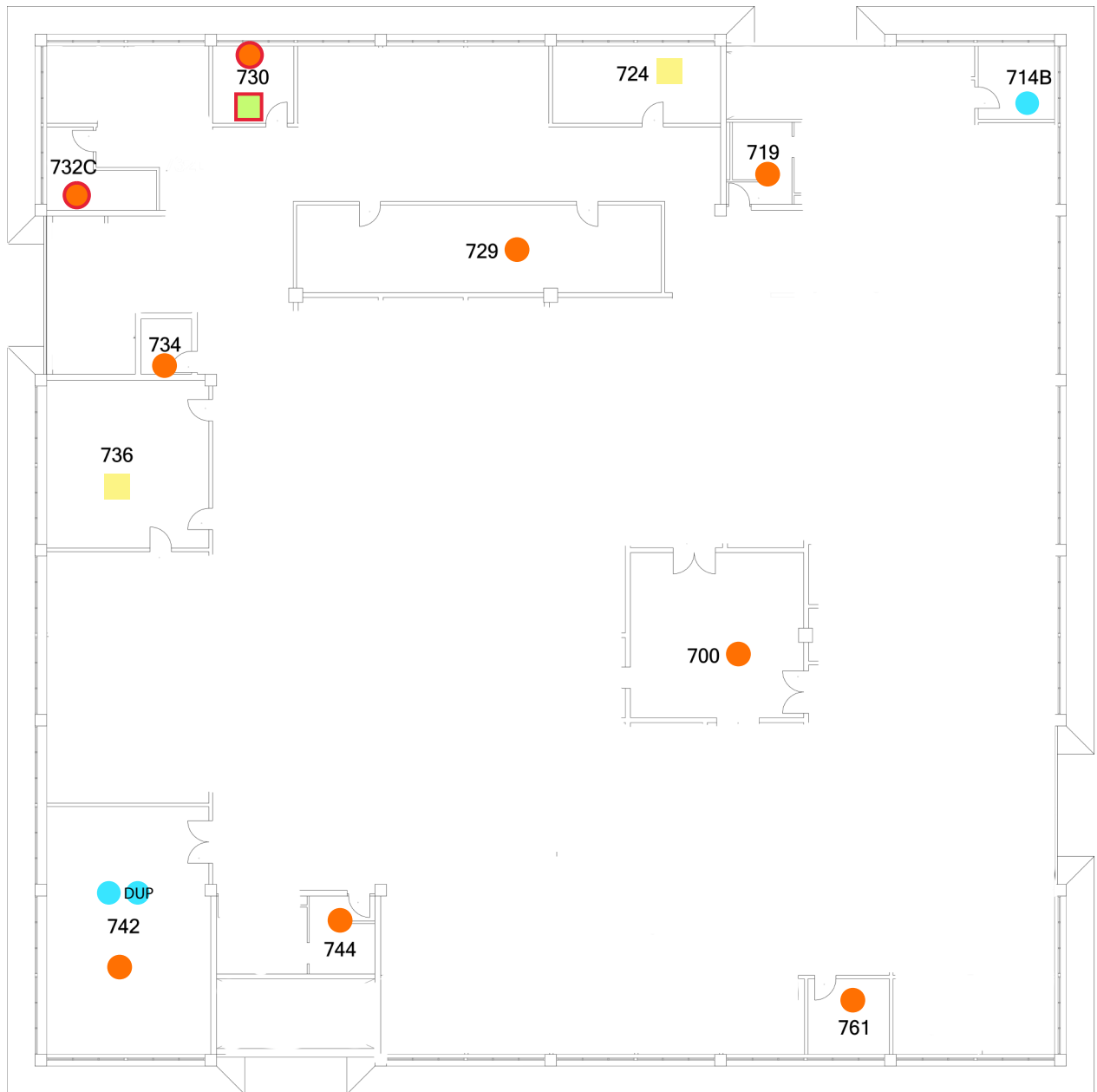
- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers



This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Sixth Floor Sample Location Map		Figure 7f
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695		
Raleigh, NC	June 2024	



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers

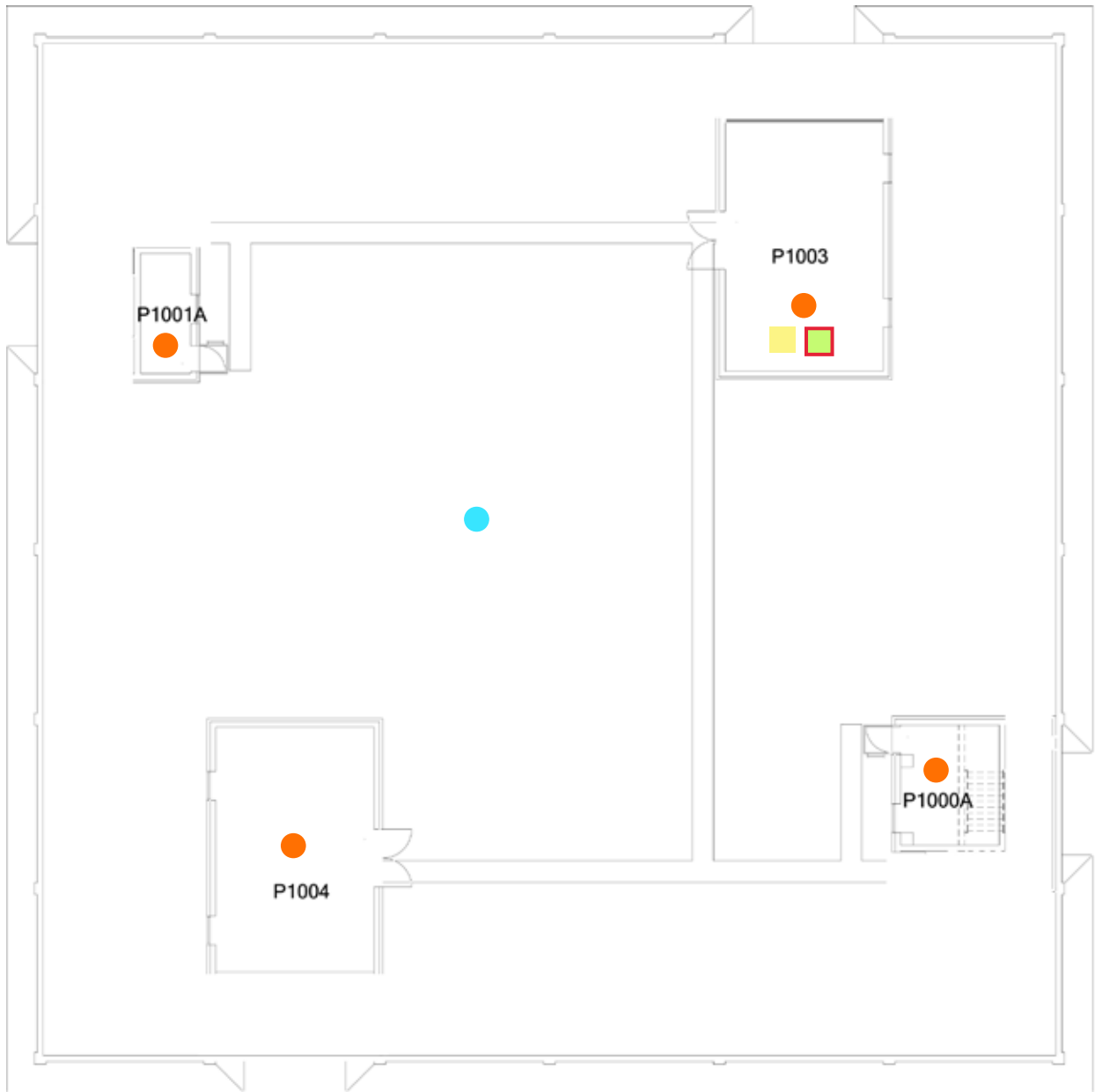


This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 DUP - a duplicate sample was collected at this location
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Figure 7g.ai

Seventh Floor Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Raleigh, NC	June 2024
Figure 7g	



Sample Type

- Geosyntec Air Sample
- Geosyntec Surface Wipe Sample
- Geosyntec Bulk Sample - insulation materials collected from inside supply ducts or air handlers
- Geosyntec Bulk Sample - air filters collected from supply grilles in perimeter rooms or air handler filter racks
- Geosyntec Bulk Sample - insulation materials collected from the exterior of ducts or air handlers
- Geosyntec Bulk Sample - window or panel caulk collected from inside the building
- NCSU Air/Surface/Bulk Sample - markers with red borders represent a sample collected by NCSU. Marker fill colors for each sample type is consistent with Geosyntec sample markers



This map has been redacted to display only rooms where environmental samples were collected. Areas where no samples were collected are not shown. Not to scale.

Notes:
 Markers represent general sample locations, not precise positions in the room
 Insulation materials collected inside ducts at the same general location are represented by a single marker
 Air filters collected from the same or adjacent air handlers are represented by a single marker
 Geosyntec collect air samples in December 2023 and April 2024
 Geosyntec collected wipe samples in December 2023
 Geosyntec collected bulk samples January 2024 and March 2024
 NCSU collected air samples in November 2023
 NCSU collected wipe samples in November 2023
 NCSU collected bulk samples April 2018, October 2023, and November 2023

Roof and Penthouse Sample Location Map	
Poe Hall, 2310 Katherine Stinson Drive Raleigh, NC 27695	
Geosyntec consultants	
Raleigh, NC	June 2024
Figure 7h	

Appendix A1
Air Sample Lab Report 2023



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/22/2023. The results are tabulated on the attached pages for the following client designated project:

n/a

The reference number for these samples is EMSL Order #: AB67731 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731

LIMS Reference ID: AB67731

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 2.6 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67731-01	DUP-01-122123	Tubes	12/21/2023	12/22/2023
AB67731-02	A-13-106-122123	Tubes	12/21/2023	12/22/2023
AB67731-03	A-12-228-122123	Tubes	12/21/2023	12/22/2023
AB67731-04	A-11-209-122123	Tubes	12/21/2023	12/22/2023
AB67731-05	A-02-317F-122123	Tubes	12/21/2023	12/22/2023
AB67731-06	A-09-402G-122123	Tubes	12/21/2023	12/22/2023
AB67731-07	A-10-400-122123	Tubes	12/21/2023	12/22/2023
AB67731-08	A-07-510E-122123	Tubes	12/21/2023	12/22/2023
AB67731-09	A-08-526-122123	Tubes	12/21/2023	12/22/2023
AB67731-10	A-05-608J-122123	Tubes	12/21/2023	12/22/2023
AB67731-11	A-06-635-122123	Tubes	12/21/2023	12/22/2023
AB67731-12	A-04-714B-122123	Tubes	12/21/2023	12/22/2023
AB67731-13	A-14-ROOF-122123	Tubes	12/21/2023	12/22/2023

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Positive Hits Summary

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AB67731-01	DUP-01-122123	EPA TO-10A	Aroclor-1262	0.0131		µg/m ³	12/21/23 12:00 12/29/2023 15:38
AB67731-02	A-13-106-122123	EPA TO-10A	Aroclor-1262	0.0193		µg/m ³	12/21/23 14:40 12/29/2023 15:55
AB67731-03	A-12-228-122123	EPA TO-10A	Aroclor-1262	0.0250		µg/m ³	12/21/23 14:10 12/29/2023 16:11
AB67731-04	A-11-209-122123	EPA TO-10A	Aroclor-1262	0.0341		µg/m ³	12/21/23 13:50 12/29/2023 16:27
AB67731-05	A-02-317F-122123	EPA TO-10A	Aroclor-1262	0.0285		µg/m ³	12/21/23 10:32 12/29/2023 16:43
AB67731-06	A-09-402G-122123	EPA TO-10A	Aroclor-1262	0.0384		µg/m ³	12/21/23 13:00 12/29/2023 16:59
AB67731-07	A-10-400-122123	EPA TO-10A	Aroclor-1262	0.0457		µg/m ³	12/21/23 13:30 12/29/2023 17:15

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Positive Hits Summary (Continued)

Lab ID	Client ID					Sampled
AB67731-08	A-07-510E-122123					12/21/23 11:55
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0794		µg/m ³	12/29/2023 17:31	
AB67731-09	A-08-526-122123					12/21/23 12:09
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0451		µg/m ³	12/29/2023 17:48	
AB67731-10	A-05-608J-122123					12/21/23 11:14
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.121		µg/m ³	12/29/2023 18:04	
AB67731-11	A-06-635-122123					12/21/23 11:22
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0333		µg/m ³	12/29/2023 18:36	
AB67731-12	A-04-714B-122123					12/21/23 10:54
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.108		µg/m ³	12/29/2023 18:52	



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results

Sample: DUP-01-122123
AB67731-01 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0131		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00695	µg/m³	12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	84%			60-120		12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	102%			60-120		12/28/23 11:13	12/29/23 15:38	RAG/TL1	EPA TO-10A	EPA TO-10A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
 (Continued)

Sample: A-13-106-122123
AB67731-02 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0193		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	93%			60-120		12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	117%			60-120		12/28/23 11:13	12/29/23 15:55	RAG/TL1	EPA TO-10A	EPA TO-10A

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200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-12-228-122123
AB67731-03 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0250		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00713	µg/m ³	12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	90%			60-120		12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	115%			60-120		12/28/23 11:13	12/29/23 16:11	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-11-209-122123
AB67731-04 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0341		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00696	µg/m³	12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	105%			60-120		12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	122%	R1		60-120		12/28/23 11:13	12/29/23 16:27	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-02-317F-122123
AB67731-05 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0285		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00696	µg/m ³	12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	94%			60-120		12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	112%			60-120		12/28/23 11:13	12/29/23 16:43	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a
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EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: A-09-402G-122123
 AB67731-06 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0384		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	95%			60-120		12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	113%			60-120		12/28/23 11:13	12/29/23 16:59	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Customer ID: GSCH75

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Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: A-10-400-122123
 AB67731-07 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0457		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00716	µg/m ³	12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	92%			60-120		12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	112%			60-120		12/28/23 11:13	12/29/23 17:15	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a
Customer PO:
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Sample Results (Continued)

**Sample: A-07-510E-122123
 AB67731-08 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0794		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00699	µg/m ³	12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	106%			60-120		12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	124%	R1		60-120		12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a
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EMSL Sales Rep: Emily Stressman
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Reported: 01/09/2024 16:07

Sample Results
 (Continued)

Sample: A-08-526-122123
AB67731-09 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0451		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00707	µg/m ³	12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	104%			60-120		12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	128%	R1		60-120		12/28/23 11:13	12/29/23 17:48	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Order ID: 012367731
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Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
 (Continued)

Sample: A-05-608J-122123
AB67731-10 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.121		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00694	µg/m ³	12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	115%			60-120		12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	138%	R1		60-120		12/28/23 11:13	12/29/23 18:04	RAG/TL1	EPA TO-10A	EPA TO-10A

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Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
(Continued)

Sample: A-06-635-122123
AB67731-11 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0333		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00709	µg/m ³	12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	100%			60-120		12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	122%	R1		60-120		12/28/23 11:13	12/29/23 18:36	RAG/TL1	EPA TO-10A	EPA TO-10A

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Customer PO:
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Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results (Continued)

**Sample: A-04-714B-122123
 AB67731-12 (Tubes)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.108		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00697	µg/m ³	12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	106%			60-120		12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	128%	R1		60-120		12/28/23 11:13	12/29/23 18:52	RAG/TL1	EPA TO-10A	EPA TO-10A

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Sample Results
 (Continued)

Sample: A-14-ROOF-122123
AB67731-13 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00691	µg/m ³	12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		104%		60-120		12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>		127%	R1	60-120		12/28/23 11:13	12/29/23 19:08	RAG/TL1	EPA TO-10A	EPA TO-10A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0915 - EPA TO-10A**Blank (BBL0915-BLK1)**

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		88	60-120		
Surrogate: Decachlorobiphenyl				100.0		113	60-120		

Blank (BBL0915-BLK2)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		101	60-120		
Surrogate: Decachlorobiphenyl				100.0		125	60-120		

LCS (BBL0915-BS1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1000	50.0	µg/m ³	1000		100	70-130		
Aroclor-1260	1090	50.0	µg/m ³	1000		109	70-130		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		99	60-120		
Surrogate: Decachlorobiphenyl				100.0		123	60-120		



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Quality Control
(Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0915 - EPA TO-10A (Continued)

LCS Dup (BBL0915-BSD1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1030	50.0	µg/m ³	1000		103	70-130	3	25
Aroclor-1260	1050	50.0	µg/m ³	1000		105	70-130	4	25

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		96	60-120		
Surrogate: Decachlorobiphenyl				100.0		123	60-120		

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367731**LIMS Reference ID:** AB67731**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Certified Analyses included in this Report

Analyte	CAS #	Certifications
EPA TO-10A in Tubes		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367731
LIMS Reference ID: AB67731
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: n/a

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 16:07

Notes and Definitions

Item	Definition
R1	Recovery is outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
5 A-02-317F-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1032	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/21/23 1032
6 A-09-402G-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1300	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1300
7 A-10-400-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1330	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 MW 12/22 1315
8 A-07-510E-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1155	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1150
9 A-08-526-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1209	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1205
10 A-05-608J-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1114	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1114
11 A-06-635-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1122	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1122
12 A-04-714B-122123	<input type="checkbox"/>	<input type="checkbox"/>	12/21/23 1054	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Start 12/20/23 1054

Method of Shipment:

Fedex

Sample Condition Upon Receipt:

Relinquished by:

John Tratter

Date/Time:

12/21/23 1800

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

ABU7731

Customer Information	Customer ID:		Billing Information	Billing ID:	Same as
	Company Name:	Geosyntec Consultants		Company Name:	
	Contact Name:	Jeff Ahrens		Billing Contact:	
	Street Address:	1300 S. Mint Street		Street Address:	
	City, State, Zip:	Charlotte, NC 28203		City, State, Zip:	
Phone:	704-227-0840	Country:		Phone:	
Email(s) for Report:	jahrens@geosyntec.com		Email(s) for Invoice:		

Project Name/No: _____ Purchase Order: _____

EMSL LIMS Project ID: _____ (If applicable, EMSL will provide)

US State where samples collected: NC State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: John Trotter Sampled By Signature: [Signature] No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
1 DUP-01-122123			1200 12/21/23	A	none	X								Start time 1200
2 A-13-106-122123			1410 12/21/23	A	none	X								start 12/20/23 1420
3 A-12-228-122123			1410 12/21/23	A	none	X								Start 12/20/23 1350
4 A-11-209-122123			1350 12/21/23	A	none	X								start 12/20/23 1340

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt: _____

Relinquished by: John Trotter Date/Time: 12/21/23 1800 Received by: [Signature] Date/Time: 12/22/23 10:20am

26°C onice



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

AB67731

Customer Information	Customer ID:	Billing ID:
	Company Name: <i>Geosyntec Consultants</i>	Company Name: <i>SAME AS</i>
	Contact Name: <i>Jeff Ahrens</i>	Billing Contact:
	Street Address: <i>1300 S. MINT FT. So. 300</i>	Street Address:
	City, State, Zip: <i>Charlotte, NC 28203</i> Country:	City, State, Zip: Country:
Phone: <i>704-227-0840</i>	Phone:	
Email(s) for Report: <i>jahrens@geosyntec.com</i>	Email(s) for Invoice:	

Project Name/No: *NCSU, PH* Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: *NC* State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: *John Trotte* Sampled By Signature: *[Signature]* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
<i>13 A-14-R00F-122123</i>			<i>12/21/23 1505</i>	<i>A</i>	<i>NONE</i>	<input checked="" type="checkbox"/>								<i>#2/20/23 1435</i>

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: *FedEx* Sample Condition Upon Receipt:

Relinquished by: *[Signature]* Date/Time: *12-21-23, 1800* Received by: Date/Time:

Relinquished by: Date/Time: Received by: Date/Time:

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

January 11, 2024

Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]

1300 S Mint Street, Suite 300

Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/27/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67810 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 15.1 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810**LIMS Reference ID:** AB67810**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00**Reported:** 01/11/2024 16:17**Samples in this Report**

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67810-01	A-01-216-122223	Tubes	12/22/2023	12/27/2023
AB67810-02	A-03-742-122223	Tubes	12/22/2023	12/27/2023
AB67810-03	A-15-117-122223	Tubes	12/22/2023	12/27/2023
AB67810-04	A-Blank-117-122223	Tubes	12/22/2023	12/27/2023



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367810

LIMS Reference ID: AB67810

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/27/2023 09:00
Reported: 01/11/2024 16:17

Positive Hits Summary

Lab ID	Client ID					Sampled
AB67810-01	A-01-216-122223					12/22/23 11:21
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0704		µg/m³	12/29/2023 19:24	
Lab ID	Client ID					Sampled
AB67810-02	A-03-742-122223					12/22/23 17:15
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0677		µg/m³	12/29/2023 19:41	
Lab ID	Client ID					Sampled
AB67810-03	A-15-117-122223					12/22/23 10:02
Method	Analyte	Result	Qualifier	Unit	Analyzed	
EPA TO-10A	Aroclor-1262	0.0436		µg/m³	12/29/2023 19:57	

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Reported: 01/11/2024 16:17

Sample Results

Sample: A-01-216-122223
AB67810-01 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0704		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00748	µg/m ³	12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	109%			60-120		12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	133%	R1		60-120		12/28/23 11:13	12/29/23 19:24	RAG/TL1	EPA TO-10A	EPA TO-10A

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Sample Results
 (Continued)

Sample: A-03-742-122223
AB67810-02 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0677		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00677	µg/m ³	12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	109%			60-120		12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	127%	R1		60-120		12/28/23 11:13	12/29/23 19:41	RAG/TL1	EPA TO-10A	EPA TO-10A

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EMSL Sales Rep: Emily Stressman

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Sample Results
 (Continued)

Sample: A-15-117-122223
AB67810-03 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	0.0436		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.00713	µg/m³	12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	107%			60-120		12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>	130%	R1		60-120		12/28/23 11:13	12/29/23 19:57	RAG/TL1	EPA TO-10A	EPA TO-10A

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Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/27/2023 09:00

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Sample Results
 (Continued)

Sample: A-Blank-117-12223
AB67810-04 (Tubes)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1221	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1232	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1242	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1248	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1254	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1260	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1262	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Aroclor-1268	ND		1	0.050	ug/PUF	12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		109%		60-120		12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A
<i>Surrogate: Decachlorobiphenyl</i>		134%	R1	60-120		12/28/23 11:13	12/29/23 20:13	RAG/TL1	EPA TO-10A	EPA TO-10A

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Quality Control

GC-SVOA

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BBL0915 - EPA TO-10A
Blank (BBL0915-BLK1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		88	60-120
Surrogate: Decachlorobiphenyl				100.0		113	60-120

Blank (BBL0915-BLK2)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	ND	50.0	µg/m ³						
Aroclor-1221	ND	50.0	µg/m ³						
Aroclor-1232	ND	50.0	µg/m ³						
Aroclor-1242	ND	50.0	µg/m ³						
Aroclor-1248	ND	50.0	µg/m ³						
Aroclor-1254	ND	50.0	µg/m ³						
Aroclor-1260	ND	50.0	µg/m ³						
Aroclor-1262	ND	50.0	µg/m ³						
Aroclor-1268	ND	50.0	µg/m ³						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		101	60-120
Surrogate: Decachlorobiphenyl				100.0		125	60-120

LCS (BBL0915-BS1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1000	50.0	µg/m ³	1000		100	70-130
Aroclor-1260	1090	50.0	µg/m ³	1000		109	70-130

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		99	60-120
Surrogate: Decachlorobiphenyl				100.0		123	60-120



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Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BBL0915 - EPA TO-10A (Continued)

LCS Dup (BBL0915-BSD1)

Prepared: 12/28/2023 Analyzed: 12/29/2023

Aroclor-1016	1030	50.0	µg/m ³	1000		103	70-130	3	25
Aroclor-1260	1050	50.0	µg/m ³	1000		105	70-130	4	25

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				100.0		96	60-120		
Surrogate: Decachlorobiphenyl				100.0		123	60-120		

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Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA TO-10A in Tubes</i>		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

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Notes and Definitions

Item	Definition
R1	Recovery is outside of the method control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



MSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

ABU7810

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:		Billing Information	Billing ID:
	Company Name:	Geosyntec Consultants	Company Name:	Same as
	Contact Name:	Jeff Ahrens	Billing Contact:	
	Street Address:	1300 S Mint St.	Street Address:	
	City, State, Zip:	Charlotte, NC 28203	Country:	US
	Phone:	704-227-0850	City, State, Zip:	
Email(s) for Report:	jahrens@geosyntec.com	Country:		
		Phone:		
		Email(s) for Invoice:		

Project Name/No: **NCSU PH** Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: **NC** State of Connecticut (CT) must select project location:

Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No **Sample(s) Temperature Upon Receipt (LAB ONLY)**

Sampled By Name: **John Trotter & Marc Welch** Sampled By Signature: *[Signature]* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
1 A-01-216-122223			12/22/23 1121	A	none	+								
2 A-03-742-122223			12/22/23 1715	A	none	+								
3 A-15-117-122223			12/22/23 1002	A	none	+								
4 A-Blank-117-122223			12/22/23 1457	A	none	+								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.) 15.0°C on ice **4 g/L**

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: **Fedex** Sample Condition Upon Receipt:

Relinquished by: <i>[Signature]</i>	Date/Time: 12/26/2023 1130	Received by: <i>[Signature]</i> FX	Date/Time: 12/27/23 9 ⁰⁰
Relinquished by:	Date/Time:	Received by: <i>[Signature]</i>	Date/Time: 12/27/23 9 AM

Appendix A2
Surface Wipe Sample Summary Table
and Lab Report, December 2023

Summary Detected PCB Aroclors in Surface Wipe Samples Collected by Geosyntec, December 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration (µg/100 cm ²)	Aroclor-1262 (µg/ 100 cm ²)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas (µg/100 cm ²) ¹			
1st	2	W-068-100-12212023	100	Maintenance/utility	Desk	< RL	1.95	10			
		W-002-101-12212023	101	Maintenance/utility	Lid	< RL	< RL	10			
		W-003-102A-12212023	102A	Laboratory	Desk	< RL	< RL	10			
		W-004-103-12212023	103B	Laboratory	Vent	< RL	< RL	10			
	1	1	W-014-103B-12212023	103	Laboratory	Desk	< RL	7.4	10		
			W-067-116-12212023	116	Maintenance/utility	Desk	< RL	1.12	10		
			W-006-117-12212023	117	Laboratory	Table	< RL	< RL	10		
			W-005-117-12212023	117	Laboratory (dup)	Table	< RL	< RL	10		
			W-007-120-12212023	120	Classroom	Desk	< RL	< RL	10		
			2	2	W-008-125-12212023	125	Maintenance/utility	Lid	< RL	< RL	10
					W-009-127-12212023	127	Maintenance/utility	Metal Box	< RL	< RL	10
	W-010-130-12212023	130			Maintenance/utility	Table	< RL	< RL	10		
	N/A	W-011-197-12212023	197	Elevator	Elevator buttons	< RL	< RL	10			
	N/A	W-012-198-12212023	198	Elevator	Elevator buttons	< RL	0.592	10			
	N/A	W-013-199-12212023	199	Elevator	Elevator buttons	< RL	0.573	10			
	2nd	2	W-015-201-12212023	201	Bathroom	Shelf	< RL	< RL	10		
W-017-202-12212023			202	Classroom	Table	< RL	< RL	10			
W-016-202-12212023			202	Classroom (dup)	Table	< RL	< RL	10			
W-018-208Q-12212023			208Q	Office	Desk	< RL	< RL	10			
1		1	W-019-210-12212023	210	Classroom	Desk	< RL	< RL	10		
			W-020-213-12212023	213	Bathroom	Counter	< RL	0.673	10		
			W-014-218-12212023	218	Classroom	Desk	< RL	0.644	10		
			W-022-220-12212023	220	Classroom	Vent	< RL	9.49	10		
2	W-023-222-12212023	222	Maintenance/utility	Product dispenser	< RL	0.733	10				

¹eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions

Notes:

Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-###-####-mmddyyyy)

HVAC: heating, ventilation and air conditioning

µg/100 cm² = micrograms per 100 square centimeters

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

The method reporting limit (RL) = 0.500 µg/100 cm².

< RL: analyte was not detected at or above the reporting limit

HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.

**Summary Detected PCB Aroclors in Surface Wipe Samples Collected by Geosyntec, December 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration (µg/100 cm ²)	Aroclor-1262 (µg/ 100 cm ²)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas (µg/100 cm ²) ¹
3rd	4	W-021-216-12212023	216	Classroom	Desk	< RL	< RL	10
		W-025-300D-12212023	300D	Office	Window Sill	< RL	74.6	10
		W-026-309-12212023	309	Bathroom	Shelf	< RL	< RL	10
		W-024-310L-12212023	310L	Office	Vent	< RL	1.87	10
	3	W-028-312-12212023	312	Classroom	Table	< RL	0.529	10
		W-027-312-12212023	312	Classroom (dup)	Table	< RL	< RL	10
		W-029-313-12212023	313	Maintenance/utility	Shelf	< RL	0.763	10
		W-030-325-12212023	325	Bathroom	Counter	< RL	< RL	10
4th	4	W-031-326S-12212023	326S	Office	Shelf	< RL	< RL	10
		W-033-400-12202023	400	Classroom	Desk	< RL	1.57	10
		W-034-402G-12202023	402G	Office	Window Sill	< RL	7.75	10
		W-035-406-12202023	406	Bathroom	Counter	< RL	< RL	10
	3	W-036-412G-12202023	412G	Office	Microwave	< RL	< RL	10
		W-037-413-12202023	413	Maintenance/utility	Shelf	< RL	1.43	10
		W-038-414A-12202023	414A	Classroom	Counter	< RL	< RL	10
		W-039-419-12202023	419	Bathroom	Shelf	< RL	3.1	10
5th	4	W-040-424-12202023	424	Classroom	Desk	< RL	0.766	10
		W-041-500-12202023	500	Classroom	Window Sill	< RL	4.5	10
		W-042-509-12202023	509	Bathroom	Counter	< RL	< RL	10
	3	W-043-510E-12202023	510E	Office	Shelf	< RL	< RL	10
		W-044-514-12202023	514	Maintenance/utility	Product dispenser	< RL	1.62	10
		W-045-518-12202023	518	Office	Printer	< RL	< RL	10
		W-046-526-12202023	526	Bathroom	Shelf	< RL	< RL	10
		W-048-529-12202023	529	Classroom	Vent	< RL	< RL	10
W-047-532-12202023	532	Classroom	Table	< RL	< RL	10		

¹[eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

Notes:
Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-##-#####-mmddyyyy)
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US EPA: United States Environmental Protection Agency
PCB: Polychlorinated Biphenyls
The method reporting limit (RL) = 0.500 µg/100 cm².
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HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.

**Summary Detected PCB Aroclors in Surface Wipe Samples Collected by Geosyntec, December 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC**

Floor	HVAC Circulation Zone	Sample-ID	Room #	Room Type	Surface Wiped	Aroclor-1026, Aroclor-1221, Aroclor-1232, Aroclor 1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1268 Concentration (µg/100 cm ²)	Aroclor-1262 (µg/ 100 cm ²)	US EPA PCB Threshold for Non-Porous Surfaces in High Occupancy Areas (µg/100 cm ²) ¹
6th	3	W-049-604-12202023	604	Laboratory	Table	< RL	< RL	10
	4	W-050-605-12202023	605	Laboratory	Shelf	< RL	< RL	10
		W-051-607-12202023	607	Bathroom	Counter	< RL	< RL	10
		W-052-608P-12202023	608P	Office	Desk	< RL	2.00	10
	3	W-053-613-12202023	613	Maintenance/utility	Cardboard box	< RL	< RL	10
		W-054-616A-12202023	616A	Office	Window Sill	< RL	1.91	10
W-055-630-12202023		630	Bathroom	Counter	< RL	< RL	10	
7th	4	W-056-700-12202023	700	Laboratory	Shelf	< RL	< RL	10
		W-057-719-12202023	719	Bathroom	Counter	< RL	< RL	10
		W-058-729-12202023	729	Office	Book	< RL	< RL	10
	3	W-059-734-12202023	734	Maintenance/utility	Shelf	< RL	< RL	10
		W-060-742-12202023	742	Laboratory	Window Sill	< RL	0.573	10
		W-061-744-12202023	744	Bathroom	Product dispenser	< RL	< RL	10
		W-062-761-12202023	761	Office	Desk	< RL	< RL	10
Roof	N/A	W-063-P1000A-12212023	P1000A	Maintenance/utility	Desk	< RL	< RL	10
	N/A	W-064-P1001A-12212023	P1001A	Maintenance/utility	Book	< RL	< RL	10
Roof	4	W-066-P1003-12212023	P1003	Maintenance/utility	Book	< RL	7.88	10
	3	W-065-P1004-12212023	P1004	Maintenance/utility	Metal Box	< RL	2.87	10

¹[eCFR :: 40 CFR Part 761 -- Polychlorinated Biphenyls \(PCBs\) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions](#)

Notes:

Sample ID nomenclature: Wipe Sample-Sample Number-Sample Room Number-Sample Date (W-##-#####-mmddyyyy)

HVAC: heating, ventilation and air conditioning

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PCB: Polychlorinated Biphenyls

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HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/21/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67620 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620

LIMS Reference ID: AB67620

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 6.7 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620**LIMS Reference ID:** AB67620**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67620-01	W-033-400-12202023	Wipe	12/20/2023	12/21/2023
AB67620-02	W-034-4026-12202023	Wipe	12/20/2023	12/21/2023
AB67620-03	W-035-406-122023	Wipe	12/20/2023	12/21/2023
AB67620-04	W-036-4126-12202023	Wipe	12/20/2023	12/21/2023
AB67620-05	W-037-413-12202023	Wipe	12/20/2023	12/21/2023
AB67620-06	W-038-414A-12202023	Wipe	12/20/2023	12/21/2023
AB67620-07	W-039-419-12202023	Wipe	12/20/2023	12/21/2023
AB67620-08	W-040-424-12202023	Wipe	12/20/2023	12/21/2023
AB67620-09	W-041-500-12202023	Wipe	12/20/2023	12/21/2023
AB67620-10	W-042-509-12202023	Wipe	12/20/2023	12/21/2023
AB67620-11	W-043-510E-12202023	Wipe	12/20/2023	12/21/2023
AB67620-12	W-044-514-12202023	Wipe	12/20/2023	12/21/2023
AB67620-13	W-045-518-12202023	Wipe	12/20/2023	12/21/2023
AB67620-14	W-046-526-12202023	Wipe	12/20/2023	12/21/2023
AB67620-15	W-047-532-12202023	Wipe	12/20/2023	12/21/2023
AB67620-16	W-048-529-12202023	Wipe	12/20/2023	12/21/2023
AB67620-17	W-049-604-12202023	Wipe	12/20/2023	12/21/2023
AB67620-18	W-050-605-12202023	Wipe	12/20/2023	12/21/2023
AB67620-19	W-051-607-12202023	Wipe	12/20/2023	12/21/2023
AB67620-20	W-052-608P-12202023	Wipe	12/20/2023	12/21/2023
AB67620-21	W-053-613-12202023	Wipe	12/20/2023	12/21/2023
AB67620-22	W-054-616A-12202023	Wipe	12/20/2023	12/21/2023
AB67620-23	W-055-630-12202023	Wipe	12/20/2023	12/21/2023
AB67620-24	W-056-700-12202023	Wipe	12/20/2023	12/21/2023
AB67620-25	W-057-719-12202023	Wipe	12/20/2023	12/21/2023
AB67620-26	W-058-729-12202023	Wipe	12/20/2023	12/21/2023
AB67620-27	W-059-734-12202023	Wipe	12/20/2023	12/21/2023
AB67620-28	W-060-742-12202023	Wipe	12/20/2023	12/21/2023
AB67620-29	W-061-744-12202023	Wipe	12/20/2023	12/21/2023
AB67620-30	W-062-761-12202023	Wipe	12/20/2023	12/21/2023
AB67620-31	W-001-Blank-12202023	Wipe	12/20/2023	12/21/2023

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Positive Hits Summary

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AB67620-01	W-033-400-12202023						12/20/23 15:25
SW846-8082A			Aroclor-1262	1.57		µg/100 cm ²	01/08/2024 14:56
AB67620-02	W-034-4026-12202023						12/20/23 15:05
SW846-8082A			Aroclor-1262	7.75		µg/100 cm ²	01/08/2024 15:17
AB67620-05	W-037-413-12202023						12/20/23 14:40
SW846-8082A			Aroclor-1262	1.43		µg/100 cm ²	01/08/2024 16:21
AB67620-07	W-039-419-12202023						12/20/23 14:55
SW846-8082A			Aroclor-1262	3.10		µg/100 cm ²	01/08/2024 17:04
AB67620-08	W-040-424-12202023						12/20/23 15:00
SW846-8082A			Aroclor-1262	0.766		µg/100 cm ²	01/08/2024 17:25
AB67620-09	W-041-500-12202023						12/20/23 14:00
SW846-8082A			Aroclor-1262	4.50		µg/100 cm ²	01/08/2024 17:47
AB67620-12	W-044-514-12202023						12/20/23 13:35
SW846-8082A			Aroclor-1262	1.62		µg/100 cm ²	01/04/2024 14:46

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
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 EMSL-CIN-01

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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AB67620-20	W-052-608P-12202023				12/20/23 12:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2.00		µg/100 cm ²	01/04/2024 17:35
AB67620-22	W-054-616A-12202023				12/20/23 13:25
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.91		µg/100 cm ²	01/04/2024 18:16
AB67620-28	W-060-742-12202023				12/20/23 11:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.573		µg/100 cm ²	01/04/2024 20:43

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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results

Sample: W-033-400-12202023
AB67620-01 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.57		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	79%			21-123		01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	97%			17-128		01/04/24 10:34	01/08/24 14:56	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-034-4026-12202023
 AB67620-02 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.75		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	81%			21-123		01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	99%			17-128		01/04/24 10:34	01/08/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-035-406-122023
AB67620-03 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		77%		21-123		01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		96%		17-128		01/04/24 10:34	01/08/24 15:38	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

**Sample: W-036-4126-12202023
 AB67620-04 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		73%		21-123		01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		90%		17-128		01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-037-413-12202023
AB67620-05 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.43		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	74%			21-123		01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	93%			17-128		01/04/24 10:34	01/08/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

**Sample: W-038-414A-12202023
 AB67620-06 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		85%		17-128		01/04/24 10:34	01/08/24 16:43	MxB/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results
(Continued)

Sample: W-039-419-12202023
AB67620-07 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	3.10		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	75%			17-128		01/04/24 10:34	01/08/24 17:04	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-040-424-12202023
AB67620-08 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.766		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	62%			21-123		01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	82%			17-128		01/04/24 10:34	01/08/24 17:25	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

**Sample: W-041-500-12202023
 AB67620-09 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	4.50		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	87%			17-128		01/04/24 10:34	01/08/24 17:47	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-042-509-12202023
 AB67620-10 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		70%		21-123		01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		88%		17-128		01/03/24 11:15	01/04/24 14:04	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-043-510E-12202023
 AB67620-11 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		73%		21-123		01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		89%		17-128		01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-044-514-12202023
AB67620-12 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.62		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	78%			17-128		01/03/24 11:15	01/04/24 14:46	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

**Sample: W-045-518-12202023
 AB67620-13 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		64%		21-123		01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		85%		17-128		01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results
(Continued)

Sample: W-046-526-12202023
AB67620-14 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		66%		21-123		01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		85%		17-128		01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-047-532-12202023
AB67620-15 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		67%		21-123		01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		91%		17-128		01/03/24 11:15	01/04/24 15:48	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367620
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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-048-529-12202023
AB67620-16 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		58%		21-123		01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		86%		17-128		01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

Sample: W-049-604-12202023
AB67620-17 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		48%		21-123		01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		81%		17-128		01/03/24 11:15	01/04/24 16:31	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-050-605-12202023
 AB67620-18 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
Surrogate: Tetrachloro-m-xylene	66%			21-123		01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl	83%			17-128		01/03/24 11:15	01/04/24 16:52	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-051-607-12202023
AB67620-19 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		66%		21-123		01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		86%		17-128		01/03/24 11:15	01/04/24 17:14	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-052-608P-12202023
 AB67620-20 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	2.00		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	59%			21-123		01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	86%			17-128		01/03/24 11:15	01/04/24 17:35	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-053-613-12202023
 AB67620-21 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		58%		21-123		01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		01/03/24 11:15	01/04/24 17:56	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-054-616A-12202023
 AB67620-22 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.91		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	66%			21-123		01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	92%			17-128		01/03/24 11:15	01/04/24 18:16	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-055-630-12202023
 AB67620-23 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		63%		21-123		01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		87%		17-128		01/03/24 11:15	01/04/24 18:37	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-056-700-12202023
AB67620-24 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		62%		21-123		01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		84%		17-128		01/03/24 11:15	01/04/24 18:58	SXD/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results
(Continued)

Sample: W-057-719-12202023
AB67620-25 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		67%		21-123		01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		87%		17-128		01/03/24 11:15	01/04/24 19:20	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-058-729-12202023
AB67620-26 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		63%		21-123		01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		86%		17-128		01/03/24 11:15	01/04/24 19:41	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

Sample: W-059-734-12202023
AB67620-27 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		71%		21-123		01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		93%		17-128		01/03/24 11:15	01/04/24 20:22	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-060-742-12202023
 AB67620-28 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.573		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	63%			21-123		01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	85%			17-128		01/03/24 11:15	01/04/24 20:43	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Sample Results (Continued)

**Sample: W-061-744-12202023
 AB67620-29 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		61%		21-123		01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		90%		17-128		01/03/24 11:15	01/04/24 21:04	SXD/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-062-761-12202023
 AB67620-30 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		70%		21-123		01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		79%		17-128		01/02/24 10:48	01/03/24 14:35	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Sample Results (Continued)

**Sample: W-001-Blank-12202023
 AB67620-31 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		87%		21-123		01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		107%		17-128		01/02/24 10:48	01/03/24 14:55	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
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Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0010 - SW846 3540C**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						
Aroclor-1268	ND	0.500	µg/100 cm ²						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			67	21-123			
Surrogate: Decachlorobiphenyl		1.000			73	17-128			

LCS (BCA0010-BS1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.47	0.500	µg/100 cm ²	10.00	75	37-120			
Aroclor-1260	8.43	0.500	µg/100 cm ²	10.00	84	45-121			

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			68	21-123			
Surrogate: Decachlorobiphenyl		1.000			72	17-128			

LCS Dup (BCA0010-BSD1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.44	0.500	µg/100 cm ²	10.00	74	37-120	0.4	25	
Aroclor-1260	8.45	0.500	µg/100 cm ²	10.00	85	45-121	0.3	25	

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			65	21-123			
Surrogate: Decachlorobiphenyl		1.000			71	17-128			

Batch: BCA0077 - SW846 3540C**Blank (BCA0077-BLK1)**

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						



EMSL Analytical, Inc.

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Project Name: NCSU PH
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Received: 12/21/2023 09:00
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**Quality Control
(Continued)**

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0077 - SW846 3540C (Continued)

Blank (BCA0077-BLK1)

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1268 ND 0.500 µg/100 cm²

Surrogate(s)

Surrogate: Tetrachloro-m-xylene 1.000 73 21-123
Surrogate: Decachlorobiphenyl 1.000 89 17-128

LCS (BCA0077-BS1)

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016 8.53 0.500 µg/100 cm² 10.00 85 37-120
Aroclor-1260 9.86 0.500 µg/100 cm² 10.00 99 45-121

Surrogate(s)

Surrogate: Tetrachloro-m-xylene 1.000 78 21-123
Surrogate: Decachlorobiphenyl 1.000 88 17-128

LCS Dup (BCA0077-BSD1)

Prepared: 1/3/2024 Analyzed: 1/4/2024

Aroclor-1016 7.95 0.500 µg/100 cm² 10.00 79 37-120 7 25
Aroclor-1260 9.48 0.500 µg/100 cm² 10.00 95 45-121 4 25

Surrogate(s)

Surrogate: Tetrachloro-m-xylene 1.000 71 21-123
Surrogate: Decachlorobiphenyl 1.000 85 17-128

Batch: BCA0131 - SW846 3540C

Blank (BCA0131-BLK1)

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016 ND 0.500 µg/100 cm²
Aroclor-1221 ND 0.500 µg/100 cm²
Aroclor-1232 ND 0.500 µg/100 cm²
Aroclor-1242 ND 0.500 µg/100 cm²
Aroclor-1248 ND 0.500 µg/100 cm²
Aroclor-1254 ND 0.500 µg/100 cm²
Aroclor-1260 ND 0.500 µg/100 cm²
Aroclor-1262 ND 0.500 µg/100 cm²
Aroclor-1268 ND 0.500 µg/100 cm²

Surrogate(s)

Surrogate: Tetrachloro-m-xylene 1.000 76 21-123
Surrogate: Decachlorobiphenyl 1.000 78 17-128



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Quality Control
(Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0131 - SW846 3540C (Continued)

LCS (BCA0131-BS1)

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016	6.45	0.500	µg/100 cm ²	10.00		64	37-120		
Aroclor-1260	7.17	0.500	µg/100 cm ²	10.00		72	45-121		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		59	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		68	17-128		

LCS Dup (BCA0131-BSD1)

Prepared: 1/4/2024 Analyzed: 1/8/2024

Aroclor-1016	8.58RO	0.500	µg/100 cm ²	10.00		86	37-120	28	25
Aroclor-1260	9.50RO	0.500	µg/100 cm ²	10.00		95	45-121	28	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		77	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		88	17-128		

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Wipe		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
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Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
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jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/21/2023 09:00
Reported: 01/09/2024 15:21

Notes and Definitions

Item	Definition
RO	RPD for this compound was outside of the control limits.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

1 of 3

AB67620

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 South Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC 28203	Country:		USA	City, State, Zip:	
Phone:	704-227-0950		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: *Anna Brand / Marc Webb* No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
W-033-400-122023		X	12/20/23 1525	O	4, 5 AB	X									
W-034-4026-122023		X	12/20/23 1505	O	4, 5 AB	X									
W-035-406-122023		X	12/20/23 1515	O	4, 5 AB	X									
W-036-4126-122023		X	12/20/23 1520	O	4, 5 AB	X									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
 Preservative is acetone hexane AB 12/20/23 6.7°C on UCI

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt:

Relinquished by: <i>Anna Brand</i>	Date/Time: 12/20/23 1730	Received by: <i>Colleen Falladuro</i>	Date/Time: 12/21/23 9AM
Relinquished by:	Date/Time:	Received by:	Date/Time:



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

4867620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1: EPA 8082A / Method 3540C	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
5 W-037-413-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1440	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6 W-038-414A-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1445	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 W-039-419-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1455	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8 W-040-424-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1500	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9 W-041-500-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1400	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10 W-042-509-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1350	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11 W-043-510E-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1345	0	4 10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: <i>Amal Brand</i>	Date/Time: 12/20/23 1730	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

AB67620

2 of 3

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer	
	Company Name:	Geosynta Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 S. Mint St. Unit 300			Street Address:		
	City, State, Zip:	Charlotte, NC	Country:		City, State, Zip:		Country:
Phone:	704-227-0840		Phone:				
Email(s) for Report:	jahrens@geosynta.com		Email(s) for Invoice:				

Project Name/No: NCSU, PM Purchase Order: _____

EMSL LIMS Project ID: _____ US State where samples collected: NC State of Connecticut (CT) must select project location:

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: Marc Webb, Anna Brand Sampled By Signature: Anna Brand No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
W-044-514-12202023		X	12/20/23 9355	O-Other	48r									
W-045-518-12202023		X	12/20/23 1430	↓	48r									
W-046-526-12202023		X	12/20/23 1420	↓	48r									
W-047-532-12202023		X	12/20/23 1415	↓	48r									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt: _____

Relinquished by: Anna Brand Date/Time: 12/20/23 1730 Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB1671620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
16 W-048-529-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1405	Other	4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
17 W-049-604-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1310	↓	4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
18 W-050-605-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1210		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19 W-051-607-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1300		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20 W-052-608P-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1205		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 W-053-613-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1155		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22 W-054-616A-12202023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/20/23 1325		4gr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: Anna Brand	Date/Time: 12/20/23 1730	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

3 of 3

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

AB67620

Customer Information	Customer ID:	Billing ID:
	Company Name: <u>Geosyntec Consultants</u>	Company Name: <u>Same as customer info</u>
	Contact Name: <u>Jeff Ahrens</u>	Billing Contact:
	Street Address: <u>1300 South Mint St. Suite 300</u>	Street Address:
	City, State, Zip: <u>Charlotte NC 28203</u> Country:	City, State, Zip: Country:
Phone: <u>704-227-0850</u>	Phone:	Email(s) for Invoice:
Email(s) for Report: <u>JAhrens@geosyntec.com</u>		

Project Name/No: NLSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Marc Webb / Amy Brand Sampled By Signature: [Signatures] No. of Samples in Shipment: 31

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
<u>W-055-630-122023</u>			<u>12/20/23 1315</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-056-700-122023</u>			<u>12/20/23 1025</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-057-719-122023</u>			<u>12/20/23 1130</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									
<u>W-058-729-122023</u>			<u>12/20/23 1045</u>	<u>O</u>	<u>none</u>	<input checked="" type="checkbox"/>									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt:

Relinquished by: Amy Brand Date/Time: 12/20/23 1730 Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB67620

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: EPA 8082-A Method 3540C	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
27 W-059-734-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1100	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28 W-060-742-12202023 Initials: MW	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1105	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
29 W-061-744-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1120	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30 W-062-761-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1040	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
31 W-001-BLANK-12202023	<input type="checkbox"/>	<input type="checkbox"/>	12/20/2023 1005	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: MW Brand	Date/Time: 12/20/23 1730	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733

LIMS Reference ID: AB67733

EMSL Customer ID: GSCH75

January 09, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 12/22/2023. The results are tabulated on the attached pages for the following client designated project:

NCSU PH

The reference number for these samples is EMSL Order #: AB67733 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733

LIMS Reference ID: AB67733

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 1.0 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733**LIMS Reference ID:** AB67733**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/22/2023 10:20**Reported:** 01/09/2024 12:07**Samples in this Report**

Lab ID	Sample	Matrix	Date Sampled	Date Received
AB67733-01	W-030-325-12212023	Wipe	12/21/2023	12/22/2023
AB67733-02	W-025-300D-12212023	Wipe	12/21/2023	12/22/2023
AB67733-03	W-031-326S-12212023	Wipe	12/21/2023	12/22/2023
AB67733-04	W-026-309-12212023	Wipe	12/21/2023	12/22/2023
AB67733-05	W-024-310L-12212023	Wipe	12/21/2023	12/22/2023
AB67733-06	W-029-313-12212023	Wipe	12/21/2023	12/22/2023
AB67733-07	W-027-312-12212023	Wipe	12/21/2023	12/22/2023
AB67733-08	W-028-312-12212023	Wipe	12/21/2023	12/22/2023
AB67733-09	W-023-222-12212023	Wipe	12/21/2023	12/22/2023
AB67733-10	W-022-220-12212023	Wipe	12/21/2023	12/22/2023
AB67733-11	W-014-218-12212023	Wipe	12/21/2023	12/22/2023
AB67733-12	W-020-213-12212023	Wipe	12/21/2023	12/22/2023
AB67733-13	W-019-210-12212023	Wipe	12/21/2023	12/22/2023
AB67733-14	W-021-216-12212023	Wipe	12/21/2023	12/22/2023
AB67733-15	W-018-208Q-12212023	Wipe	12/21/2023	12/22/2023
AB67733-16	W-015-201-12212023	Wipe	12/21/2023	12/22/2023
AB67733-17	W-016-202-12212023	Wipe	12/21/2023	12/22/2023
AB67733-18	W-017--202-12212023	Wipe	12/21/2023	12/22/2023
AB67733-19	W-007-120-12212023	Wipe	12/21/2023	12/22/2023
AB67733-20	W-005-117-12212023	Wipe	12/21/2023	12/22/2023
AB67733-21	W-006-117-12212023	Wipe	12/21/2023	12/22/2023
AB67733-22	W-008-125-12212023	Wipe	12/21/2023	12/22/2023
AB67733-23	W-011-197-12212023	Wipe	12/21/2023	12/22/2023
AB67733-24	W-009-127-12212023	Wipe	12/21/2023	12/22/2023
AB67733-25	W-010-130-12212023	Wipe	12/21/2023	12/22/2023
AB67733-26	W-002-101-12212023	Wipe	12/21/2023	12/22/2023
AB67733-27	W-014-103B-12212023	Wipe	12/21/2023	12/22/2023
AB67733-28	W-004-103-12212023	Wipe	12/21/2023	12/22/2023
AB67733-29	W-003-102A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-30	W-012-198-12212023	Wipe	12/21/2023	12/22/2023
AB67733-31	W-064-P1001A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-32	W-063-P1000A-12212023	Wipe	12/21/2023	12/22/2023
AB67733-33	W-065-P1004-12212023	Wipe	12/21/2023	12/22/2023
AB67733-34	W-066-P1003-12212023	Wipe	12/21/2023	12/22/2023
AB67733-35	W-067-116-12212023	Wipe	12/21/2023	12/22/2023
AB67733-36	W-068-100-12212023	Wipe	12/21/2023	12/22/2023
AB67733-37	W-013-199-12212023	Wipe	12/21/2023	12/22/2023

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Positive Hits Summary

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AB67733-02	W-025-300D-12212023						12/21/23 08:55
SW846-8082A			Aroclor-1262	74.6	D	µg/100 cm ²	01/03/2024 21:57
AB67733-05	W-024-310L-12212023						12/21/23 09:20
SW846-8082A			Aroclor-1262	1.87		µg/100 cm ²	01/03/2024 16:42
AB67733-06	W-029-313-12212023						12/21/23 09:25
SW846-8082A			Aroclor-1262	0.763		µg/100 cm ²	01/03/2024 17:03
AB67733-08	W-028-312-12212023						12/21/23 09:45
SW846-8082A			Aroclor-1262	0.529		µg/100 cm ²	01/03/2024 17:45
AB67733-09	W-023-222-12212023						12/21/23 09:50
SW846-8082A			Aroclor-1262	0.733		µg/100 cm ²	01/03/2024 18:06
AB67733-10	W-022-220-12212023						12/21/23 10:00
SW846-8082A			Aroclor-1262	9.49		µg/100 cm ²	01/03/2024 18:27
AB67733-11	W-014-218-12212023						12/21/23 10:05
SW846-8082A			Aroclor-1262	0.644		µg/100 cm ²	01/03/2024 18:48

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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AB67733-12	W-020-213-12212023				12/21/23 10:15
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.673		µg/100 cm ²	01/03/2024 19:09
AB67733-27	W-014-103B-12212023				12/21/23 12:15
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	7.40		µg/100 cm ²	12/27/2023 14:44
AB67733-30	W-012-198-12212023				12/21/23 13:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.592		µg/100 cm ²	12/27/2023 15:47
AB67733-33	W-065-P1004-12212023				12/21/23 14:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2.87		µg/100 cm ²	12/27/2023 16:51
AB67733-34	W-066-P1003-12212023				12/21/23 14:35
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	7.88		µg/100 cm ²	12/27/2023 17:12
AB67733-35	W-067-116-12212023				12/21/23 14:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.12		µg/100 cm ²	12/27/2023 17:33
AB67733-36	W-068-100-12212023				12/21/23 14:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.95		µg/100 cm ²	12/27/2023 17:54

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AB67733-37	W-013-199-12212023				12/21/23 13:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.573		µg/100 cm ²	12/27/2023 18:15

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results

Sample: W-030-325-12212023
AB67733-01 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		72%		21-123		01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		78%		17-128		01/02/24 10:48	01/03/24 15:17	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
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EMSL Customer ID: GSCH75

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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-025-300D-12212023
 AB67733-02 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	74.6	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	10.0	µg/100 cm ²	01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	95%		21-123		01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	109%		17-128		01/02/24 10:48	01/03/24 21:57	MxB/AxJ	SW846 3540C	SW846-8082A	

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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-031-326S-12212023
 AB67733-03 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		70%		21-123		01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		79%		17-128		01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-026-309-12212023
 AB67733-04 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		67%		21-123		01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		77%		17-128		01/02/24 10:48	01/03/24 16:21	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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 1300 S Mint Street, Suite 300
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-024-310L-12212023
 AB67733-05 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.87		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	66%			21-123		01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	74%			17-128		01/02/24 10:48	01/03/24 16:42	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
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 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-029-313-12212023
 AB67733-06 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.763		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	77%			17-128		01/02/24 10:48	01/03/24 17:03	MxB/AxJ	SW846 3540C	SW846-8082A

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 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

Sample: W-027-312-12212023
AB67733-07 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		55%		21-123		01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		67%		17-128		01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-028-312-12212023
AB67733-08 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.529		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	63%			21-123		01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	80%			17-128		01/02/24 10:48	01/03/24 17:45	MxB/AxJ	SW846 3540C	SW846-8082A

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 EMSL-CIN-01

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-023-222-12212023
 AB67733-09 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.733		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	62%			21-123		01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	76%			17-128		01/02/24 10:48	01/03/24 18:06	MxB/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-022-220-12212023
 AB67733-10 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	9.49		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	64%		21-123		01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	83%		17-128		01/02/24 10:48	01/03/24 18:27	MxB/AxJ	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

Sample: W-014-218-12212023
AB67733-11 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.644		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	61%			21-123		01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	76%			17-128		01/02/24 10:48	01/03/24 18:48	MxB/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-020-213-12212023
AB67733-12 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.673		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	57%			21-123		01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	71%			17-128		01/02/24 10:48	01/03/24 19:09	MxB/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-019-210-12212023
 AB67733-13 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		63%		21-123		01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		76%		17-128		01/02/24 10:48	01/03/24 19:30	MxB/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-021-216-12212023
 AB67733-14 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		62%		21-123		01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		73%		17-128		01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-018-208Q-12212023
 AB67733-15 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		71%		21-123		01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		83%		17-128		01/02/24 10:48	01/03/24 20:12	MxB/AxJ	SW846 3540C	SW846-8082A



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EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-015-201-12212023
AB67733-16 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		76%		17-128		01/02/24 10:48	01/03/24 20:54	MxB/AxJ	SW846 3540C	SW846-8082A

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EMSL-CIN-01

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-016-202-12212023
AB67733-17 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		55%		21-123		01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		62%		17-128		01/02/24 10:48	01/03/24 21:15	MxB/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-017--202-12212023
 AB67733-18 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		81%		17-128		01/02/24 10:48	01/03/24 21:36	MxB/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-007-120-12212023
 AB67733-19 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		12/26/23 12:13	12/28/23 16:15	SXD/AxJ	SW846 3540C	SW846-8082A

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-005-117-12212023
 AB67733-20 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		57%		21-123		12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		71%		17-128		12/26/23 12:13	12/28/23 16:42	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733

LIMS Reference ID: AB67733

EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 12/22/2023 10:20**Reported:** 01/09/2024 12:07

Sample Results (Continued)

Sample: W-006-117-12212023
AB67733-21 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		84%		17-128		12/26/23 12:13	12/28/23 17:04	SXD/AxJ	SW846 3540C	SW846-8082A

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 Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-008-125-12212023
 AB67733-22 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		58%		21-123		12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		74%		17-128		12/26/23 12:13	12/28/23 17:26	SXD/AxJ	SW846 3540C	SW846-8082A



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EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-011-197-12212023
AB67733-23 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		12/26/23 12:13	12/28/23 17:48	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-009-127-12212023
 AB67733-24 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		80%		17-128		12/26/23 12:13	12/28/23 18:10	SXD/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-010-130-12212023
AB67733-25 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		65%		21-123		12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		75%		17-128		12/26/23 12:13	12/28/23 18:31	SXD/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results (Continued)

**Sample: W-002-101-12212023
 AB67733-26 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
Surrogate: Tetrachloro-m-xylene		52%		21-123		12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		70%		17-128		12/26/23 12:13	12/28/23 18:53	SXD/AxJ	SW846 3540C	SW846-8082A



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Project Name: NCSU PH

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EMSL Sales Rep: Emily Stressman
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Sample Results
(Continued)

Sample: W-014-103B-12212023
AB67733-27 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.40		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	69%		21-123			12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	90%		17-128			12/26/23 12:13	12/27/23 14:44	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-004-103-12212023
 AB67733-28 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		64%		21-123		12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		90%		17-128		12/26/23 12:13	12/27/23 15:05	SXD/AxJ	SW846 3540C	SW846-8082A

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LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-003-102A-12212023
 AB67733-29 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		61%		21-123		12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		89%		17-128		12/26/23 12:13	12/27/23 15:26	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-012-198-12212023
AB67733-30 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.592		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	67%			21-123		12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	100%			17-128		12/26/23 12:13	12/27/23 15:47	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

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Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-064-P1001A-12212023
AB67733-31 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		68%		21-123		12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		91%		17-128		12/26/23 12:13	12/27/23 16:08	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-063-P1000A-12212023
 AB67733-32 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		72%		21-123		12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		95%		17-128		12/26/23 12:13	12/27/23 16:30	SXD/AxJ	SW846 3540C	SW846-8082A



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EMSL Customer ID: GSCH75

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-065-P1004-12212023
AB67733-33 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	2.87		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	68%			21-123		12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	95%			17-128		12/26/23 12:13	12/27/23 16:51	SXD/AxJ	SW846 3540C	SW846-8082A

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Project Name: NCSU PH

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EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
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Sample Results
(Continued)

Sample: W-066-P1003-12212023
AB67733-34 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	7.88		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	70%		21-123			12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	94%		17-128			12/26/23 12:13	12/27/23 17:12	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

**Sample: W-067-116-12212023
 AB67733-35 (Wipe)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.12		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		67%		21-123		12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		91%		17-128		12/26/23 12:13	12/27/23 17:33	SXD/AxJ	SW846 3540C	SW846-8082A

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EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results (Continued)

Sample: W-068-100-12212023
AB67733-36 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.95		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	63%			21-123		12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	88%			17-128		12/26/23 12:13	12/27/23 17:54	SXD/AxJ	SW846 3540C	SW846-8082A



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Sample Results
(Continued)

Sample: W-013-199-12212023
AB67733-37 (Wipe)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	0.573		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.500	µg/100 cm ²	12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	75%		21-123			12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	96%		17-128			12/26/23 12:13	12/27/23 18:15	SXD/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BBL0824 - SW846 3540C**Blank (BBL0824-BLK1)**

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						
Aroclor-1268	ND	0.500	µg/100 cm ²						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			61	21-123			
Surrogate: Decachlorobiphenyl		1.000			73	17-128			

LCS (BBL0824-BS1)

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	6.92	0.500	µg/100 cm ²	10.00	69	37-120			
Aroclor-1260	7.91	0.500	µg/100 cm ²	10.00	79	45-121			

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			66	21-123			
Surrogate: Decachlorobiphenyl		1.000			80	17-128			

LCS Dup (BBL0824-BSD1)

Prepared: 12/26/2023 Analyzed: 12/28/2023

Aroclor-1016	7.09	0.500	µg/100 cm ²	10.00	71	37-120	2	25	
Aroclor-1260	8.35	0.500	µg/100 cm ²	10.00	83	45-121	5	25	

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		1.000			63	21-123			
Surrogate: Decachlorobiphenyl		1.000			84	17-128			

Batch: BCA0010 - SW846 3540C**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	ND	0.500	µg/100 cm ²						
Aroclor-1221	ND	0.500	µg/100 cm ²						
Aroclor-1232	ND	0.500	µg/100 cm ²						
Aroclor-1242	ND	0.500	µg/100 cm ²						
Aroclor-1248	ND	0.500	µg/100 cm ²						
Aroclor-1254	ND	0.500	µg/100 cm ²						
Aroclor-1260	ND	0.500	µg/100 cm ²						
Aroclor-1262	ND	0.500	µg/100 cm ²						

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012367733
LIMS Reference ID: AB67733
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0010 - SW846 3540C (Continued)**Blank (BCA0010-BLK1)**

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1268	ND	0.500	µg/100 cm ²						
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Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		67	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		73	17-128		

LCS (BCA0010-BS1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.47	0.500	µg/100 cm ²	10.00		75	37-120		
Aroclor-1260	8.43	0.500	µg/100 cm ²	10.00		84	45-121		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		68	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		72	17-128		

LCS Dup (BCA0010-BSD1)

Prepared: 1/2/2024 Analyzed: 1/3/2024

Aroclor-1016	7.44	0.500	µg/100 cm ²	10.00		74	37-120	0.4	25
Aroclor-1260	8.45	0.500	µg/100 cm ²	10.00		85	45-121	0.3	25

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				1.000		65	21-123		
<i>Surrogate: Decachlorobiphenyl</i>				1.000		71	17-128		

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Wipe		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

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Project Name: NCSU PH

Customer PO:
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Received: 12/22/2023 10:20
Reported: 01/09/2024 12:07

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



EMSL ANALYTICAL, INC.

Page 1 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AB67733

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:	Billing ID:	Same as customer info		
	Company Name:	Company Name:	Geosyntec Consultants		
	Contact Name:	Billing Contact:	Jeff Ahrens		
	Street Address:	Street Address:	1300 South Mint St Suite 300		
	City, State, Zip:	City, State, Zip:	Country:	USA	
Phone:	Phone:	704-227-0850			
Email(s) for Report:	Email(s) for Invoice:	JAhrens@geosyntec.com			

Project Name/No: **NCSU PH** Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: **NC** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: **Anna Brand / Marc Webb** Sampled By Signature: *Anna Brand / Marc Webb* No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal. 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
1 W-030-325-12212023		X	12/21/23 0825	O	None	X									10x10cm wipe
2 W-025-300D-12212023		X	↓ 0840	↓	↓	X									↓
3 W-031-326S-12212023		X	↓ 0855	↓	↓	X									↓
4 W-026-309-12212023		X	↓ 0905	↓	↓	X									↓

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Ex# 7884 180 0280

Reporting Requirements: Results Only Results and QC Reduced Deliverables HZresults EDD Excel Other (Describe Above)

Method of Shipment: **FEDEX** Sample Condition Upon Receipt:

Relinquished by: *Anna Brand* Date/Time: **12/21/23 1700** Received by: *L. Kennedy* Date/Time: **12/22/23 10:20am**

1.0°C



EMSL ANALYTICAL, INC.

Page 2 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

Blank box for Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: EPA 8082A / Method 3540C	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
5 W-024-310L-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23 0910	O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
6 W-029-313-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0920			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 W-027-312-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0925			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8 W-028-312-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0925			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9 W-023-222-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0945			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10 W-022-220-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0950			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11 W-014-214-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1000			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: <i>Amg Brand</i>	Date/Time: 12/21/23 1700	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

Page 3 of 7

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer info	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 South Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC 28203	Country:		USA	City, State, Zip:	
Phone:	704-227-0050		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: **NCSU PH** Purchase Order: _____

EMSL LIMS Project ID: _____ US State where samples collected: **NC** State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: **Anna Brand / Marc Webb** Sampled By Signature: *Anna Brand* *Marc Webb* No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
12 W-020-213-12212023		X	12/21/23 1005	O	None	X									10x10cm wipe
13 W-019-210-12212023		X	↓ 1015	↓	↓	X									
14 W-021-216-12212023		X	↓ 1020	↓	↓	X									
15 W-019-208Q-12212023		X	↓ 1030	↓	↓	X									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: **FEDEX** Sample Condition Upon Receipt: _____

Relinquished by: *Anna Brand* Date/Time: **12/21/23 1700** Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____



EMSL ANALYTICAL, INC.

Page 4 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

[Empty box for Order Number / Lab Use Only]

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: <i>EPA 8082A / Method 3510C</i>	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
16 W-015-201-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23	1040 O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
17 W-016-202-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1045			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
18 W-017-202-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1045			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19 W-007-120-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1110			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20 W-005-117-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1120			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21 W-006-117-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1120			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22 W-008-125-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1135			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: <i>Anna Beard</i>	Date/Time: <i>12/21/23 1700</i>	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Page 5 of 7

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Customer Information	Customer ID:		Billing Information	Billing ID:	Same as customer info		
	Company Name:	Geosyntec Consultants		Company Name:			
	Contact Name:	Jeff Ahrens		Billing Contact:			
	Street Address:	1300 South Mint St Suite 300		Street Address:			
	City, State, Zip:	Charlotte, NC 28203		Country:	USA	City, State, Zip:	
Phone:	704-227-0850		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: **NCSU PH** Purchase Order: _____

EMSL LIMS Project ID: _____ (If applicable, EMSL will provide) US State where samples collected: **NC** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY) _____

Sampled By Name: **Anna Brand / Marc Webb** Sampled By Signature: *Anna Brand* *Marc Webb* No. of Samples in Shipment: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
W-011-197-12212023		X	12/21/23 1140	O	None	X									10x10cm wipe
W-009-127-12212023		X	1145			X									
W-010-130-12212023		X	1150			X									
W-002-101-12212023		X	1200			X									

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: **FEDEX** Sample Condition Upon Receipt: _____

Relinquished by: *Anna Brand* Date/Time: **12/21/23 1700** Received by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____



EMSL ANALYTICAL, INC.

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Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1: EPA 8062A / Method 3540c	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
27 W-014-103B-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12/21/23 1210	O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10x10 cm wipe
28 W-004-103-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1215			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	↓
29 W-003-102A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1220			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30 W-013-199-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1345			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
31 W-012-198-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1350			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
32 W-064-P1001A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1415			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
33 W-063-P1000A-12212023	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1420			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: <i>Anna Brand</i>	Date/Time: 12/21/23 1700	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL ANALYTICAL, INC.

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer info	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	Jeff Ahrens			Billing Contact:		
	Street Address:	1300 South Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC 28203	Country:		USA	City, State, Zip:	
Phone:	704-227-0850		Phone:				
Email(s) for Report:	JAhrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU PH Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Anna Brand / Marc Webb Sampled By Signature: Anna Brand Marc Webb No. of Samples in Shipment:

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
W-065-P1004-12212023		X	12/21/23 1430	O	None	X									10x10cm wipe
W-066-P1003-12212023		X	↓ 1435	↓	↓	X									↓
W-067-116-12212023		X	↓ 1445	↓	↓	X									↓
W-068-100-12212023		X	↓ 1450	↓	↓	X									↓

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: FEDEX Sample Condition Upon Receipt:

Relinquished by: Anna Brand Date/Time: 12/21/23 17:00 Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time

Appendix B1

Example Photos of Duct Patchwork

GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 1

Date: 3/8/2024

Location: 402S

Comments: Hot Supply Duct Textile Backing Before Repair



Photograph ID: 2

Date: 3/8/2024

Location: 402S

Comments: Hot Supply Duct Textile Backing After Repair



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 3

Date: 3/8/2024

Direction: 634A

Comments: Mixed Supply Duct Textile Backing Before Repair



Photograph ID: 4

Date: 3/8/2024

Direction: 634A

Comments: Mixed Supply Duct Textile Backing After Repair



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 5

Date: 3/8/2024

Direction: 640C

Comments: Cold Supply Duct Exterior Before Repair



Photograph ID: 6

Date: 3/8/2024

Direction: 640C

Comments: Cold Supply Duct Exterior After Repair



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 7

Date: 3/8/2024

Location: 607

Comments: Cold Supply Duct Exterior Before Repair



Photograph ID: 8

Date: 3/8/2024

Direction: 607

Comments: Cold Supply Duct Exterior After Repair



Appendix B2

Example Photos of Visual Inspection

GEOSYNTEC CONSULTANTS
Photographic Record



Client: NCSU c/o KTS

Project Number: GN10263

Site Name: NCSU PH

Site Location: 2310 Katharine Stinson Dr, Raleigh, NC

Photograph ID: 1

Date: 3/6/2024

Location: 325

HVAC Circulation Zone: 3

Inspected: Cold Supply Duct



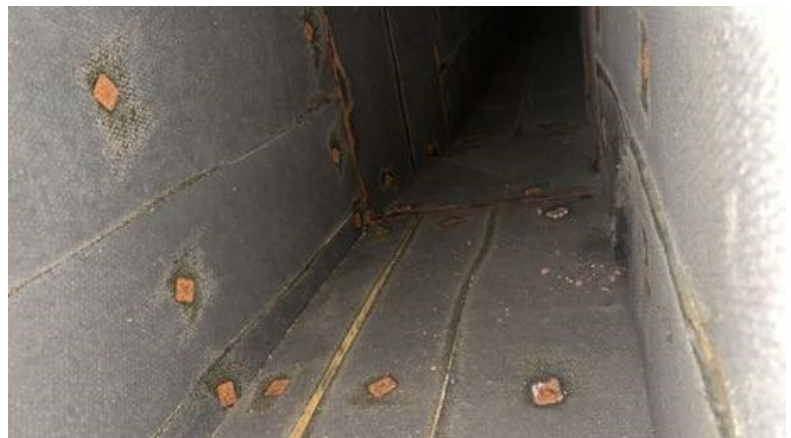
Photograph ID: 2

Date: 3/6/2024

Location: 602M

HVAC Circulation Zone: 4

Inspected: Cold Supply Duct



**Geosyntec Consultants
Photographic Record**



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 3

Date: 3/7/2024

Location: 213

HVAC Circulation Zone: 1

Inspected: Cold Supply Duct



Photograph ID: 4

Date: 3/7/2024

Location: 106

HVAC Circulation Zone: 2

Inspected: Cold Supply Duct



**Geosyntec Consultants
Photographic Record**



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 5

Date: 3/5/2024

Location: 309

HVAC Circulation Zone: 4

Inspected: Hot Supply Duct



Photograph ID: 6

Date: 3/6/2024

Location: 630

HVAC Circulation Zone: 3

Inspected: Hot Supply Duct



**Geosyntec Consultants
Photographic Record**



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 7

Date: 3/7/2024

Location: 122

HVAC Circulation Zone: 1

Inspected: Hot Supply Duct



Photograph ID: 8

Date: 3/7/2024

Direction: 106

HVAC Circulation Zone: 2

Inspected: Hot Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 9

Date: 3/6/2024

Location: 634a

HVAC Circulation Zone: 3

Inspected: Mixed Air Duct



Photograph ID: 10

Date: 3/5/2024

Location: 326

HVAC Circulation Zone: 3

Inspected: Mixed Air Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 11

Date: 3/6/2024

Location: 638

HVAC Circulation Zone: 3

Inspected: Mixed Air Duct



Photograph ID: 12

Date: 3/5/2024

Direction: 326J

HVAC Circulation Zone: 3

Inspected: Mixed Air Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 13

Date: 3/5/2024

Location: 326

HVAC Circulation Zone: 3

Inspected: Insulation Adhesive from Mixed Air Duct



Photograph ID: 14

Date: 3/6/2024

Location: 630

HVAC Circulation Zone: 3

Inspected: Insulation Adhesive over insulation pins



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 15

Date: 3/6/2024

Location: 638

HVAC Circulation Zone: 3

Inspected: Discolored Insulation Facing from Mixed Air Duct



Photograph ID: 16

Date: 3/7/2024

Location: 122

HVAC Circulation Zone: 2

Inspected: Discolored Insulation Facing from Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 17

Date: 3/7/2024

Location: 106

HVAC Circulation Zone: 1

Inspected: Discolored Insulation Facing from Hot Supply Duct



Photograph ID: 18

Date: 3/5/2024

Location: 309

HVAC Circulation Zone: 4

Inspected: Discolored Insulation Facing from Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 19

Date: 3/5/2024

Location: 310G

HVAC Circulation Zone: 4

Inspected: Discolored Insulation Facing from Cold Supply Duct



Photograph ID: 20

Date: 3/5/2024

Location: 309

HVAC Circulation Zone: 4

Inspected: Tears in Insulation Facing from Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 21

Date: 3/6/2024

Location: 634A

HVAC Circulation Zone: 3

Inspected: Tears in Insulation Facing from Mixed Air Duct



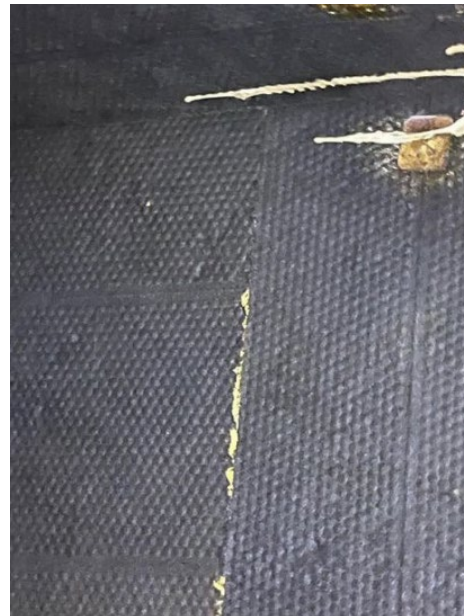
Photograph ID: 22

Date: 3/6/2024

Location: 607

HVAC Circulation Zone: 4

Inspected: Tears in Insulation Facing from Hot Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 23

Date: 3/6/2024

Location: 325

HVAC Circulation Zone: 3

Inspected: Tears in Insulation Facing from Cold Supply Duct



Photograph ID: 24

Date: 3/5/2024

Location: 309

HVAC Circulation Zone: 4

Inspected: Patches in Insulation Facing from Hot Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 25

Date: 3/6/2024

Location: 636

HVAC Circulation Zone: 3

Inspected: Patches in Insulation Facing from Cold Supply Duct



Photograph ID: 26

Date: 3/6/2024

Location: 635

HVAC Circulation Zone: 3

Inspected: Dents in Insulation Facing from Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 27

Date: 1/4/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Floor of Air Handler Unit 1



Photograph ID: 28

Date: 1/4/2024

Location: 510E

HVAC Circulation Zone: 3

Inspected: Mixing Box



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 29

Date: 1/5/2024

Location: 510

HVAC Circulation Zone: 4

Inspected: Return Duct



Photograph ID: 30

Date: 3/8/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Foamboard Adhesive



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 31

Date: 3/6/2024

Location: 607

HVAC Circulation Zone: 4

Inspected: Gold Insulation Sealant in Hot Supply Duct



Photograph ID: 32

Date: 3/6/2024

Location: 300P

HVAC Circulation Zone: 4

Inspected: Red Insulation Sealant in Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 33

Date: 3/6/2024

Location: 634A

HVAC Circulation Zone: 3

Inspected: Gold and Red Insulation Sealant in Mixed Air Duct



Photograph ID: 34

Date: 3/6/2024

Location: 325

HVAC Circulation Zone: 4

Inspected: Red Insulation Sealant Overlaid on Gold Insulation Sealant in Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 35

Date: 3/5/2024

Location: 317C

HVAC Circulation Zone: 3

Inspected: Black Insulation Sealant in Cold Supply Duct



Photograph ID: 36

Date: 1/4/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Gray Insulation Sealant



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 37

Date: 3/7/2024

Location: 213

HVAC Circulation Zone: 2

Inspected: Red Duct Sealant



Photograph ID: 38

Date: 3/6/2024

Location: 325

HVAC Circulation Zone: 3

Inspected: Red and Gold Overlaid Duct Sealant



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

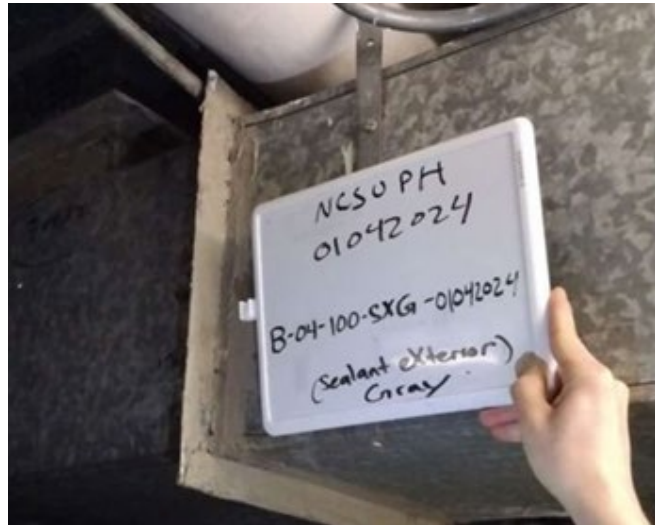
Photograph ID: 39

Date: 1/4/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Gray Exterior Duct Sealant



Photograph ID: 40

Date: 1/3/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Yellow Exterior Duct Sealant



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

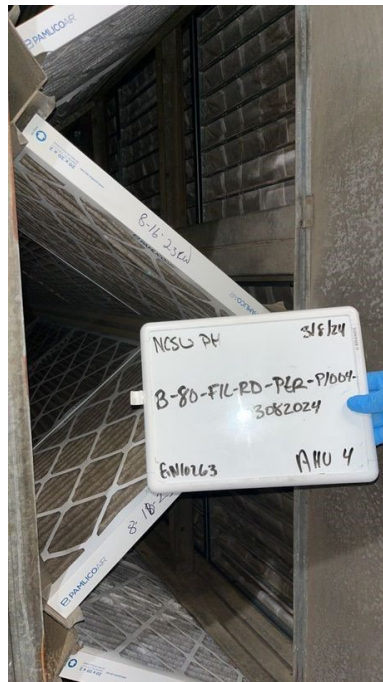
Photograph ID: 41

Date: 3/8/2024

Location: P1004

HVAC Circulation Zone: 4

Inspected: Pleated Return Filter



Photograph ID: 42

Date: 3/8/2024

Location: 100

HVAC Circulation Zone: 1

Inspected: Pocket Filters



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

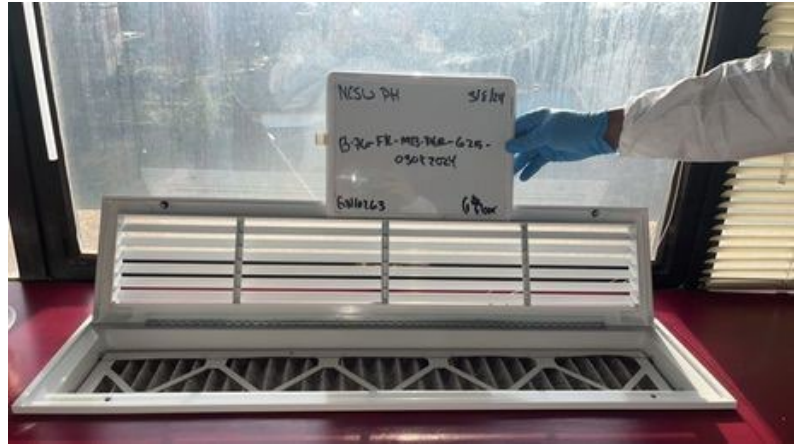
Photograph ID: 43

Date: 3/8/2024

Location: 625

HVAC Circulation Zone: 3

Inspected: Pleated Supply Filter



Photograph ID: 44

Date: 3/8/2024

Location: 608M

HVAC Circulation Zone: 4

Inspected: Pleated Supply Filter



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

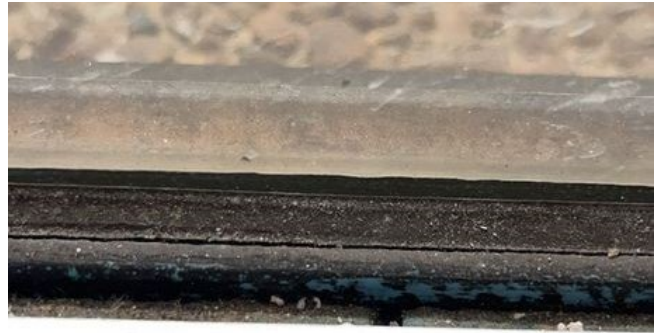
Photograph ID: 45

Date: 3/8/2024

Location: 310G

HVAC Circulation Zone: 4

Inspected: Window Caulk



Photograph ID: 46

Date: 3/8/2024

Location: 300M

HVAC Circulation Zone: 4

Inspected: Window Caulk



Appendix B3

Example Photos of Bulk Samples

GEOSYNTEC CONSULTANTS
Photographic Record



Client: NCSU c/o KTS

Project Number: GN10263

Site Name: NCSU PH

Site Location: 2310 Katharine Stinson Dr, Raleigh, NC

Photograph ID: 1

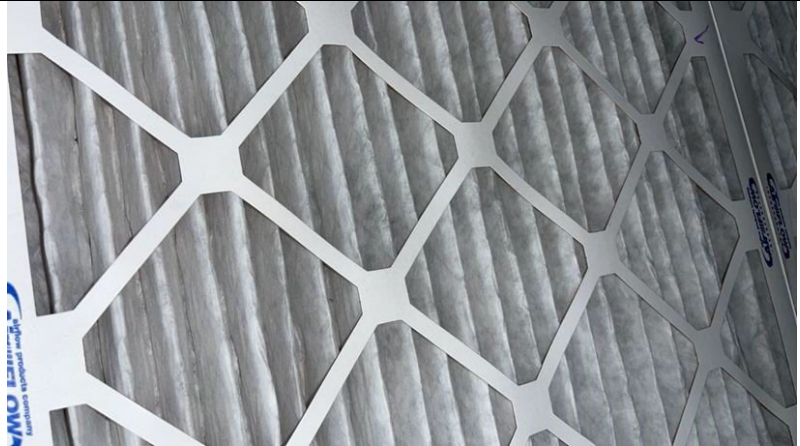
Date: 3/8/2024

Location: P1003

Sample ID: B-84-FIL-RD-PER-P1003-03082024

HVAC Circulation Zone: From Air Handling Unit 5

Bulk Material: Pleated Return Air Filter



GEOSYNTEC CONSULTANTS
Photographic Record



Client: NCSU c/o KTS

Project Number: GN10263

Site Name: NCSU PH

Site Location: 2310 Katharine Stinson Dr, Raleigh, NC

Photograph ID: 2

Date: 3/8/2024

Location: P1004

Sample ID: B-82-FIL-RD-PER-P1004-03082024

HVAC Circulation Zone: From Air Handling Unit 3

Bulk Material: Pleated Return Air Filter



GEOSYNTEC CONSULTANTS
Photographic Record



Client: NCSU c/o KTS

Project Number: GN10263

Site Name: NCSU PH

Site Location: 2310 Katharine Stinson Dr, Raleigh, NC

Photograph ID: 3

Date: 3/8/2024

Location: P1003

Sample ID: B-87-FIL-RD-PER-P1003-03082024

HVAC Circulation Zone: From Air Handling Unit 6

Bulk Material: Pocket Return Air Filter



Photograph ID: 4

Date: 3/8/2024

Location: P1004

Sample ID: B-83-FIL-RD-PER-P1004-03082024

HVAC Circulation Zone: From Air Handling Unit 3

Bulk Material: Pocket Return Air Filter



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 5

Date: 3/7/2024

Location: 213

Sample ID: B-70-ISEA-CS-213-03072024

HVAC Circulation Zone: 1

Bulk Material: Insulation Sealant

Comments: Cold Supply Duct



Photograph ID: 6

Date: 3/6/2024

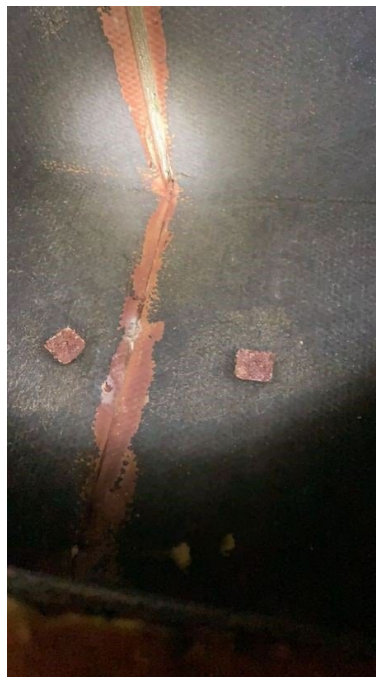
Location: 636

Sample ID: B-33-ISEA-CS-PER-636-03062024

HVAC Circulation Zone: 3

Bulk Material: Insulation Sealant

Comments: Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 7

Date: 3/7/2024

Location: 402S

Sample ID: B-58-ISEA-HS-PER-402S-03072024

HVAC Circulation Zone: 4

Bulk Material: Insulation Sealant

Comments: Hot Supply Duct



Photograph ID: 8

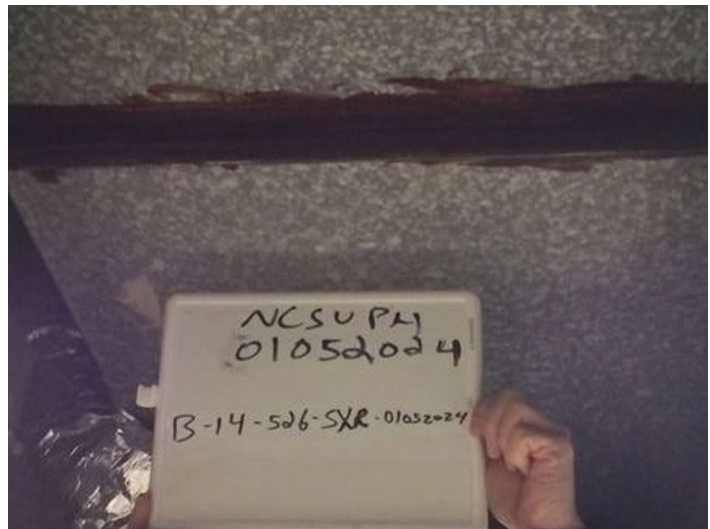
Date: 3/6/2024

Direction: 635

Sample ID: B-14-526-SXR-01052024

HVAC Circulation Zone: 4

Bulk Material: Exterior Sealant



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 9

Date: 3/6/2024

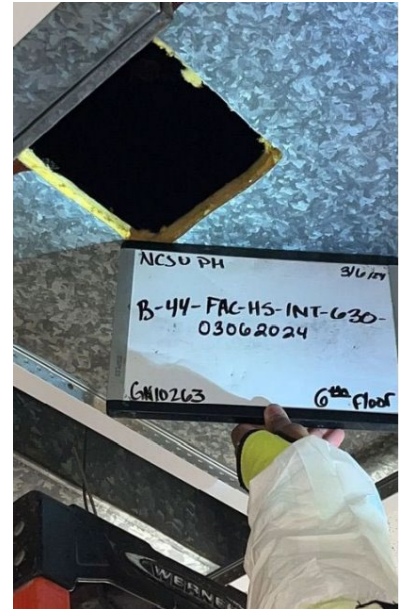
Location: 630

Sample ID: B-44-FAC-HS-INT-630-03062024

HVAC Circulation Zone: 3

Bulk Material: Insulation Facing

Comments: Hot Supply Duct



Photograph ID: 10

Date: 3/6/2024

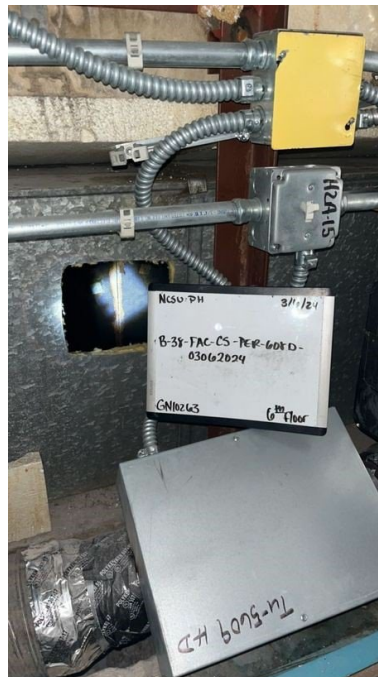
Location: 608D

Sample ID: B-38-FAC-CS-PER-608D-03062024

HVAC Circulation Zone: 4

Bulk Material: Insulation Facing

Comments: Cold Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 11

Date: 3/7/2024

Location: 417

Sample ID: B-16-FAC-CS-INT-309-03052024

HVAC Circulation Zone: 4

Bulk Material: Insulation Facing

Comments: Hot Supply Duct



Photograph ID: 12

Date: 3/6/2024

Location: 325

Sample ID: B-46-FAC-MB-INT-634A-03062024

HVAC Circulation Zone: 3

Bulk Material: Insulation Facing

Comments: Mixed Air Supply Duct



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 13

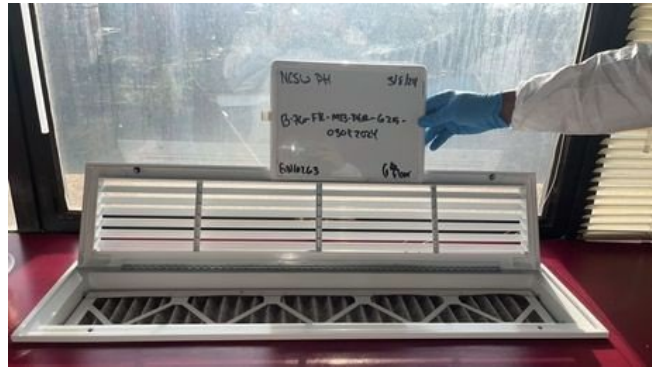
Date: 3/6/2024

Location: 607

Sample ID: B-76-FIL-MB-PER-625-03082024

HVAC Circulation Zone: 3

Bulk Material: Pleated Supply Filter



Photograph ID: 14

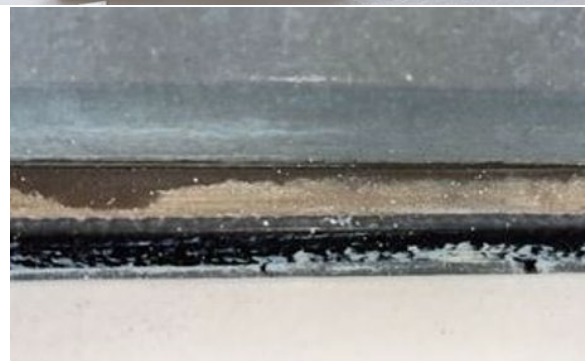
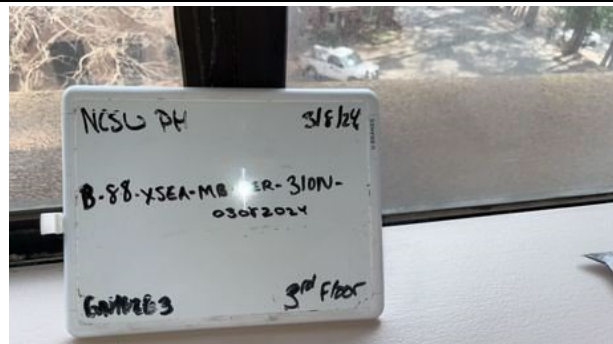
Date: 3/8/2024

Location: 310N

Sample ID: B-88-XSEA-MB-PER-310N-03082024

HVAC Circulation Zone: 4

Bulk Material: Window Caulk



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 15

Date: 3/8/2024

Location: 100

Sample ID: B-78-XSEA-RD-PER-100-03082024

HVAC Circulation Zone: 1

Bulk Material: Foamboard Construction Adhesive



Photograph ID: 16

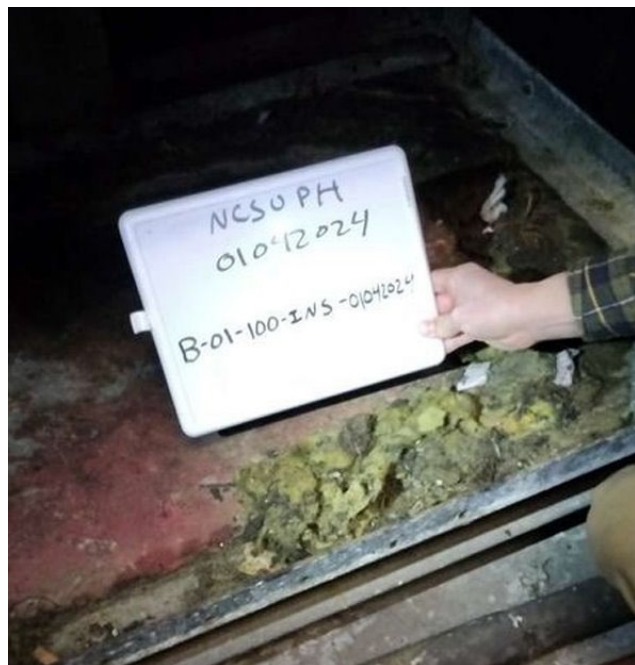
Date: 1/4/2024

Location: 100

Sample ID: B-01-INS-01042024

HVAC Circulation Zone: From Air Handling Unit 1

Bulk Material: Insulation Fibers



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 17

Date: 1/5/2024

Location: 510

Sample ID: B-09-510-INS-01052024

HVAC Circulation Zone: 4

Bulk Material: Insulation Fibers



Photograph ID: 18

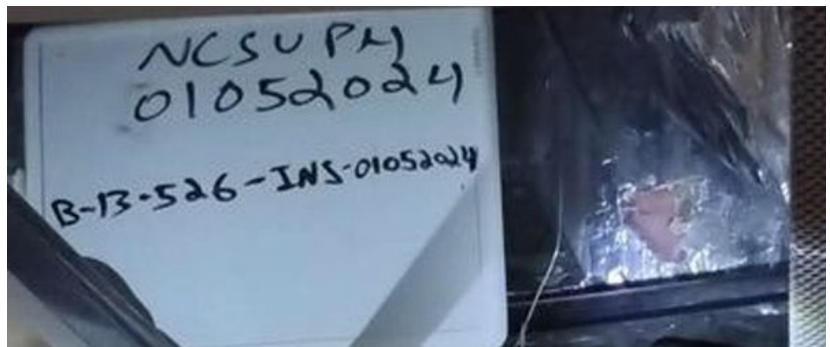
Date: 1/5/2024

Location: 526

Sample ID: B-13-526-INS-01052024

HVAC Circulation Zone: 3

Bulk Material: Insulation Fibers



GEOSYNTEC CONSULTANTS
Photographic Record



Client: North Carolina State University

Project Number: GN10263

Site Name: NCSU PH

Site Location: Raleigh, North Carolina

Photograph ID: 19

Date: 3/8/2024

Location: 326D

Sample ID: B-05-510S-ADH-01052024

HVAC Circulation Zone: 4

Bulk Material: Insulation Adhesive



Appendix C

Air Handling Unit (AHU) Restart Checklist and Summary

Poe Hall re-start up of HVAC system 4/16/24-4/27/24

The six main air handling units (AHU's) and two relief fans were started, as well as the Auditorium fan coil (FCU). All building exhaust had remained on. The outside air (OA) and occupancy schedule was set to occupied (OCC) or unoccupied (UNOCC) per Geosyntec's recommendations.

Timeline as follows:

- 4/16/24 at 10:30am: All units started and set to run continuously.
- 4/16/24 at 4:30pm: AHU #6 cut off and would not stay running in "Auto" mode.
- 4/17/24 at 7am: AHU #6 restarted in "Manual" mode.
- 4/17/24 at 2pm: Building Automation System (BAS) module changed out and graphics made visible for all units.
- 4/19/24 at 7am: Units set to normal schedule.
- 4/23/24 at 12pm: Units set to 0% OA.
- 4/23/24 at 11pm: Units set to UNOCC and 0% OA.
- 4/24/24 at 4am: Units set to OCC and 10% OA.
- 4/24/24 at 11pm: Units set to UNOCC and 0% OA.
- 4/25/24 at 4am: Units set to OCC and 10% OA.
- 4/25/24 at 11pm: Units set to UNOCC and 0% OA.
- 4/27/24 at 6pm: Units set to normal schedule OCC 4am -11pm.
- 4/30/24 at 7am: Units set to modified schedule to conserve energy.

At the time of re-start:

- The rooms appeared to be as they were left on November 17th shutdown
- The air handlers were in fair shape considering they are 53 years old.
- All pre-filters will be ready for "Quarterly" change. Last change was on 8/29/23

- There were some signs of some loose interior insulation.
- AHU #1 has a frequency drive issue and is set to 30 Hz or 50% run speed.
- AHU's #3 and #4 and both rooftop relief fans were not visible on BAS graphics but repaired on 4/17/24.
- AHU's #3, #4, #5 and #6 bag filters were not replaced because they are on backorder. Expecting them to arrive soon. Existing filters left in place, since they didn't look bad.

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 NOT DISCLOSE TO THIRD PARTIES.**

NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center">OM</p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center">✓ Complete</p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center">✓ Locked Out</p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center">✓ Missing panel was put back on.</p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center">✓ Complete</p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p align="center">Cut filter placed in black trash bag & labeled. Missing filter replaced.</p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p align="center">NO visible signs of mold. Pre filters are ready for a change soon.</p>

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and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	Complete
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	Note date and time for each AHU here: 4/16/24 10:40am
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	Complete

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<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p>Set by Control Shop to OCCUPIED</p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p>Note date and time for each AHU here: AHU #1 set to OCC/UNOCC schedule.</p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p>4/24/24 set to Specified schedule per Geosyntec.</p>
<ul style="list-style-type: none"> • 4/27/24 	<p>unit set to normal operation</p>
<ul style="list-style-type: none"> • 4/30/24 	<p>unit schedule changed to</p>
	<p>Conserve energy.</p>

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 NOT DISCLOSE TO THIRD PARTIES.**

NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center">ON</p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center">Locked out</p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center">Complete</p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p>cut filter placed in black bag and replaced with new one.</p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p>NO visible signs of mold. Pre filters are ready for a change soon</p>

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and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	Complete - filters will be ready for change soon
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	<p>Note date and time for each AHU here:</p> <p>4/16/24 10:45am</p> <p>Unit is running in Hand at 30Hz.</p>
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	Complete

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NOT DISCLOSE TO THIRD PARTIES.

<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p>Set by control shop to occupied</p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p>Note date and time for each AHU here: AHU #2 set to occ/unocc schedule.</p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p>4/24/24 set to specified schedule per Geosyntec</p>
<ul style="list-style-type: none"> • 4/27/24 	<p>Unit set to Normal operation</p>
<ul style="list-style-type: none"> • 4/30/24 	<p>unit schedule changed</p>
	<p>to conserve energy.</p>

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 PREPARED AT THE DIRECTION OF COUNSEL AND IN ANTICIPATION OF LITIGATION. DO
 NOT DISCLOSE TO THIRD PARTIES.**

NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center"><i>ON</i></p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center"><i>Locked out</i></p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p><i>Cut bag filter left in unit until replacement can be found.</i></p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p><i>no visible signs of mold. pre filters are ready for a change.</i></p>

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PREPARED AT THE DIRECTION OF COUNSEL AND IN ANTICIPATION OF LITIGATION. DO
NOT DISCLOSE TO THIRD PARTIES.

and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	- When ready. Complete
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	Note date and time for each AHU here: 4/16/24 10:00am
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	MDP was reset.

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NOT DISCLOSE TO THIRD PARTIES.

<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p>Set by Control Shop to occupied.</p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p>Note date and time for each AHU here: AHU #3 Set to OCC/UNOCC Schedule.</p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p>4/24/24 set to specified schedule per Geosyntec</p>
<ul style="list-style-type: none"> ◦ 4/27/24 	<p>Unit set to Normal operations</p>
<ul style="list-style-type: none"> ◦ 4/30/24 	<p>Unit schedule changed</p>
	<p>to conserve energy.</p>

**CONFIDENTIAL - ATTORNEY WORK PRODUCT
 PREPARED AT THE DIRECTION OF COUNSEL AND IN ANTICIPATION OF LITIGATION. DO
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NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center"><i>on</i></p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center"><i>Locked out</i></p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p><i>Replacement ordered. will remove and place in Garbage Bag.</i></p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p><i>No visible signs of mold. Pre filters are ready for a change soon.</i></p>

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and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	Complete. → when ready
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	<i>Note date and time for each AHU here:</i> 4/16/24 10:05am
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	MDP was reset.

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NOT DISCLOSE TO THIRD PARTIES.

<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p>Set by Control Shop to occupied.</p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p>Note date and time for each AHU here: AHU #4 set to OCC/UNOCC Schedule.</p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p>4/24/24 set to specified schedule per Geosyntec</p>
<ul style="list-style-type: none"> • 4/27/24 	<p>unit set to Normal operations</p>
<ul style="list-style-type: none"> • 4/30/24 	<p>unit schedule changed</p>
	<p>to conserve energy.</p>

**CONFIDENTIAL - ATTORNEY WORK PRODUCT
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 NOT DISCLOSE TO THIRD PARTIES.**

NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center"><i>on</i></p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center"><i>Locked out</i></p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p><i>Replacement ordered, will replace and place in garbage Bag.</i></p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p><i>No visible signs of mold. Pre filters are ready for a change soon.</i></p>

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and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	Complete - when ready
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	<i>Note date and time for each AHU here:</i> 4/16/24 10:25am
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	Complete

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<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p>Set by Control Shop to occupied</p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p>Note date and time for each AHU here: AHU #5 set to OCC/UNOCC Schedule.</p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p>4/24/24 set to specified schedule per Geosyntec.</p>
<ul style="list-style-type: none"> o 4/27/24 	<p>unit set to normal operations</p>
<ul style="list-style-type: none"> o 4/30/24 	<p>unit schedule changed</p>
	<p>to conserve energy.</p>

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 NOT DISCLOSE TO THIRD PARTIES.**

NOTE: Individuals performing restart as set forth below should wear nitrile gloves, Tyvek suits, clear glasses, and N95 mask.

April 16th 2024

<u>STEPS FOR RESTART</u>	<u>NOTES</u>
<ul style="list-style-type: none"> • Turn on the steam; insure steam operating up to AHUs 	<p align="center"><i>on.</i></p>
<ul style="list-style-type: none"> • Turn on the chilled water pumps for building 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Verify control valves are working if they have been locked 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Check unit for proper operation prior to maintenance 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Turn off power and lockout / tagout unit 	<p align="center"><i>Locked out</i></p>
<ul style="list-style-type: none"> • Visual inspection: make sure nothing is out of the ordinary such as any obstructions of fan blades, equipment damage, etc. 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace missing filters 	<p align="center"><i>Complete</i></p>
<ul style="list-style-type: none"> • Replace bag filters that were cut during earlier sampling; preserve removed bag filters (mark storage container so that AHU from which bag filter is removed is clear) 	<p align="center"><i>Replacement Ordered. Will replace and place in Garbage Bag.</i></p>
<ul style="list-style-type: none"> • Inspect existing filters for mold or other conditions requiring replacement; assuming replacement not required, re-insert existing filters. If replacement is required, note reason 	<p align="center"><i>NO visible mold. Pre filters are ready for a change soon.</i></p>

Shut down at 4:30, Restarted at 7am on 4/17

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and preserve removed filters (mark storage container so that AHU from which bag filter is removed is clear)	Complete - when ready.
<ul style="list-style-type: none"> Lubricate motor and fan bearings, inspect fan and blades 	Complete
<ul style="list-style-type: none"> Check belt(s) for wear, proper tension and alignment (adjust as necessary) 	Complete
<ul style="list-style-type: none"> Inspect pulleys, and report any deficiencies 	Okay
<ul style="list-style-type: none"> Visually inspect cooling and heating coils 	Complete
<ul style="list-style-type: none"> Inspect piping and valves for leaks or deterioration, and operate valves fully open and closed 	Complete
<ul style="list-style-type: none"> Check operation of damper motor and lubricate (if applicable) 	Complete
<ul style="list-style-type: none"> Inspect drain and condensate pan, clean and chemically treat (as necessary) 	Complete
<ul style="list-style-type: none"> Turn AHU on by changing VFD from 'Off' to 'Auto' Mode <ul style="list-style-type: none"> The control system "holds" need to be released (completed from a laptop/remotely) Leave temperature set points as last customized by occupants, rather than setting one global temperature 	<i>Note date and time for each AHU here:</i> 4/16/24 10:30am
<ul style="list-style-type: none"> Check unit for proper operation after maintenance 	Complete

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 PREPARED AT THE DIRECTION OF COUNSEL AND IN ANTICIPATION OF LITIGATION. DO
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<ul style="list-style-type: none"> • Run 48-hour normal occupied ventilation 	<p><i>Set by control stop to occupied</i></p>
<ul style="list-style-type: none"> • After 48 hours, switch to typical occupied/unoccupied schedule for 7 days <ul style="list-style-type: none"> • During this week, check control system and hydronic systems and check that room temperatures are being maintained 	<p><i>Note date and time for each AHU here: AHU #6 set to occ/unocc schedule.</i></p>
<ul style="list-style-type: none"> • Run normal occupied ventilation for air sampling by Geosyntec 	<p><i>4/24/24 set to specified schedule per Geosyntec</i></p>
<ul style="list-style-type: none"> • 4/27/24 	<p><i>Unit set to normal operations</i></p>
<ul style="list-style-type: none"> • 4/30/24 	<p><i>Unit schedule changed</i></p>
	<p><i>to conserve energy.</i></p>

Appendix D
Bulk Sample Lab Report



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

January 19, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 1/11/2024. The results are tabulated on the attached pages for the following client designated project:

NCSUPH (bulk)

The reference number for these samples is EMSL Order #: AC05466 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012405466

LIMS Reference ID: AC05466

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 01/11/2024 09:00

Reported: 01/19/2024 17:52

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 6.1 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466**LIMS Reference ID:** AC05466**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC05466-01	B-01-100-INS-01042024	Solid	01/04/2024	01/11/2024
AC05466-02	B-02-100-ADH-01042024	Solid	01/04/2024	01/11/2024
AC05466-03	B-03-100-SEA-01042024	Solid	01/04/2024	01/11/2024
AC05466-04	B-04-100-SXG01042024	Solid	01/04/2024	01/11/2024
AC05466-05	B-05-510S-ADH-01052024	Solid	01/05/2024	01/11/2024
AC05466-06	B-06-510E-ADH-01052024	Solid	01/05/2024	01/11/2024
AC05466-07	B-07-510E-INS-01052024	Solid	01/05/2024	01/11/2024
AC05466-08	DUP-08-510E-INS-01052024	Solid	01/05/2024	01/11/2024
AC05466-09	B-09-510-INS-01052024	Solid	01/05/2024	01/11/2024
AC05466-10	B-10-510-ADH-01052024	Solid	01/05/2024	01/11/2024
AC05466-11	B-11-510-COAT-01052024	Solid	01/05/2024	01/11/2024
AC05466-12	B-12-520E-INS-01052024	Solid	01/05/2024	01/11/2024
AC05466-13	B-13-526-INS-01052024	Solid	01/05/2024	01/11/2024
AC05466-14	B-14-526-SXR-01052024	Solid	01/05/2024	01/11/2024
AC05466-15	B-15-528-FIL-01052024	Solid	01/05/2024	01/11/2024
AC05466-16	B-16-500-FIL-01052024	Solid	01/05/2024	01/11/2024
AC05466-17	B-17-724-FIL-01052024	Solid	01/05/2024	01/11/2024
AC05466-18	B-18-736-FIL-01052024	Solid	01/05/2024	01/11/2024
AC05466-19	B-19-100-FIL-01052024	Solid	01/05/2024	01/11/2024
AC05466-20	B-20-116-FIL-01052024	Solid	01/05/2024	01/11/2024

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Positive Hits Summary

Lab ID	Client ID				Sampled
AC05466-01	B-01-100-INS-01042024				01/04/24 14:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	480	D	mg/kg	01/18/2024 10:27
AC05466-02	B-02-100-ADH-01042024				01/04/24 14:15
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1260	2500	D, B	mg/kg	01/17/2024 21:37
AC05466-03	B-03-100-SEA-01042024				01/04/24 15:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1242	1.9	D	mg/kg	01/17/2024 22:19
SW846-8082A	Aroclor-1262	11	D	mg/kg	01/17/2024 22:19
AC05466-04	B-04-100-SXG01042024				01/04/24 16:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	19	D	mg/kg	01/17/2024 17:20
AC05466-05	B-05-510S-ADH-01052024				01/05/24 09:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	260	D	mg/kg	01/17/2024 13:32
AC05466-06	B-06-510E-ADH-01052024				01/05/24 09:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	770	D	mg/kg	01/17/2024 14:03
AC05466-07	B-07-510E-INS-01052024				01/05/24 10:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	0.91		mg/kg	01/18/2024 21:44

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC05466-08	DUP-08-510E-INS-01052024				01/05/24 11:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.6		mg/kg	01/18/2024 22:05
AC05466-09	B-09-510-INS-01052024				01/05/24 11:10
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	310	D	mg/kg	01/18/2024 14:12
AC05466-10	B-10-510-ADH-01052024				01/05/24 11:20
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	53000	D	mg/kg	01/17/2024 21:15
AC05466-11	B-11-510-COAT-01052024				01/05/24 11:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1300	D	mg/kg	01/17/2024 14:52
AC05466-12	B-12-520E-INS-01052024				01/05/24 13:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1.3		mg/kg	01/15/2024 14:22
AC05466-13	B-13-526-INS-01052024				01/05/24 13:10
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	18	D	mg/kg	01/15/2024 17:43
AC05466-14	B-14-526-SXR-01052024				01/05/24 13:55
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	240	D	mg/kg	01/15/2024 18:04

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted."

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

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EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC05466-15	B-15-528-FIL-01052024				01/05/24 14:10
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	71	D	mg/kg	01/15/2024 18:25
AC05466-16	B-16-500-FIL-01052024				01/05/24 14:20
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	250	D	mg/kg	01/15/2024 18:46
AC05466-17	B-17-724-FIL-01052024				01/05/24 14:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	570	D	mg/kg	01/15/2024 19:07
AC05466-18	B-18-736-FIL-01052024				01/05/24 14:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	400	D	mg/kg	01/15/2024 19:28
AC05466-19	B-19-100-FIL-01052024				01/05/24 14:55
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	93	D	mg/kg	01/15/2024 19:50
AC05466-20	B-20-116-FIL-01052024				01/05/24 15:10
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	54	D	mg/kg	01/15/2024 20:11

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results

Sample: B-01-100-INS-01042024
AC05466-01 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	480	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	110	mg/kg	01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	120%	S8	10-112		01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	289%	S8	10-123		01/15/24 10:12	01/18/24 10:27	MxB/TL1	SW846 3540C	SW846-8082A	



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EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 01/11/2024 09:00
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Sample Results
(Continued)

Sample: B-02-100-ADH-01042024
AC05466-02 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	2500	D, B	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	250	mg/kg	01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		01/15/24 10:12	01/17/24 21:37	MxB/TL1	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
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Sample Results
 (Continued)

Sample: B-03-100-SEA-01042024
AC05466-03 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	1.9	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	11	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5	1.2	mg/kg	01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	38%			10-112		01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	40%			10-123		01/15/24 10:12	01/17/24 22:19	MxB/TL1	SW846 3540C	SW846-8082A

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LIMS Reference ID: AC05466
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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
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Sample Results
(Continued)

Sample: B-04-100-SXG01042024
AC05466-04 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	19	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	10	2.5	mg/kg	01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	35%			10-112		01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	39%			10-123		01/15/24 10:12	01/17/24 17:20	MxB/TL1	SW846 3540C	SW846-8082A



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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
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Sample Results
(Continued)

Sample: B-05-510S-ADH-01052024
AC05466-05 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	260	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	22	mg/kg	01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	63%		10-112		01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	89%		10-123		01/15/24 10:12	01/17/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC05466
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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
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Sample Results
(Continued)

Sample: B-06-510E-ADH-01052024
AC05466-06 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	770	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	140	mg/kg	01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	118%	S8	10-112		01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	154%	S8	10-123		01/15/24 10:12	01/17/24 14:03	MxB/TL1	SW846 3540C	SW846-8082A	

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Customer PO:
EMSL Sales Rep: Emily Stressman
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Sample Results
(Continued)

Sample: B-07-510E-INS-01052024
AC05466-07 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	0.91		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	72%		10-112		01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	82%		10-123		01/17/24 11:45	01/18/24 21:44	MxB/TL1	SW846 3540C	SW846-8082A	

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jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results
(Continued)

Sample: DUP-08-510E-INS-01052024
AC05466-08 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	1.6		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.25	mg/kg	01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		27%		10-112		01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		41%		10-123		01/17/24 11:45	01/18/24 22:05	MxB/TL1	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-09-510-INS-01052024
 AC05466-09 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1262	310	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	54	mg/kg	01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	150%	S8	10-112		01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	203%	S8	10-123		01/15/24 10:12	01/18/24 14:12	MxB/AJ	SW846 3540C	SW846-8082A	



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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results
(Continued)

Sample: B-10-510-ADH-01052024
AC05466-10 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	53000	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5000	4500	mg/kg	01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		01/15/24 10:12	01/17/24 21:15	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
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Sample Results (Continued)

**Sample: B-11-510-COAT-01052024
 AC05466-11 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	1300	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	200	mg/kg	01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	148%	S8	10-112		01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	202%	S8	10-123		01/15/24 10:12	01/17/24 14:52	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-12-520E-INS-01052024
 AC05466-12 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	1.3		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND		1	0.24	mg/kg	01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)		Recovery	Q	Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>		73%		10-112		01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		69%		10-123		01/12/24 09:50	01/15/24 14:22	MxB/AxJ	SW846 3540C	SW846-8082A

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 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-13-526-INS-01052024
 AC05466-13 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	18	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	4	1.0	mg/kg	01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	71%		10-112		01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	80%		10-123		01/12/24 09:50	01/15/24 17:43	MxB/AxJ	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-14-526-SXR-01052024
 AC05466-14 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	240	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	32%		10-112		01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	49%		10-123		01/12/24 09:50	01/15/24 18:04	MxB/AxJ	SW846 3540C	SW846-8082A	

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
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Sample Results (Continued)

Sample: B-15-528-FIL-01052024
AC05466-15 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	71	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	5.0	mg/kg	01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	29%		10-112		01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	64%		10-123		01/12/24 09:50	01/15/24 18:25	MxB/AxJ	SW846 3540C	SW846-8082A	

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-16-500-FIL-01052024
 AC05466-16 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	250	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	48%		10-112		01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	168%	S8	10-123		01/12/24 09:50	01/15/24 18:46	MxB/AxJ	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
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 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-17-724-FIL-01052024
 AC05466-17 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	570	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	48	mg/kg	01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	82%		10-112		01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	258%	S8	10-123		01/12/24 09:50	01/15/24 19:07	MxB/AxJ	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-18-736-FIL-01052024
 AC05466-18 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	400	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	23	mg/kg	01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	65%		10-112		01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	214%	S8	10-123		01/12/24 09:50	01/15/24 19:28	MxB/AxJ	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results (Continued)

**Sample: B-19-100-FIL-01052024
 AC05466-19 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	93	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	72%		10-112		01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	133%	S8	10-123		01/12/24 09:50	01/15/24 19:50	MxB/AxJ	SW846 3540C	SW846-8082A	



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EMSL-CIN-01

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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Sample Results
(Continued)

Sample: B-20-116-FIL-01052024
AC05466-20 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1262	54	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	4.8	mg/kg	01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	85%			10-112		01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	118%			10-123		01/12/24 09:50	01/15/24 20:11	MxB/AxJ	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0545 - SW846 3540C**Blank (BCA0545-BLK1)**

Prepared: 1/12/2024 Analyzed: 1/15/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		67	10-112
Surrogate: Decachlorobiphenyl		0.5000		73	10-123

Blank (BCA0545-BLK2)

Prepared: 1/12/2024 Analyzed: 1/16/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		60	10-112
Surrogate: Decachlorobiphenyl		0.5000		66	10-123

LCS (BCA0545-BS1)

Prepared: 1/12/2024 Analyzed: 1/15/2024

Aroclor-1016	3.45	0.25	mg/kg	5.000	69	23-111
Aroclor-1260	3.68	0.25	mg/kg	5.000	74	29-119

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		69	10-112
Surrogate: Decachlorobiphenyl		0.5000		72	10-123

**EMSL Analytical, Inc.**

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LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
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Quality Control (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0545 - SW846 3540C (Continued)

LCS (BCA0545-BS2)

Prepared: 1/12/2024 Analyzed: 1/16/2024

Aroclor-1016	2.67	0.25	mg/kg	5.000		53	23-111		
Aroclor-1260	2.81	0.25	mg/kg	5.000		56	29-119		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		48	10-112		
Surrogate: Decachlorobiphenyl				0.5000		56	10-123		

Matrix Spike (BCA0545-MS1)

Source: AC05642-02

Prepared: 1/12/2024 Analyzed: 1/15/2024

Aroclor-1016	3.29	0.24	mg/kg	4.878	ND	67	10-111		
Aroclor-1260	3.36	0.24	mg/kg	4.878	ND	69	10-132		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4878		69	10-112		
Surrogate: Decachlorobiphenyl				0.4878		69	10-123		

Matrix Spike Dup (BCA0545-MSD1)

Source: AC05642-02

Prepared: 1/12/2024 Analyzed: 1/15/2024

Aroclor-1016	3.26	0.24	mg/kg	4.854	ND	67	10-111	0.8	28
Aroclor-1260	3.62	0.24	mg/kg	4.854	ND	75	10-132	7	28

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4854		68	10-112		
Surrogate: Decachlorobiphenyl				0.4854		75	10-123		

Batch: BCA0645 - SW846 3540C

Blank (BCA0645-BLK1)

Prepared: 1/15/2024 Analyzed: 1/16/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	0.563 B	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		74	10-112		
Surrogate: Decachlorobiphenyl				0.5000		82	10-123		

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Project Name: NCSUPH (bulk)
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EMSL Sales Rep: Emily Stressman
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Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCA0645 - SW846 3540C (Continued)**LCS (BCA0645-BS1)**

Prepared: 1/15/2024 Analyzed: 1/16/2024

Aroclor-1016	3.89	0.25	mg/kg	5.000		78	23-111		
Aroclor-1260	3.77 B	0.25	mg/kg	5.000		75	29-119		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.5000</i>		<i>79</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.5000</i>		<i>81</i>	<i>10-123</i>		

Matrix Spike (BCA0645-MSD)**Source: AC05466-02**

Prepared: 1/15/2024 Analyzed: 1/17/2024

Aroclor-1016	NR5, D	240	mg/kg	4.762	ND		10-111		
Aroclor-1260	2660 R5, D, B	240	mg/kg	4.762	2530	NR	10-132		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.4762</i>		<i>115</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.4762</i>		<i>NR</i>	<i>10-123</i>		

Batch: BCA0763 - SW846 3540C**Blank (BCA0763-BLK1)**

Prepared: 1/17/2024 Analyzed: 1/18/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.5000</i>		<i>71</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.5000</i>		<i>77</i>	<i>10-123</i>		

LCS (BCA0763-BS1)

Prepared: 1/17/2024 Analyzed: 1/18/2024

Aroclor-1016	3.40	0.25	mg/kg	5.000		68	23-111		
Aroclor-1260	3.62	0.25	mg/kg	5.000		72	29-119		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.5000</i>		<i>67</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.5000</i>		<i>75</i>	<i>10-123</i>		

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 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	-------------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BCA0763 - SW846 3540C (Continued)**Matrix Spike (BCA0763-MS1)****Source: AC05498-03**

Prepared: 1/17/2024 Analyzed: 1/18/2024

Aroclor-1016	1.08	0.25	mg/kg	4.926	ND	22	10-111		
Aroclor-1260	1.34	0.25	mg/kg	4.926	0.149	24	10-132		

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.4926</i>		<i>27</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.4926</i>		<i>30</i>	<i>10-123</i>		

Matrix Spike Dup (BCA0763-MSD1)**Source: AC05498-03**

Prepared: 1/17/2024 Analyzed: 1/18/2024

Aroclor-1016	1.65 RO	0.25	mg/kg	5.000	ND	33	10-111	42	28
Aroclor-1260	1.95 RO	0.25	mg/kg	5.000	0.149	36	10-132	37	28

Surrogate(s)

<i>Surrogate: Tetrachloro-m-xylene</i>				<i>0.5000</i>		<i>38</i>	<i>10-112</i>		
<i>Surrogate: Decachlorobiphenyl</i>				<i>0.5000</i>		<i>41</i>	<i>10-123</i>		

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSUPH (bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Solid		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2023
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012405466
LIMS Reference ID: AC05466
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSUPH (bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 01/11/2024 09:00
Reported: 01/19/2024 17:52

Notes and Definitions

Item	Definition
B	The analyte was detected in the Method Blank.
D	Analyte was reported from a dilution run.
R5	Recovery is outside of the control limits due to dilution.
RO	RPD for this compound was outside of the control limits.
S8	Surrogate recovery is outside the control limits due to dilution.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL Order Number / Lab Use Only
AC054 UU

PHONE: (800) 220-3675
EMAIL: EWChemistry2@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer Information		Billing Information	
Customer ID:	Company Name: <i>Geosyntec Consultants</i>	Billing ID:	Company Name: <i>same as customer</i>
Contact Name: <i>Jeff Ahrens</i>	Street Address: <i>1300 S. Mint St. Suite 300</i>	Billing Contact:	Street Address:
City, State, Zip: <i>Charlotte, NC 28203</i>	Country: <i>USA</i>	City, State, Zip:	City, State, Zip:
Phone: <i>704-227-0850</i>		Phone:	Phone:
Email(s) for Report: <i>JAhrens@geosyntec.com</i>		Email(s) for Invoice:	
Project Name/No: <i>NCSURPH (SRWK)</i>		Purchase Order:	

EMSL LIMS Project ID: (if applicable, EMSL will provide)	US State where samples collected: <i>NC</i>	State of Connecticut (CT) must select project location:
Samples for Compliance? <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, for NPDES? <input type="checkbox"/> Yes <input type="checkbox"/> No	Other (Specify)
Samples Collected by (Check One): <input type="checkbox"/> EMSL <input checked="" type="checkbox"/> CLIENT	Samples Received Chilled? <input type="checkbox"/> Yes <input type="checkbox"/> No	PWS ID:
Sampled By Name: <i>Marc Webb</i>	Sampled By Signature: <i>[Signature]</i>	Sample(s) Temperature Upon Receipt (LAB ONLY)
Turn-Around-Time (TAT)	Standard Turn-Around-Time: <i>2 Weeks</i>	Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable) <input type="checkbox"/>
	The following TATs are subject to Lab approval. Call lab to confirm TAT before submittal:	State Reporting Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> 1 Week <input type="checkbox"/> 4 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 2 Days <input type="checkbox"/> 1 Day	No. of Samples in Shipment: <i>20</i>

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)				Comments										
						Test 1:	Test 2:	Test 3:	Test 4:											
3-01-100-INS-01042024		X	01/04/24 1400	W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other	PCB-Bulk														
3-02-100-ADH-01042024		X	01/04/24 1515				X													
3-03-100-SEA-01042024		X	01/04/24 1500																	
3-04-100-SXG-01042024		X	01/04/24 1600																	

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
email about state cert 1908

Method of Shipment: <i>Fedex</i>	Results Only <input type="checkbox"/>	Results and QC <input type="checkbox"/>	Reduced Deliverables <input type="checkbox"/>	HZresults EDD <input type="checkbox"/>	Excel <input type="checkbox"/>	Other (Describe Above) <input type="checkbox"/>
Relinquished by: <i>Marc Webb</i>	Date/Time: <i>01/08/24</i>	Received by: <i>[Signature]</i>	Date/Time: <i>1/9/24</i>	Received by: <i>[Signature]</i>	Date/Time: <i>1/9/24</i>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information
Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)						Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Field PH Test Time	Field Temp. Deg.C		Field Temp. Test Time
3-05-5105-ADH-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 900	W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i> none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-06-510E-ADH-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 950			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-07-510E-INS-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1045			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-08-510E-INS-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1100			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-09-510E-INS-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1110			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-10-510-ADH-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1120			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3-11-510-COAT-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1130			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	01/05/24 mm			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex

Relinquished by: Marc Webb

Relinquished by: Marc Webb

Date/Time: 01/08/24 1530

Date/Time:

Sample Condition Upon Receipt:

Received by:

Received by:

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

EMSL Order Number / Lab Use Only
AC059466

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Customer Information		Billing Information	
Customer ID:	Company Name: Geosyntec Consultants	Billing ID:	Company Name: same as customer
Contact Name: Self Arens	Street Address: 1300 S. Mint St. Suite 300	Billing Contact:	Street Address:
City, State, Zip: Charlotte, NC 28203	Country: USA	City, State, Zip:	Country:
Phone: 704-227-0850		Phone:	
Email(s) for Report: SArens@geosyntec.com		Email(s) for Invoice:	

Project Name/No: **NCSUPH CRJNK**

EMSL LIMS Project ID: _____
(if applicable, EMSL will provide)

Samples for Compliance? Yes No

If Yes, for NPDES? Yes No

Other (Specify): _____

US State where samples collected: **NC**

State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

State Reporting Required? Yes No

State of Connecticut (CT) must select project location: _____

Purchase Order: _____

Samples Collected by (Check One): EMSL CLIENT

Samples Received Chilled? Yes No

Sample(s) Temperature Upon Receipt (LAB ONLY)

1 Week 4 Days 3 Days 2 Days 1 Day

No. of Samples in Shipment: **20**

Sampled By Name: **Marc Webb**

Sampled By Signature: _____

Turn-Around-Time (TAT) Standard Turn-Around-Time: _____

The following TATs are subject to Lab approval. Call lab to confirm TAT before submittal.

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg. C	Field Temp. Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
3-12-58E-INS-01452024		X	01/05/24		None	X								
3-13-58E-INS-01052024		X	01/05/24											
3-14-58E-INS-01052024		X	01/05/24											
3-15-58E-INS-01052024		X	01/05/24											
3-16-58E-INS-01052024		X	01/05/24											
3-17-58E-INS-01052024		X	01/05/24											
3-18-FIL-01052024		X	01/05/24											Phase hold

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.): _____

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hresults EDD Excel Other (Describe Above)

Method of Shipment: **Fedex**

Relinquished by: **Marc Webb**

Date/Time: **01/08/24 1530**

Received by: _____

Date/Time: **01/08/24 1050A**

Relinquished by: _____

Date/Time: _____

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line.)						Comments	
						Test 1: <i>PCB-13Cik</i>	Test 2:	Test 3:	Test 4:	Field PH Test Time	Field Temp. Deg.C		Field Temp. Test Time
¹⁰ 3-16-500-FIL-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1420	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
¹¹ 3-17-704-FIL-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1430	O	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
¹² 3-18-736-FIL-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1445	O		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
¹³ 3-19-100-PIL-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1455	O		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
¹⁴ 3-20-116-FIL-01052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	01/05/24 1510	O		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Sample Condition Upon Receipt:

Method of Shipment: *Fedex*

Relinquished by: *Marc Webb*

Date/Time: *01/08/24 1530*

Relinquished by:

Date/Time:

Received by:

Date/Time

Received by:

Date/Time

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255

LIMS Reference ID: AC10255

EMSL Customer ID: GSCH75

April 02, 2024

Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]

1300 S Mint Street, Suite 300

Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 3/12/2024. The results are tabulated on the attached pages for the following client designated project:

NCSU PH (Bulk)

The reference number for these samples is EMSL Order #: AC10255 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255

LIMS Reference ID: AC10255

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30

Reported: 04/02/2024 14:45

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature:** 0.9 °C

Custody Seals	Y
Containers Intact	Y
COC/Labels Agree	Y
Preservation Confirmed	Y

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255**LIMS Reference ID:** AC10255**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC10255-01	B-12-FAC-CS-PER-310G-03052024	Solid	03/05/2024	03/12/2024
AC10255-02	B-11-FAC-CS-PER-317L-03052024	Solid	03/05/2024	03/12/2024
AC10255-03	B-10-ISEA-CS-PER-317L-03052024	Solid	03/05/2024	03/12/2024
AC10255-04	B-9-ISEA-CS-PER-317C-03052024	Solid	03/05/2024	03/12/2024
AC10255-05	B-8-FAC-CS-PER-317C-03052024	Solid	03/05/2024	03/12/2024
AC10255-06	B-7-ISEA-MB-WT-326-03052024	Solid	03/05/2024	03/12/2024
AC10255-07	B-6-FAC-MB-INT-326-03052024	Solid	03/05/2024	03/12/2024
AC10255-08	B-5-ISEA-CS-PER-326H-03052024	Solid	03/05/2024	03/12/2024
AC10255-09	B-4-FAC-CS-PER-326H-03052024	Solid	03/05/2024	03/12/2024
AC10255-10	B-3-ISEA-CS-PER-326H-03052024	Solid	03/05/2024	03/12/2024
AC10255-11	B-2-FAC-MB-WT-326J-03052024	Solid	03/05/2024	03/12/2024
AC10255-12	B-1-ISEA-MB-INT-326J-03052024	Solid	03/05/2024	03/12/2024
AC10255-13	B-24-FAC-HS-INT-325-03062024	Solid	03/06/2024	03/12/2024
AC10255-14	B-23-ISEA-CS-INT-325-03062024	Solid	03/06/2024	03/12/2024
AC10255-15	B-22-FAC-CS-INT-325-03062024	Solid	03/06/2024	03/12/2024
AC10255-16	B-21-ISEA-CS-PER-300P-03062024	Solid	03/06/2024	03/12/2024
AC10255-17	B-20-FAC-CS-PER-300P-03062024	Solid	03/06/2024	03/12/2024
AC10255-18	B-19-ISEA-HS-INT-309-03052024	Solid	03/05/2024	03/12/2024
AC10255-19	B-18-FAC-HS-INT-309-03052024	Solid	03/05/2024	03/12/2024
AC10255-20	B-17-ISEA-CS-INT-309-03052024	Solid	03/05/2024	03/12/2024
AC10255-21	B-16-FAC-CS-INT-309-03052024	Solid	03/05/2024	03/12/2024
AC10255-22	B-15-ISEA-CS-PER-300D-03052024	Solid	03/05/2024	03/12/2024
AC10255-23	B-14-FAC-CS-PER-300D-03052024	Solid	03/05/2024	03/12/2024
AC10255-24	B-13-ISEA-CS-PER-310G-03052024	Solid	03/05/2024	03/12/2024
AC10255-25	B-60-ISEA-HS-PER-502-03072024	Solid	03/07/2024	03/12/2024
AC10255-26	B-59-FAC-HS-PER-502-03072024	Solid	03/07/2024	03/12/2024
AC10255-27	B-58-ISEA-HS-PER-402S-03072024	Solid	03/07/2024	03/12/2024
AC10255-28	B-57-FAC-HS-PER-402S-03072024	Solid	03/07/2024	03/12/2024
AC10255-29	B-56-ISEA-HS-PER-417-03072024	Solid	03/07/2024	03/12/2024
AC10255-30	B-55-FAC-HS-PER-417-03072024	Solid	03/07/2024	03/12/2024
AC10255-31	B-54-ISEA-HS-PER-520B-03072024	Solid	03/07/2024	03/12/2024
AC10255-32	B-53-FAC-HS-PER-520B-03072024	Solid	03/07/2024	03/12/2024
AC10255-33	B-52-ISEA-HS-INT-607-03062024	Solid	03/07/2024	03/12/2024
AC10255-34	B-51-FAC-HS-INT-607-03062024	Solid	03/07/2024	03/12/2024
AC10255-35	B-50-ISEA-CS-INT-607-03062024	Solid	03/07/2024	03/12/2024
AC10255-36	B-49-FAC-CS-INT-607-03062024	Solid	03/07/2024	03/12/2024
AC10255-37	B-72-ISEA-HS-INT-213-03072024	Solid	03/07/2024	03/12/2024
AC10255-38	B-71-FAC-HS-INT-213-03072024	Solid	03/07/2024	03/12/2024
AC10255-39	B-70-ISEA-CS-INT-213-03072024	Solid	03/07/2024	03/12/2024
AC10255-40	B-69-FAC-CS-INT-213-03072024	Solid	03/07/2024	03/12/2024

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255**LIMS Reference ID:** AC10255**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30**Reported:** 04/02/2024 14:45

Samples in this Report (Continued)

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC10255-41	B-68-ISEA-HS-PER-122-03072024	Solid	03/07/2024	03/12/2024
AC10255-42	B-67-FAC-HS-PER-122-03072024	Solid	03/07/2024	03/12/2024
AC10255-43	B-66-ISEA-CS-PER-122-03072024	Solid	03/07/2024	03/12/2024
AC10255-44	B-65-FAC-CS-PER-122-03072024	Solid	03/07/2024	03/12/2024
AC10255-45	B-64-ISEA-HS-PER-106-03072024	Solid	03/07/2024	03/12/2024
AC10255-46	B-63-FAC-HS-PER-106-03072024	Solid	03/07/2024	03/12/2024
AC10255-47	B-62-ISEA-CS-PER-106-03072024	Solid	03/07/2024	03/12/2024
AC10255-48	B-61-FAC-CS-PER-106-03072024	Solid	03/07/2024	03/12/2024
AC10255-49	B-25-ISEA-HS-INT-365-03062024	Solid	03/06/2024	03/12/2024
AC10255-50	B-26-FAC-HS-PER-31K-03062024	Solid	03/06/2024	03/12/2024
AC10255-51	B-27-ISEA-HS-PER-317C-03062024	Solid	03/06/2024	03/12/2024
AC10255-52	B-28-FAC-CS-PER-640C-03062024	Solid	03/06/2024	03/12/2024
AC10255-53	B-29-ISEA-CS-PER-640C-03062024	Solid	03/06/2024	03/12/2024
AC10255-54	B-30-FAC-CS-PER-635-03062024	Solid	03/06/2024	03/12/2024
AC10255-55	B-31-ISEA-CS-PER-635-03062024	Solid	03/06/2024	03/12/2024
AC10255-56	B-32-FAC-CS-PER-636-03062024	Solid	03/06/2024	03/12/2024
AC10255-57	B-33-ISEA-CS-PER-636-03062024	Solid	03/06/2024	03/12/2024
AC10255-58	B-34-FAL-CS-PER-621F-03062024	Solid	03/06/2024	03/12/2024
AC10255-59	B-35-ISEA-CS-PER-607F-03062024	Solid	03/06/2024	03/12/2024
AC10255-60	B-36-FAC-CS-PER-602M-03062024	Solid	03/06/2024	03/12/2024
AC10255-61	B-37-ISEA-CS-PER-602M-03062024	Solid	03/06/2024	03/12/2024
AC10255-62	B-38-FAC-CS-PER-608D-03062024	Solid	03/06/2024	03/12/2024
AC10255-63	B-39-ISEA-CS-PER-608D-03062024	Solid	03/06/2024	03/12/2024
AC10255-64	B-40-FHC-MB-INT-638-03062024	Solid	03/06/2024	03/12/2024
AC10255-65	B-41-ISEA-MB-INT-638-03062024	Solid	03/06/2024	03/12/2024
AC10255-66	B-42-FAC-CS-INT-630-03062024	Solid	03/06/2024	03/12/2024
AC10255-67	B-43-ISEA-CS-INT-630-03062024	Solid	03/06/2024	03/12/2024
AC10255-68	B-44-FHC-HS-INT-630-03062024	Solid	03/06/2024	03/12/2024
AC10255-69	B-45-ISEA-HS-INT-630-03062024	Solid	03/06/2024	03/12/2024
AC10255-70	B-46-FAC-MB-INT-634A-03062024	Solid	03/06/2024	03/12/2024
AC10255-71	B-47-ISEA-MB-INT-634A-03062024	Solid	03/06/2024	03/12/2024
AC10255-72	B-48-ISEA-MB-INT-634A-03062024	Solid	03/06/2024	03/12/2024
AC10255-73	B-73-FIL-MB-PER-310L-03082024	Solid	03/08/2024	03/12/2024
AC10255-74	B-74-FIL-MB-PER-326D-03082024	Solid	03/08/2024	03/12/2024
AC10255-75	B-75-FIL-MB-PER-608M-03082024	Solid	03/08/2024	03/12/2024
AC10255-76	B-76-FIL-MB-PER-615-03082024	Solid	03/08/2024	03/12/2024
AC10255-77	B-77-FIL-RD-PER-100-03082024	Solid	03/08/2024	03/12/2024
AC10255-78	B-78-XSEA-RD-PER-100-03082024	Solid	03/08/2024	03/12/2024
AC10255-79	B-79-FIL-RD-PER-116-03082024	Solid	03/08/2024	03/12/2024
AC10255-80	B-80-FIL-RD-PER-P1004-03082024	Solid	03/08/2024	03/12/2024

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255

LIMS Reference ID: AC10255

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30

Reported: 04/02/2024 14:45

Samples in this Report
(Continued)

Lab ID	Sample	Matrix	Date Sampled	Date Received
AC10255-81	B-81-FIL-RD-PER-P1004-03082024	Solid	03/08/2024	03/12/2024
AC10255-82	B-82-FIL-RD-PER-P1004-03082024	Solid	03/08/2024	03/12/2024
AC10255-83	B-83-FIK-RD-PER-P1004-03082024	Solid	03/08/2024	03/12/2024
AC10255-84	B-84-FIL-RD-PER-P1003-03082024	Solid	03/08/2024	03/12/2024
AC10255-85	B-85-FIL-RD-PER-P1003-03082024	Solid	03/08/2024	03/12/2024
AC10255-86	B-86-FIL-RD-PER-P1003-03082024	Solid	03/08/2024	03/12/2024
AC10255-87	B-87-FIL-RD-PER-P1003-03082024	Solid	03/08/2024	03/12/2024
AC10255-88	B-88-XSEA-MB-PER-310N-03082024	Solid	03/08/2024	03/12/2024
AC10255-89	B-89-XSEA-MB-PER-326H-03082024	Solid	03/08/2024	03/12/2024
AC10255-90	B-90-XSEA-MB-PER-310G-03082024	Solid	03/08/2024	03/12/2024
AC10255-91	B-91-XSEA-MB-PER-300M-03082024	Solid	03/08/2024	03/12/2024

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary

Lab ID	Client ID				Sampled
AC10255-01	B-12-FAC-CS-PER-310G-03052024				03/05/24 14:41
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1500	D	mg/kg	03/30/2024 16:01
AC10255-02	B-11-FAC-CS-PER-317L-03052024				03/05/24 12:58
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	800	D	mg/kg	03/30/2024 16:23
AC10255-03	B-10-ISEA-CS-PER-317L-03052024				03/05/24 14:22
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	220	D	mg/kg	03/30/2024 16:45
AC10255-04	B-9-ISEA-CS-PER-317C-03052024				03/05/24 11:48
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	510	D	mg/kg	03/30/2024 17:07
AC10255-05	B-8-FAC-CS-PER-317C-03052024				03/05/24 11:34
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1200	D	mg/kg	03/30/2024 17:29
AC10255-06	B-7-ISEA-MB-WT-326-03052024				03/05/24 10:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	900	D	mg/kg	03/30/2024 17:52
AC10255-07	B-6-FAC-MB-INT-326-03052024				03/05/24 09:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	21000	D	mg/kg	04/01/2024 12:31

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-08	B-5-ISEA-CS-PER-326H-03052024				03/05/24 09:23
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	400	D	mg/kg	03/30/2024 18:35
AC10255-09	B-4-FAC-CS-PER-326H-03052024				03/05/24 08:59
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	24000	D	mg/kg	03/30/2024 18:58
AC10255-10	B-3-ISEA-CS-PER-326H-03052024				03/05/24 08:56
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	770	D	mg/kg	03/30/2024 19:20
AC10255-11	B-2-FAC-MB-WT-326J-03052024				03/05/24 08:32
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1900	D	mg/kg	03/30/2024 19:42
AC10255-12	B-1-ISEA-MB-INT-326J-03052024				03/05/24 08:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	980	D	mg/kg	03/30/2024 20:04
AC10255-13	B-24-FAC-HS-INT-325-03062024				03/06/24 10:38
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	24000	D	mg/kg	03/30/2024 20:26
AC10255-14	B-23-ISEA-CS-INT-325-03062024				03/06/24 09:50
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	330	D	mg/kg	03/30/2024 20:48

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
AC10255-15	B-22-FAC-CS-INT-325-03062024				03/06/24 09:37
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	940	D	mg/kg	03/30/2024 21:10
AC10255-16	B-21-ISEA-CS-PER-300P-03062024				03/06/24 09:45
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	11000	D	mg/kg	03/30/2024 21:32
AC10255-17	B-20-FAC-CS-PER-300P-03062024				03/06/24 09:29
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1800	D	mg/kg	03/29/2024 02:09
AC10255-18	B-19-ISEA-HS-INT-309-03052024				03/05/24 18:09
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	31000	D	mg/kg	03/29/2024 21:57
AC10255-19	B-18-FAC-HS-INT-309-03052024				03/05/24 16:42
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	280	D	mg/kg	03/29/2024 02:51
AC10255-20	B-17-ISEA-CS-INT-309-03052024				03/05/24 16:19
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	27000	D	mg/kg	03/29/2024 19:01
AC10255-21	B-16-FAC-CS-INT-309-03052024				03/05/24 15:36
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1200	D	mg/kg	03/29/2024 10:55

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200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Positive Hits Summary
 (Continued)

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AC10255-22	B-15-ISEA-CS-PER-300D-03052024						03/05/24 15:27
SW846-8082A			Aroclor-1262	28000	D	mg/kg	03/29/2024 19:23
AC10255-23	B-14-FAC-CS-PER-300D-03052024						03/05/24 15:15
SW846-8082A			Aroclor-1262	1100	D	mg/kg	03/29/2024 19:45
AC10255-24	B-13-ISEA-CS-PER-310G-03052024						03/05/24 15:00
SW846-8082A			Aroclor-1262	25000	D	mg/kg	03/29/2024 20:07
AC10255-25	B-60-ISEA-HS-PER-502-03072024						03/07/24 11:29
SW846-8082A			Aroclor-1262	20000	D	mg/kg	03/29/2024 20:29
AC10255-26	B-59-FAC-HS-PER-502-03072024						03/07/24 11:29
SW846-8082A			Aroclor-1262	380	D	mg/kg	03/29/2024 12:49
AC10255-27	B-58-ISEA-HS-PER-402S-03072024						03/07/24 10:38
SW846-8082A			Aroclor-1262	25000	D	mg/kg	04/01/2024 16:00
AC10255-28	B-57-FAC-HS-PER-402S-03072024						03/07/24 10:38
SW846-8082A			Aroclor-1262	240	D	mg/kg	03/29/2024 13:33

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-29	B-56-ISEA-HS-PER-417-03072024				03/07/24 09:33
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2000	D	mg/kg	03/29/2024 21:13
AC10255-30	B-55-FAC-HS-PER-417-03072024				03/07/24 09:32
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	490	D	mg/kg	03/29/2024 15:07
AC10255-31	B-54-ISEA-HS-PER-520B-03072024				03/07/24 09:21
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	4200	D	mg/kg	03/29/2024 21:35
AC10255-32	B-53-FAC-HS-PER-520B-03072024				03/07/24 08:59
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	310	D	mg/kg	03/29/2024 15:51
AC10255-33	B-52-ISEA-HS-INT-607-03062024				03/07/24 17:54
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	11000	D	mg/kg	03/29/2024 17:57
AC10255-34	B-51-FAC-HS-INT-607-03062024				03/07/24 17:53
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	290	D	mg/kg	03/29/2024 18:19
AC10255-35	B-50-ISEA-CS-INT-607-03062024				03/07/24 17:32
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	48000	D	mg/kg	04/01/2024 12:09

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Project Name: NCSU PH (Bulk)
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Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-36	B-49-FAC-CS-INT-607-03062024				03/07/24 17:31
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2400	D	mg/kg	03/29/2024 05:16
AC10255-37	B-72-ISEA-HS-INT-213-03072024				03/07/24 17:25
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	24000	D	mg/kg	03/29/2024 22:19
AC10255-38	B-71-FAC-HS-INT-213-03072024				03/07/24 17:24
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1100	D	mg/kg	03/29/2024 05:58
AC10255-39	B-70-ISEA-CS-INT-213-03072024				03/07/24 17:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	18000	D	mg/kg	03/29/2024 22:41
AC10255-40	B-69-FAC-CS-INT-213-03072024				03/07/24 17:05
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	380	D	mg/kg	03/29/2024 06:40
AC10255-41	B-68-ISEA-HS-PER-122-03072024				03/07/24 16:31
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2100	D	mg/kg	03/29/2024 07:00
AC10255-42	B-67-FAC-HS-PER-122-03072024				03/07/24 16:31
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	210	D	mg/kg	03/29/2024 07:22

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID	Method	Analyte	Result	Qualifier	Unit	Sampled
AC10255-43	B-66-ISEA-CS-PER-122-03072024						03/07/24 15:54
SW846-8082A			Aroclor-1262	16000	D	mg/kg	03/29/2024 23:03
AC10255-44	B-65-FAC-CS-PER-122-03072024						03/07/24 15:52
SW846-8082A			Aroclor-1262	1200	D	mg/kg	03/29/2024 08:04
AC10255-45	B-64-ISEA-HS-PER-106-03072024						03/07/24 14:43
SW846-8082A			Aroclor-1262	1400	D	mg/kg	03/29/2024 08:25
AC10255-46	B-63-FAC-HS-PER-106-03072024						03/07/24 14:43
SW846-8082A			Aroclor-1262	82	D	mg/kg	03/29/2024 08:45
AC10255-47	B-62-ISEA-CS-PER-106-03072024						03/07/24 14:40
SW846-8082A			Aroclor-1262	24000	D	mg/kg	03/29/2024 23:25
AC10255-48	B-61-FAC-CS-PER-106-03072024						03/07/24 14:09
SW846-8082A			Aroclor-1262	1000	D	mg/kg	03/29/2024 09:28
AC10255-49	B-25-ISEA-HS-INT-365-03062024						03/06/24 10:45
SW846-8082A			Aroclor-1262	24000	D	mg/kg	04/02/2024 10:57

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 EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-50	B-26-FAC-HS-PER-31K-03062024				03/06/24 11:19
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	320	D	mg/kg	03/29/2024 10:10
AC10255-51	B-27-ISEA-HS-PER-317C-03062024				03/06/24 11:38
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2500	D	mg/kg	03/29/2024 10:32
AC10255-52	B-28-FAC-CS-PER-640C-03062024				03/06/24 14:36
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	820	D	mg/kg	03/29/2024 11:13
AC10255-53	B-29-ISEA-CS-PER-640C-03062024				03/06/24 15:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	18000	D	mg/kg	04/02/2024 11:19
AC10255-54	B-30-FAC-CS-PER-635-03062024				03/06/24 13:04
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1100	D	mg/kg	03/29/2024 11:55
AC10255-55	B-31-ISEA-CS-PER-635-03062024				03/06/24 13:17
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	12000	D	mg/kg	03/29/2024 14:32
AC10255-56	B-32-FAC-CS-PER-636-03062024				03/06/24 13:46
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1100	D	mg/kg	03/30/2024 15:39

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-57	B-33-ISEA-CS-PER-636-03062024				03/06/24 13:57
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	22000	D	mg/kg	03/27/2024 11:27
AC10255-58	B-34-FAL-CS-PER-621F-03062024				03/06/24 13:59
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	860	D	mg/kg	03/27/2024 18:48
AC10255-59	B-35-ISEA-CS-PER-607F-03062024				03/06/24 14:17
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	16000	D	mg/kg	03/27/2024 11:48
AC10255-60	B-36-FAC-CS-PER-602M-03062024				03/06/24 13:32
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1000	D	mg/kg	03/27/2024 19:09
AC10255-61	B-37-ISEA-CS-PER-602M-03062024				03/06/24 13:43
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	19000	D	mg/kg	03/27/2024 12:09
AC10255-62	B-38-FAC-CS-PER-608D-03062024				03/06/24 13:01
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1600	D	mg/kg	03/27/2024 19:39
AC10255-63	B-39-ISESA-CS-PER-608D-03062024				03/06/24 13:15
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	23000	D	mg/kg	03/27/2024 12:30

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-64	B-40-FHC-MB-INT-638-03062024				03/06/24 15:31
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	870	D	mg/kg	03/27/2024 20:00
AC10255-65	B-41-ISEA-MB-INT-638-03062024				03/06/24 15:36
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	13000	D	mg/kg	03/27/2024 12:51
AC10255-66	B-42-FAC-CS-INT-630-03062024				03/06/24 16:13
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	1900	D	mg/kg	03/29/2024 03:11
AC10255-67	B-43-ISEA-CS-INT-630-03062024				03/06/24 16:07
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	6300	D	mg/kg	03/27/2024 13:12
AC10255-68	B-44-FHC-HS-INT-630-03062024				03/06/24 16:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	200	D	mg/kg	03/27/2024 20:41
AC10255-69	B-45-ISEA-HS-INT-630-03062024				03/06/24 16:28
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	2000	D	mg/kg	03/27/2024 21:03
AC10255-70	B-46-FAC-MB-INT-634A-03062024				03/06/24 17:01
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	560	D	mg/kg	03/27/2024 21:24

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-71	B-47-ISEA-MB-INT-634A-03062024				03/06/24 17:03
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	32000	D	mg/kg	03/27/2024 13:32
AC10255-72	B-48-ISEA-MB-INT-634A-03062024				03/06/24 17:04
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	280	D	mg/kg	03/27/2024 21:45
AC10255-73	B-73-FIL-MB-PER-310L-03082024				03/08/24 07:58
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	120	D	mg/kg	03/27/2024 13:54
AC10255-74	B-74-FIL-MB-PER-326D-03082024				03/08/24 08:13
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	50	D	mg/kg	03/27/2024 22:06
AC10255-75	B-75-FIL-MB-PER-608M-03082024				03/08/24 08:23
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	280	D	mg/kg	03/27/2024 14:14
AC10255-76	B-76-FIL-MB-PER-615-03082024				03/08/24 08:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	75	D	mg/kg	03/26/2024 03:59
AC10255-77	B-77-FIL-RD-PER-100-03082024				03/08/24 08:46
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	160	D	mg/kg	03/26/2024 04:20

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**EMSL Analytical, Inc.**

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID					Sampled
AC10255-78	B-78-XSEA-RD-PER-100-03082024					03/08/24 08:55
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1242	11	D	mg/kg	03/26/2024 04:41	
SW846-8082A	Aroclor-1254	13	D	mg/kg	03/26/2024 04:41	
SW846-8082A	Aroclor-1262	7.7	D	mg/kg	03/26/2024 04:41	
AC10255-79	B-79-FIL-RD-PER-116-03082024					03/08/24 09:08
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	150	D	mg/kg	03/26/2024 05:01	
AC10255-80	B-80-FIL-RD-PER-P1004-03082024					03/08/24 09:27
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	88	D	mg/kg	03/26/2024 05:22	
AC10255-81	B-81-FIL-RD-PER-P1004-03082024					03/08/24 09:32
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	140	D	mg/kg	03/26/2024 05:43	
AC10255-82	B-82-FIL-RD-PER-P1004-03082024					03/08/24 09:42
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	25	D	mg/kg	03/26/2024 06:04	
AC10255-83	B-83-FIK-RD-PER-P1004-03082024					03/08/24 09:46
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	120	D	mg/kg	03/26/2024 06:25	
AC10255-84	B-84-FIL-RD-PER-P1003-03082024					03/08/24 09:53
Method	Analyte	Result	Qualifier	Unit	Analyzed	
SW846-8082A	Aroclor-1262	21	D	mg/kg	03/26/2024 06:47	

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Positive Hits Summary
 (Continued)

Lab ID	Client ID				Sampled
AC10255-85	B-85-FIL-RD-PER-P1003-03082024				03/08/24 10:04
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	340	D	mg/kg	03/26/2024 07:07
AC10255-86	B-86-FIL-RD-PER-P1003-03082024				03/08/24 10:08
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	11	D	mg/kg	03/26/2024 07:28
AC10255-87	B-87-FIL-RD-PER-P1003-03082024				03/08/24 10:13
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	110	D	mg/kg	03/26/2024 07:49
AC10255-88	B-88-XSEA-MB-PER-310N-03082024				03/08/24 17:16
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	92	D	mg/kg	03/26/2024 08:10
AC10255-89	B-89-XSEA-MB-PER-326H-03082024				03/08/24 11:20
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	46	D	mg/kg	03/26/2024 08:30
AC10255-90	B-90-XSEA-MB-PER-310G-03082024				03/08/24 12:23
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	83	D	mg/kg	03/26/2024 08:52
AC10255-91	B-91-XSEA-MB-PER-300M-03082024				03/08/24 12:30
Method	Analyte	Result	Qualifier	Unit	Analyzed
SW846-8082A	Aroclor-1262	190	D	mg/kg	03/26/2024 09:12



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EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results

Sample: B-12-FAC-CS-PER-310G-03052024
AC10255-01 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1500	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/26/24 14:53	03/30/24 16:01	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-11-FAC-CS-PER-317L-03052024
 AC10255-02 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	800	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	79%		10-112		03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	178%	S8	10-123		03/26/24 14:53	03/30/24 16:23	MxB/TL	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
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(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-10-ISEA-CS-PER-317L-03052024
AC10255-03 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	220	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	30%		10-112		03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	44%		10-123		03/26/24 14:53	03/30/24 16:45	MxB/TL	SW846 3540C	SW846-8082A	

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200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-9-ISEA-CS-PER-317C-03052024
AC10255-04 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	510	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	48	mg/kg	03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	39%		10-112		03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	98%		10-123		03/26/24 14:53	03/30/24 17:07	MxB/TL	SW846 3540C	SW846-8082A	

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-8-FAC-CS-PER-317C-03052024
AC10255-05 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1200	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	400	97	mg/kg	03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	71%		10-112		03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	204%	S8	10-123		03/26/24 14:53	03/30/24 17:29	MxB/TL	SW846 3540C	SW846-8082A	



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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30

Reported: 04/02/2024 14:45

Sample Results (Continued)

Sample: B-7-ISEA-MB-WT-326-03052024
AC10255-06 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	900	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	83%		10-112		03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	152%	S8	10-123		03/26/24 14:53	03/30/24 17:52	MxB/TL	SW846 3540C	SW846-8082A	



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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-6-FAC-MB-INT-326-03052024
AC10255-07 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	21000	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/26/24 14:53	04/01/24 12:31	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-5-ISEA-CS-PER-326H-03052024
AC10255-08 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	400	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	50	mg/kg	03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	76%		10-112		03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	241%	S8	10-123		03/26/24 14:53	03/30/24 18:35	MxB/TL	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC10255
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-4-FAC-CS-PER-326H-03052024
AC10255-09 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	24000	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/26/24 14:53	03/30/24 18:58	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

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EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-3-ISEA-CS-PER-326H-03052024
AC10255-10 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	770	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	64%		10-112		03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	130%	S8	10-123		03/26/24 14:53	03/30/24 19:20	MxB/TL	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-2-FAC-MB-WT-326J-03052024
AC10255-11 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1900	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	83%		10-112		03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	196%	S8	10-123		03/26/24 14:53	03/30/24 19:42	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-1-ISEA-MB-INT-326J-03052024
AC10255-12 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	980	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	400	98	mg/kg	03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	91%		10-112		03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	241%	S8	10-123		03/26/24 14:53	03/30/24 20:04	MxB/TL	SW846 3540C	SW846-8082A	



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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-24-FAC-HS-INT-325-03062024
AC10255-13 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	24000	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	4220%	S8	10-123		03/26/24 14:53	03/30/24 20:26	MxB/TL	SW846 3540C	SW846-8082A	

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200 Route 130, Cinnaminson, NJ, 08077
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 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-23-ISEA-CS-INT-325-03062024
AC10255-14 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	330	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	49	mg/kg	03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	58%		10-112		03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	151%	S8	10-123		03/26/24 14:53	03/30/24 20:48	MxB/TL	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-22-FAC-CS-INT-325-03062024
AC10255-15 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	940	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	51%		10-112		03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	166%	S8	10-123		03/26/24 14:53	03/30/24 21:10	MxB/TL	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-21-ISEA-CS-PER-300P-03062024
AC10255-16 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	11000	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5000	1200	mg/kg	03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/26/24 14:53	03/30/24 21:32	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-20-FAC-CS-PER-300P-03062024
AC10255-17 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1800	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	400	97	mg/kg	03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	76%		10-112		03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	209%	S8	10-123		03/25/24 09:50	03/29/24 02:09	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-19-ISEA-HS-INT-309-03052024
AC10255-18 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	31000	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	8000	2000	mg/kg	03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112			03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123			03/25/24 09:50	03/29/24 21:57	MxB/TL	SW846 3540C	SW846-8082A

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-18-FAC-HS-INT-309-03052024
AC10255-19 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	280	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	72%		10-112		03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	125%	S8	10-123		03/25/24 09:50	03/29/24 02:51	MxB/TL	SW846 3540C	SW846-8082A	

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-17-ISEA-CS-INT-309-03052024
 AC10255-20 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	27000	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	9000	2200	mg/kg	03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 19:01	MxB/TL	SW846 3540C	SW846-8082A	



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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-16-FAC-CS-INT-309-03052024
AC10255-21 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1200	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	75	mg/kg	03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	64%		10-112		03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	203%	S8	10-123		03/25/24 09:50	03/29/24 10:55	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

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Sample Results
(Continued)

Sample: B-15-ISEA-CS-PER-300D-03052024
AC10255-22 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	28000	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1400	mg/kg	03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 19:23	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-14-FAC-CS-PER-300D-03052024
 AC10255-23 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1100	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	80%		10-112		03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	214%	S8	10-123		03/25/24 09:50	03/29/24 19:45	MxB/TL	SW846 3540C	SW846-8082A	



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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-13-ISEA-CS-PER-310G-03052024
AC10255-24 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	25000	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 20:07	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-60-ISEA-HS-PER-502-03072024
 AC10255-25 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	20000	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 20:29	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Sample Results (Continued)

Sample: B-59-FAC-HS-PER-502-03072024
AC10255-26 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	380	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	72%		10-112		03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	137%	S8	10-123		03/25/24 09:50	03/29/24 12:49	MxB/TL	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-58-ISEA-HS-PER-402S-03072024
 AC10255-27 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	25000	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	04/01/24 16:00	MxB/TL	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-57-FAC-HS-PER-402S-03072024
 AC10255-28 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	240	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	49	mg/kg	03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	44%		10-112		03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	113%		10-123		03/25/24 09:50	03/29/24 13:33	MxB/TL	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-56-ISEA-HS-PER-417-03072024
AC10255-29 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	2000	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	600	150	mg/kg	03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 21:13	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-55-FAC-HS-PER-417-03072024
 AC10255-30 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	490	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	73	mg/kg	03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	80%		10-112		03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	205%	S8	10-123		03/25/24 09:50	03/29/24 15:07	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Sample Results
 (Continued)

Sample: B-54-ISEA-HS-PER-520B-03072024
AC10255-31 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	4200	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	2000	480	mg/kg	03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 21:35	MxB/TL	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-53-FAC-HS-PER-520B-03072024
AC10255-32 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	310	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	74	mg/kg	03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	108%		10-112		03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	227%	S8	10-123		03/25/24 09:50	03/29/24 15:51	MxB/TL	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-52-ISEA-HS-INT-607-03062024
AC10255-33 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	11000	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	3000	740	mg/kg	03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	03/29/24 17:57	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-51-FAC-HS-INT-607-03062024
AC10255-34 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	290	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	50	mg/kg	03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	92%		10-112		03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	220%	S8	10-123		03/25/24 09:50	03/29/24 18:19	MxB/TL	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-50-ISEA-CS-INT-607-03062024
 AC10255-35 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	48000	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	15000	3600	mg/kg	03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:50	04/01/24 12:09	MxB/TL	SW846 3540C	SW846-8082A	

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-49-FAC-CS-INT-607-03062024
AC10255-36 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	2400	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 05:16	MxB/TL	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-72-ISEA-HS-INT-213-03072024
AC10255-37 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	24000	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 22:19	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Analytical, Inc.

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-71-FAC-HS-INT-213-03072024
AC10255-38 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1100	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 05:58	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-70-ISEA-CS-INT-213-03072024
AC10255-39 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	18000	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1400	mg/kg	03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112			03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123			03/25/24 09:49	03/29/24 22:41	MxB/TL	SW846 3540C	SW846-8082A

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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 (704) 227-0850
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-69-FAC-CS-INT-213-03072024
 AC10255-40 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	380	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	72%		10-112		03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	167%	S8	10-123		03/25/24 09:49	03/29/24 06:40	MxB/TL	SW846 3540C	SW846-8082A	



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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-68-ISEA-HS-PER-122-03072024
AC10255-41 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	2100	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 07:00	MxB/TL	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-67-FAC-HS-PER-122-03072024
AC10255-42 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	210	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	90%		10-112		03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	170%	S8	10-123		03/25/24 09:49	03/29/24 07:22	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-66-ISEA-CS-PER-122-03072024
AC10255-43 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	16000	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	4000	980	mg/kg	03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 23:03	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-65-FAC-CS-PER-122-03072024
AC10255-44 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1200	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	240	mg/kg	03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 08:04	MxB/TL	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-64-ISEA-HS-PER-106-03072024
AC10255-45 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1400	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 08:25	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-63-FAC-HS-PER-106-03072024
AC10255-46 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	82	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	76%		10-112		03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	124%	S8	10-123		03/25/24 09:49	03/29/24 08:45	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-62-ISEA-CS-PER-106-03072024
AC10255-47 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	24000	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 23:25	MxB/TL	SW846 3540C	SW846-8082A	

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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-61-FAC-CS-PER-106-03072024
AC10255-48 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1000	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	74%		10-112		03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	113%		10-123		03/25/24 09:49	03/29/24 09:28	MxB/TL	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

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EMSL Customer ID: GSCH75

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 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-25-ISEA-HS-INT-365-03062024
 AC10255-49 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	24000	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112			03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123			03/25/24 09:49	04/02/24 10:57	MxB/TL	SW846 3540C	SW846-8082A

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-26-FAC-HS-PER-31K-03062024
AC10255-50 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	320	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	49	mg/kg	03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	56%		10-112		03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	128%	S8	10-123		03/25/24 09:49	03/29/24 10:10	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-27-ISEA-HS-PER-317C-03062024
AC10255-51 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	2500	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	250	mg/kg	03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 10:32	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-28-FAC-CS-PER-640C-03062024
AC10255-52 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	820	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	300	74	mg/kg	03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	93%		10-112		03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	120%		10-123		03/25/24 09:49	03/29/24 11:13	MxB/TL	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-29-ISEA-CS-PER-640C-03062024
AC10255-53 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	18000	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	04/02/24 11:19	MxB/TL	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-30-FAC-CS-PER-635-03062024
AC10255-54 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1100	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	68%		10-112		03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	119%		10-123		03/25/24 09:49	03/29/24 11:55	MxB/TL	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-31-ISEA-CS-PER-635-03062024
 AC10255-55 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	12000	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	2000	490	mg/kg	03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/25/24 09:49	03/29/24 14:32	MxB/TL	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

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EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-32-FAC-CS-PER-636-03062024
AC10255-56 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1100	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	92%		10-112		03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	206%	S8	10-123		03/25/24 09:50	03/30/24 15:39	MxB/TL	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

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 EMSL-CIN-01

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EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-33-ISEA-CS-PER-636-03062024
 AC10255-57 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	22000	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	8000	1900	mg/kg	03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 11:27	MxB/TL1	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-34-FAL-CS-PER-621F-03062024
 AC10255-58 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	860	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	1000	240	mg/kg	03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 18:48	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-35-ISEA-CS-PER-607F-03062024
AC10255-59 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	16000	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	4000	1000	mg/kg	03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 11:48	MxB/TL1	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-36-FAC-CS-PER-602M-03062024
AC10255-60 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	1000	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 19:09	MxB/TL1	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-37-ISEA-CS-PER-602M-03062024
AC10255-61 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	19000	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 12:09	MxB/TL1	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-38-FAC-CS-PER-608D-03062024
 AC10255-62 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	1600	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 19:39	MxB/TL1	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-39-ISESA-CS-PER-608D-03062024
AC10255-63 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	23000	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	6000	1500	mg/kg	03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 12:30	MxB/TL1	SW846 3540C	SW846-8082A	

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Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-40-FHC-MB-INT-638-03062024
AC10255-64 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	870	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 20:00	MxB/TL1	SW846 3540C	SW846-8082A	

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-41-ISEA-MB-INT-638-03062024
 AC10255-65 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	13000	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	4000	990	mg/kg	03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 12:51	MxB/TL1	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-42-FAC-CS-INT-630-03062024
AC10255-66 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1262	1900	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	90%		10-112		03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	306%	S8	10-123		03/22/24 12:58	03/29/24 03:11	MxB/TL	SW846 3540C	SW846-8082A	

**EMSL Analytical, Inc.**

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-43-ISEA-CS-INT-630-03062024
 AC10255-67 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	6300	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	2000	480	mg/kg	03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 13:12	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Sample Results
(Continued)

Sample: B-44-FHC-HS-INT-630-03062024
AC10255-68 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	200	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	97%		10-112		03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	153%	S8	10-123		03/22/24 12:58	03/27/24 20:41	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-45-ISEA-HS-INT-630-03062024
 AC10255-69 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	2000	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	500	120	mg/kg	03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112		03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123		03/22/24 12:58	03/27/24 21:03	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
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Sample Results (Continued)

**Sample: B-46-FAC-MB-INT-634A-03062024
 AC10255-70 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	560	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	49	mg/kg	03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	104%		10-112		03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	195%	S8	10-123		03/22/24 12:58	03/27/24 21:24	MxB/TL1	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

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Telephone: 856-858-4800 Fax:856-786-5974
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EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-47-ISEA-MB-INT-634A-03062024
AC10255-71 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	32000	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	8000	2000	mg/kg	03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	%	S8	10-112			03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	%	S8	10-123			03/22/24 12:58	03/27/24 13:32	MxB/TL1	SW846 3540C	SW846-8082A

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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-48-ISEA-MB-INT-634A-03062024
AC10255-72 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	280	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	41%		10-112		03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	41%		10-123		03/22/24 12:58	03/27/24 21:45	MxB/TL1	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Sample Results (Continued)

**Sample: B-73-FIL-MB-PER-310L-03082024
 AC10255-73 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	120	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	46%		10-112		03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	118%		10-123		03/22/24 12:58	03/27/24 13:54	MxB/TL1	SW846 3540C	SW846-8082A	



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
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(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-74-FIL-MB-PER-326D-03082024
AC10255-74 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	50	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	31%		10-112		03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	62%		10-123		03/22/24 12:58	03/27/24 22:06	MxB/TL1	SW846 3540C	SW846-8082A	

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200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-75-FIL-MB-PER-608M-03082024
AC10255-75 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	280	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	80	20	mg/kg	03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	71%		10-112		03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	183%	S8	10-123		03/22/24 12:58	03/27/24 14:14	MxB/TL1	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

Sample: B-76-FIL-MB-PER-615-03082024
AC10255-76 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	75	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	12	mg/kg	03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	41%		10-112		03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	95%		10-123		03/21/24 12:11	03/26/24 03:59	MxB/TL1	SW846 3540C	SW846-8082A	

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 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 1300 S Mint Street, Suite 300
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 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-77-FIL-RD-PER-100-03082024
AC10255-77 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	160	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	65%		10-112		03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	127%	S8	10-123		03/21/24 12:11	03/26/24 04:20	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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1300 S Mint Street, Suite 300
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(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-78-XSEA-RD-PER-100-03082024
AC10255-78 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	11	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	13	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	7.7	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	10	2.5	mg/kg	03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	51%		10-112		03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	72%		10-123		03/21/24 12:11	03/26/24 04:41	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-79-FIL-RD-PER-116-03082024
AC10255-79 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	150	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	62%		10-112		03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	122%		10-123		03/21/24 12:11	03/26/24 05:01	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
 (Continued)

Sample: B-80-FIL-RD-PER-P1004-03082024
AC10255-80 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	88	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	25	mg/kg	03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	54%		10-112		03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	123%		10-123		03/21/24 12:11	03/26/24 05:22	MxB/TL1	SW846 3540C	SW846-8082A	



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EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
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(704) 227-0850
jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-81-FIL-RD-PER-P1004-03082024
AC10255-81 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	140	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	70%		10-112		03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	103%		10-123		03/21/24 12:11	03/26/24 05:43	MxB/TL1	SW846 3540C	SW846-8082A	

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**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-82-FIL-RD-PER-P1004-03082024
AC10255-82 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	25	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	25	6.0	mg/kg	03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q		Limits						
<i>Surrogate: Tetrachloro-m-xylene</i>	48%			10-112		03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>	87%			10-123		03/21/24 12:11	03/26/24 06:04	MxB/TL1	SW846 3540C	SW846-8082A

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EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-83-FIK-RD-PER-P1004-03082024
AC10255-83 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	120	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	54%		10-112		03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	142%	S8	10-123		03/21/24 12:11	03/26/24 06:25	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-84-FIL-RD-PER-P1003-03082024
 AC10255-84 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	21	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	10	2.4	mg/kg	03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	82%		10-112		03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	93%		10-123		03/21/24 12:11	03/26/24 06:47	MxB/TL1	SW846 3540C	SW846-8082A	



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EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-85-FIL-RD-PER-P1003-03082024
AC10255-85 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	340	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	200	48	mg/kg	03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	89%		10-112		03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	241%	S8	10-123		03/21/24 12:11	03/26/24 07:07	MxB/TL1	SW846 3540C	SW846-8082A	

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 EMSL-CIN-01

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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-86-FIL-RD-PER-P1003-03082024
 AC10255-86 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	11	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5	1.2	mg/kg	03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	60%		10-112		03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	72%		10-123		03/21/24 12:11	03/26/24 07:28	MxB/TL1	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-87-FIL-RD-PER-P1003-03082024
AC10255-87 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	110	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	100	24	mg/kg	03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	66%		10-112		03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	84%		10-123		03/21/24 12:11	03/26/24 07:49	MxB/TL1	SW846 3540C	SW846-8082A	



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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-88-XSEA-MB-PER-310N-03082024
AC10255-88 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	92	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	81%		10-112		03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	108%		10-123		03/21/24 12:11	03/26/24 08:10	MxB/TL1	SW846 3540C	SW846-8082A	

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results
(Continued)

Sample: B-89-XSEA-MB-PER-326H-03082024
AC10255-89 (Solid)

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	46	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	5	4.8	mg/kg	03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	46%		10-112		03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	53%		10-123		03/21/24 12:11	03/26/24 08:30	MxB/TL1	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Sample Results (Continued)

**Sample: B-90-XSEA-MB-PER-310G-03082024
 AC10255-90 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	83	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	20	20	mg/kg	03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	80%		10-112		03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	87%		10-123		03/21/24 12:11	03/26/24 08:52	MxB/TL1	SW846 3540C	SW846-8082A	

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Project Name: NCSU PH (Bulk)

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EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
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Sample Results (Continued)

**Sample: B-91-XSEA-MB-PER-300M-03082024
 AC10255-91 (Solid)**

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Prep/Analyst Initials	Prep Method	Analytical Method
GC-SVOA										
Aroclor-1016	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1221	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1232	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1242	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1248	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1254	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1260	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1262	190	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Aroclor-1268	ND	D	50	50	mg/kg	03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A
Surrogate(s)	Recovery	Q	Limits							
<i>Surrogate: Tetrachloro-m-xylene</i>	93%		10-112		03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A	
<i>Surrogate: Decachlorobiphenyl</i>	117%		10-123		03/21/24 12:11	03/26/24 09:12	MxB/TL1	SW846 3540C	SW846-8082A	

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Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Quality Control**GC-SVOA**

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCC1285 - SW846 3540C**Blank (BCC1285-BLK1)**

Prepared: 3/21/2024 Analyzed: 3/22/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		61	10-112
Surrogate: Decachlorobiphenyl		0.5000		90	10-123

Blank (BCC1285-BLK2)

Prepared: 3/21/2024 Analyzed: 3/28/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		43	10-112
Surrogate: Decachlorobiphenyl		0.5000		60	10-123

LCS (BCC1285-BS1)

Prepared: 3/21/2024 Analyzed: 3/22/2024

Aroclor-1016	2.47	0.25	mg/kg	5.000	49	23-111
Aroclor-1260	2.98	0.25	mg/kg	5.000	60	29-119

Surrogate(s)

Surrogate: Tetrachloro-m-xylene		0.5000		54	10-112
Surrogate: Decachlorobiphenyl		0.5000		78	10-123



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LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

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Project Name: NCSU PH (Bulk)
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Quality Control
(Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCC1285 - SW846 3540C (Continued)

LCS (BCC1285-BS2)

Prepared: 3/21/2024 Analyzed: 3/28/2024

Aroclor-1016	1.85	0.25	mg/kg	5.000		37	23-111		
Aroclor-1260	2.15	0.25	mg/kg	5.000		43	29-119		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		38	10-112		
Surrogate: Decachlorobiphenyl				0.5000		51	10-123		

Batch: BCC1390 - SW846 3540C

Blank (BCC1390-BLK1)

Prepared: 3/22/2024 Analyzed: 3/26/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		41	10-112		
Surrogate: Decachlorobiphenyl				0.5000		53	10-123		

Matrix Spike (BCC1390-MS1)

Source: AC10255-65

Prepared: 3/22/2024 Analyzed: 3/26/2024

Aroclor-1016	10.5	0.24	mg/kg	4.854	ND	216	10-111		
Aroclor-1260	2310 E	0.24	mg/kg	4.854	ND	NR	10-132		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4854		37	10-112		
Surrogate: Decachlorobiphenyl				0.4854		NR	10-123		

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Quality Control
 (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCC1481 - SW846 3540C**Blank (BCC1481-BLK1)**

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		68	10-112		
Surrogate: Decachlorobiphenyl				0.5000		77	10-123		

LCS (BCC1481-BS1)

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	3.77	0.25	mg/kg	5.000		75	23-111		
Aroclor-1260	4.55	0.25	mg/kg	5.000		91	29-119		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		75	10-112		
Surrogate: Decachlorobiphenyl				0.5000		84	10-123		

Matrix Spike (BCC1481-MS1)**Source: AC10255-36**

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	NR5, D	250	mg/kg	4.975	ND		10-111		
Aroclor-1260	NR5, D	250	mg/kg	4.975	ND		10-132		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4975			10-112		
Surrogate: Decachlorobiphenyl				0.4975			10-123		

Matrix Spike Dup (BCC1481-MSD1)**Source: AC10255-36**

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	NR5, D	250	mg/kg	5.000	ND		10-111		28
Aroclor-1260	NR5, D	250	mg/kg	5.000	ND		10-132		28

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000			10-112		
Surrogate: Decachlorobiphenyl				0.5000			10-123		

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Received: 03/12/2024 09:30
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Quality Control (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCC1482 - SW846 3540C**Blank (BCC1482-BLK1)**

Prepared: 3/25/2024 Analyzed: 3/27/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		71	10-112		
Surrogate: Decachlorobiphenyl				0.5000		85	10-123		

LCS (BCC1482-BS1)

Prepared: 3/25/2024 Analyzed: 3/27/2024

Aroclor-1016	4.52 S8	0.25	mg/kg	5.000		90	23-111		
Aroclor-1260	5.35 S8	0.25	mg/kg	5.000		107	29-119		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		79	10-112		
Surrogate: Decachlorobiphenyl				0.5000		96	10-123		

Matrix Spike (BCC1482-MS1)**Source: AC10255-17**

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	ND R5, D	98	mg/kg	4.902	ND		10-111		
Aroclor-1260	ND R5, D	98	mg/kg	4.902	ND		10-132		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4902		60	10-112		
Surrogate: Decachlorobiphenyl				0.4902		116	10-123		

Matrix Spike Dup (BCC1482-MSD1)**Source: AC10255-17**

Prepared: 3/25/2024 Analyzed: 3/29/2024

Aroclor-1016	ND R5, D	100	mg/kg	5.000	ND		10-111		28
Aroclor-1260	ND R5, D	100	mg/kg	5.000	ND		10-132		28

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		56	10-112		
Surrogate: Decachlorobiphenyl				0.5000		162	10-123		

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Project Name: NCSU PH (Bulk)
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Received: 03/12/2024 09:30
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Quality Control (Continued)

GC-SVOA (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCC1623 - SW846 3540C**Blank (BCC1623-BLK1)**

Prepared: 3/26/2024 Analyzed: 3/29/2024

Aroclor-1016	ND	0.25	mg/kg						
Aroclor-1221	ND	0.25	mg/kg						
Aroclor-1232	ND	0.25	mg/kg						
Aroclor-1242	ND	0.25	mg/kg						
Aroclor-1248	ND	0.25	mg/kg						
Aroclor-1254	ND	0.25	mg/kg						
Aroclor-1260	ND	0.25	mg/kg						
Aroclor-1262	ND	0.25	mg/kg						
Aroclor-1268	ND	0.25	mg/kg						

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		49	10-112		
Surrogate: Decachlorobiphenyl				0.5000		56	10-123		

LCS (BCC1623-BS1)

Prepared: 3/26/2024 Analyzed: 3/29/2024

Aroclor-1016	2.67	0.25	mg/kg	5.000		53	23-111		
Aroclor-1260	2.93	0.25	mg/kg	5.000		59	29-119		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		50	10-112		
Surrogate: Decachlorobiphenyl				0.5000		59	10-123		

Matrix Spike (BCC1623-MS1)**Source: AC10592-05**

Prepared: 3/26/2024 Analyzed: 3/28/2024

Aroclor-1016	3.56	0.25	mg/kg	5.000	ND	71	10-111		
Aroclor-1260	4.81	0.25	mg/kg	5.000	ND	96	10-132		

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.5000		62	10-112		
Surrogate: Decachlorobiphenyl				0.5000		75	10-123		

Matrix Spike Dup (BCC1623-MSD1)**Source: AC10592-05**

Prepared: 3/26/2024 Analyzed: 3/28/2024

Aroclor-1016	3.05	0.25	mg/kg	4.950	ND	62	10-111	15	28
Aroclor-1260	3.65	0.25	mg/kg	4.950	ND	74	10-132	27	28

Surrogate(s)

Surrogate: Tetrachloro-m-xylene				0.4950		52	10-112		
Surrogate: Decachlorobiphenyl				0.4950		63	10-123		

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255
LIMS Reference ID: AC10255
EMSL Customer ID: GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Certified Analyses included in this Report

Analyte	CAS #	Certifications
SW846-8082A in Solid		
Aroclor-1016	12674-11-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1221	11104-28-2	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1232	11141-16-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1242	53469-21-9	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1248	12672-29-6	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1254 [2C]	11097-69-1	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1260	11096-82-5	NJDEP,NYSDOH,PADEP,California ELAP
Aroclor-1262	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1262 [2C]	37324-23-5	NJDEP,NYSDOH,PADEP
Aroclor-1268	11100-14-4	NJDEP,NYSDOH,PADEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
NYSDOH	New York State Department of Health	10872	04/01/2024
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

EMSL Order ID: 012410255**LIMS Reference ID:** AC10255**EMSL Customer ID:** GSCH75

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

Project Name: NCSU PH (Bulk)

Customer PO:
EMSL Sales Rep: Emily Stressman

Received: 03/12/2024 09:30
Reported: 04/02/2024 14:45

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
E	Result is beyond calibration range. This value is estimated.
R5	Recovery is outside of the control limits due to dilution.
S8	Surrogate recovery is outside the control limits due to dilution.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
%REC	Percent Recovery
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.



Environmental Chemistry - Sampling Event

Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL Order Number / Lab Use Only
AC10255

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer Information	Customer ID:	Billing ID:
	Company Name: Geosyntec Consultants	Company Name: Same as customer
	Contact Name: Jeff Ahrens	Billing Contact:
	Street Address: 1300 S. Mint St. Suite 300	Street Address:
	City, State, Zip: Charlotte, NC 28203 USA	City, State, Zip: _____ Country: _____
Phone: 704-227-0850	Phone:	
Email(s) for Report: JAhrens@geosyntec.com	Email(s) for Invoice:	

Project Name/No: **NCSU PH (Bulk)** Purchase Order: _____

EMSL LIMS Project ID: _____ (If applicable, EMSL will provide)

US State where samples collected: **NC** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) _____ PWS ID: _____ State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No **Sample(s) Temperature Upon Receipt (LAB ONLY)**

Sampled By Name: **Marc Webb** Sampled By Signature: *[Signature]* No. of Samples in Shipment: **48**

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
B-12-FAC-CS-PER-306-03052024		X	03052024 1441	O	none	<input checked="" type="checkbox"/>								
B-11-FAC-CS-PER-317L-03052024		X	03052024 1258			<input checked="" type="checkbox"/>								
B-10-ISEA-CS-PER-317L-03052024		X	03052024 1422			<input checked="" type="checkbox"/>								
B-9-ISEA-CS-PER-317C-03052024		X	03052024 1148			<input checked="" type="checkbox"/>								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

FX 71549661 2623 4.30C on 4/1

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: **Fedex** Sample Condition Upon Receipt: _____

Relinquished by: Marc Webb	Date/Time: 03/11/2024 1300	Received by: Colleen Palladino	Date/Time: 3/12/24 9:30
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL Order Number / Lab Use Only
AC10265

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
						Test 1: <i>PCB Bj14</i>	Test 2:	Test 3:	Test 4:					
B-8-FAC-LS-PER-317C -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1134	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-7-ISEA-MB-WT-326 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1000			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-6-FAC-MB-WT-326 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0950			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-5-ISEA-LS-PER-326H -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0923			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-4-FAC-LS-PER-326H -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0850			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-3-ISEA-LS-PER-326H -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0856			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-2-FAC-MB-WT-326J -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0832			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-1-ISEA-MB-WT-326J -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 0830			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: Marc Webb	Date/Time: 03112024 1300	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL Order Number / Lab Use Only
AC10265

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer Information	Customer ID:			Billing Information	Billing ID: <u>Same as customer</u>		
	Company Name: <u>Geosyntec Consultants</u>				Company Name:		
	Contact Name: <u>Jeff Ahrens</u>				Billing Contact:		
	Street Address: <u>1300 S. Mint St. Suite 300</u>				Street Address:		
	City, State, Zip: <u>Charlotte, NC 28203</u>		Country: <u>USA</u>		City, State, Zip:		Country:
	Phone: <u>704-227-0850</u>				Phone:		
Email(s) for Report: <u>JAhrens@geosyntec.com</u>				Email(s) for Invoice:			

Project Name/No: <u>NCSU PH (Bulk)</u>				Purchase Order:			
EMSL LIMS Project ID: <small>(If applicable, EMSL will provide)</small>				US State where samples collected: <u>NC</u>		State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)	
Samples for Compliance? <input type="checkbox"/> Yes <input type="checkbox"/> No		If Yes, for NPDES? <input type="checkbox"/> Yes <input type="checkbox"/> No		Other (Specify)		PWS ID: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Samples Collected by (Check One): <input type="checkbox"/> EMSL <input checked="" type="checkbox"/> CLIENT		Samples Received Chilled? <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample(s) Temperature Upon Receipt (LAB ONLY)			
Sampled By Name: <u>Marc Webb</u>			Sampled By Signature: <u>[Signature]</u>			No. of Samples in Shipment: <u>48</u>	
Turn-Around-Time (TAT)		Standard Turn-Around-Time: <input checked="" type="checkbox"/> 2 Weeks		The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: <input type="checkbox"/> 1 Week <input type="checkbox"/> 4 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 2 Days <input type="checkbox"/> 1 Day			

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other <small>Describe below in Special Instructions</small>	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
B-24-FAC-MS-INT-325-03062024		X	03062024 1038	0	none	X								
B-23-ISEA-CS-INT-325-03062024		X	03062024 0950			X								
B-22-FAC-CS-INT-325-03062024		X	03062024 0937			X								
B-21-ISEA-CS-PER-300P-03062024		X	03062024 0945			X								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: <input type="checkbox"/> Results Only <input checked="" type="checkbox"/> Results and QC <input type="checkbox"/> Reduced Deliverables <input checked="" type="checkbox"/> Hzresults EDD <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Other (Describe Above)	
Method of Shipment: <u>Fedex</u>	Sample Condition Upon Receipt:
Relinquished by: <u>Marc Webb</u>	Date/Time: <u>03/10/2024 / 1300</u>
Relinquished by:	Date/Time:



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Order Number / Lab Use Only

AC10255

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments	
						Test 1:	Test 2:	Test 3:	Test 4:						
B-20-FAC-CS-PER-300P -03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03062024 0929	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-19-ISEA-HS-WT-309 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1809			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-18-FAC-HS-WT-309 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1642			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-17-ISEA-CS-WT-309 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1619			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-16-FAC-CS-WT-309 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1536			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-15-ISEA-CS-PER-3000 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1527			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-14-FAC-CS-PER-3000 -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1515			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
B-13-ISEA-CS-PER-310G -03052024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03052024 1500 +1500aw			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

Method of Shipment:

Fedex

Sample Condition Upon Receipt:

Relinquished by:

Marc Webb

Date/Time:

03112024/1300

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

AC10255

Customer Information	Customer ID:	Billing ID:	
	Company Name: <u>Geosyntec Consultants</u>	Company Name: <u>Same as customer</u>	
	Contact Name: <u>Jeff Ahrens</u>	Billing Contact:	
	Street Address: <u>1300 S. Mint St. Suite 300</u>	Street Address:	
	City, State, Zip: <u>Charlotte, NC 28203</u> Country: <u>USA</u>	City, State, Zip:	Country:
	Phone: <u>704-227-0850</u>	Phone:	
Email(s) for Report: <u>JAhrens@geosyntec.com</u>	Email(s) for Invoice:		

Project Name/No: NCSU PH (Bulk) Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Marc Webb Sampled By Signature: [Signature] No. of Samples in Shipment: 48

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
B-60-1SEA-HS-PER-5020 -03072024		K	03072024 1129	O	none	X								
B-59-1FAC-HS-PER-5020 -03072024		K	03072024 1129			X								
B-58-1SEA-HS-PER-4025 -03072024		K	03072024 1038			X								
B-57-1FAC-HS-PER-4025 -03072024		K	03072024 1038			X								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: Fedex Sample Condition Upon Receipt:

Relinquished by: Marc Webb Date/Time: 3/12/24 1300 Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

ACID255

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
B-56-ISEA-HS-PER-417 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 0933	O	None	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-55-FAC-HS-PER-417 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 0932			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-54-ISEA-HS-PER-520B -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 0921			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-53-FAC-HS-PER-520B -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 0859			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-52-ISEA-HS-WT-607 -03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03062024 1754			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-51-FAC-HS-WT-607 -03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03062024 1753			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-50-ISEA-CS-INT-607 -03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03062024 1732			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-49-FAC-CS-INT-607 -03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03062024 1731			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test 1:
PUS
B3JK

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: Marc Webb	Date/Time: 03112024 1300	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Environmental Chemistry - Sampling Event

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

Chain of Custody

EMSL Order Number / Lab Use Only
AC10255

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer Information	Customer ID:	Billing ID:	Same as customer
	Company Name: Geosyntec Consultants	Company Name:	
	Contact Name: Jeff Ahrens	Billing Contact:	
	Street Address: 1300 S. Mint St. Suite 300	Street Address:	
	City, State, Zip: Charlotte, NC 28203 Country: USA	City, State, Zip:	Country:
Phone: 704-227-0850	Phone:		
Email(s) for Report: JAhrens@geosyntec.com	Email(s) for Invoice:		

Project Name/No: **NCSu PH** Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: **NC** State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: **Marc Webb** Sampled By Signature: *[Signature]* No. of Samples in Shipment: **48**

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal: 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
B-72-15EA-HS-WT-213-03072024		<input checked="" type="checkbox"/>	03072024 1725	0	none	<input checked="" type="checkbox"/>								
B-71-PAC-HS-WT-213-03072024		<input checked="" type="checkbox"/>	03072024 1724	1		<input checked="" type="checkbox"/>								
B-70-15EA-CS-WT-213-03072024		<input checked="" type="checkbox"/>	03072024 1705	1		<input checked="" type="checkbox"/>								
B-69-PAC-CS-WT-213-03072024		<input checked="" type="checkbox"/>	03072024 1705	1		<input checked="" type="checkbox"/>								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: **Fedex** Sample Condition Upon Receipt:

Relinquished by: **Marc Webb** Date/Time: **03112024 1300** Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

EMSL Order Number / Lab Use Only

AC10255

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)				Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
B-68-ISEA-HS-PER-122 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1631	W	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-67-FAC-HS-PER-122 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1631	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-68-ISEA-CS-PER-122 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1554	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-65-FAC-CS-PER-122 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1552	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-64-ISEA-HS-PER-106 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1443	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-63-FAC-HS-PER-106 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1443	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-62-ISEA-CS-PER-106 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1440	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
B-61-FAC-CS-PER-106 -03072024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	03072024 1409	W		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Method of Shipment:

Fedex

Sample Condition Upon Receipt:

Relinquished by:

Marc Webb

Date/Time:

03112024 1300

Received by:

Date/Time

Relinquished by:

Date/Time:

Received by:

Date/Time

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

AC10255

Customer Information	Customer ID:			Billing Information	Billing ID:	Same as customer	
	Company Name:	Geosyntec Consultants			Company Name:		
	Contact Name:	JEFF Ahrens			Billing Contact:		
	Street Address:	1300 S Mint St Suite 300			Street Address:		
	City, State, Zip:	Charlotte, NC, 28203	Country:		USA	City, State, Zip:	
Phone:	(704) 227-0950		Phone:				
Email(s) for Report:	JAahrens@geosyntec.com		Email(s) for Invoice:				

Project Name/No: NCSU DH (Bulk) Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide) US State where samples collected: NC State of Connecticut (CT) must select project location: Commercial (Taxable) Residential (Non-Taxable)

Samples for Compliance? Yes No If Yes, for NPDES? Yes No Other (Specify) PWS ID: State Reporting Required? Yes No

Samples Collected by (Check One): EMSL CLIENT Samples Received Chilled? Yes No Sample(s) Temperature Upon Receipt (LAB ONLY)

Sampled By Name: Danielle Meyer Sampled By Signature: [Signature] No. of Samples in Shipment: 43

Turn-Around-Time (TAT) Standard Turn-Around-Time: 2 Weeks The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal. 1 Week 4 Days 3 Days 2 Days 1 Day

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <small>Describe below in Special Instructions</small>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
B-25-ISEA-HS-INT-325		X	3/6/14 1045	G	none	X								
B-26-FAC-HS-PER-317C-03062024		X	3/6/24 1119	O	none	X								
B-27-ISEA-HS-PER-317C-03062024		X	3/6/24 1138	O	none	X								
B-28-FAC-CS-PER-640C-03062024		X	3/6/24 1436	O	none	X								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.):
 Please hold the following sample, will contact for analysis at a later date: B-89-XSEA-MB-PER-310N-03082024, B-89-XSEA-MB-PER-326H-03082024, B-90-XSEA-MB-PER-3106-03082024, B-91-XSEA-MB-PER-300M-03082024

Reporting Requirements: Results Only Results and QC Reduced Deliverables Hzresults EDD Excel Other (Describe Above)

Method of Shipment: FEDEX Sample Condition Upon Receipt:

Relinquished by: Danielle Meyer Date/Time: 03/11/24 1034 Received by: [Signature] Date/Time: 3/12/24 9:30am



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AC10255

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
B-29-ISEA-CS-PER-640C-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 500	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-30-FAC-CS-PER-635-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1304	↓	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-31-ISEA-CS-PER-635-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1317			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-32-FAC-CS-PER-636-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1346			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-33-ISEA-CS-PER-636-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1357			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-34-FAC-CS-PER-621F-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1359			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-35-ISEA-CS-PER-607F-0306 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1417			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: <i>Daniel New</i>	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

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AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

AC10255

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
B-36-FAC-CS-PER-607M-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1332	⊙	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-37-ISEA-CS-PER-607M-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1343	↓	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-38-FAC-CS-PER-608D-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1301			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-39-ISEA-CS-PER-608D-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1315			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-40-FAC-MB-INT-638-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1531			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B-41-ISEA-MB-INT-638-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1536			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-42-FAC-CS-INT-630-0306 7024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1613			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: Danielle Meyer	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

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Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

AC10255

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
B-43-ISEA-CS-INT-630-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1607	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-44-FAC-MS-INT-630-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1630	↓	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-45-ISEA-MS-INT-630-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1628			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-46-FAC-MB-INT-634A-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1701			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-47-ISEA-MB-INT-634A-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1703			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-48-ISEA-MB-INT-634A-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/6/24 1704			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-73-FIL-MB-PER-31DL-05062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0758			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-74-FIL-MB-PER-326D-03062024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0813			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDGX		Sample Condition Upon Receipt:	
Relinquished by: Danielle Meyer	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

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Environmental Chemistry Chain of Custody

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Cinnaminson, NJ 08077

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EMAIL: EnvChemistry2@EMSL.com

AC10255

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)								Comments	
				W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:		
B-75-FIL-MB-PER-605M-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0823	O	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-76-FIL-MB-PER-675-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0830	↓	↓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B-77-FIL-RD-PER-100-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0840			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-78-XSEA-RD-PER-700-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0855			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-79-FIL-RD-PER-116-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0905			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-80-FIL-RD-PER-P1004-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0922			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-81-FIL-RD-PER-P1004-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0937			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-82-FIL-RD-PER-P1004-0307 2024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0942			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: Danielle Meyer	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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AC10255

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EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Please hold the following samples, will contact for analysis at a later date: B-88-XSEA-MB-PER-310N-03082024, B-89-XSEA-MB-PER-326H-03082024, B-90-XSEA-MB-PER-310G-03082024, and B-91-XSEA-MB-PER-300M-03082024

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
B-83-FIL-RD-PER-P1004-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/10/24 0946	O	none	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-84-FIL-RD-PER-P1003-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 0953			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-85-FIL-RD-PER-P1003-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1004			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-86-FIL-RD-PER-P1003-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1008			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
B-87-FIL-RD-PER-P1003-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1013			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B-88-XSEA-MB-PER-310N-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1216			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON HOLD
B-89-XSEA-MB-PER-326H-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1120			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON HOLD
B-90-XSEA-MB-PER-310G-03082024	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3/8/24 1223			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON HOLD

Method of Shipment: FEDEX		Sample Condition Upon Receipt:	
Relinquished by: Danielle Meyer	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.

Environmental Chemistry Chain of Custody

EMSL Order Number / Lab Use Only

AC10255

EMSL Analytical, Inc.
200 Rt. 130 N
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix W=Water S=Soil A=Air SL=Sludge O=Other	Preservative 1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	List Test(s) Needed (Write in test below, then check on sample line:)								Comments
						Test 1:	Test 2:	Test 3:	Test 4:	Test 5:	Test 6:	Test 7:	Test 8:	
13-91-XSEA-MB-PER-300M-0205-0204	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2/8/24 1230	0	none	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON HOLD
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Method of Shipment: Fedex		Sample Condition Upon Receipt:	
Relinquished by: Danielle Meyer	Date/Time: 3/11/24 1034	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - COC-07 Chemistry R11 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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Appendix E1
Air Sample Lab Report 2024



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012415354
LIMS Reference ID: AC15354
EMSL Customer ID: GSCH75

May 23, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/30/2024. The results are tabulated on the attached pages for the following client designated project:

NCSUPH

The reference number for these samples is EMSL Order #: AC15354 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

EMSL Order ID: 012415354
LIMS Reference ID: AC15354
EMSL Customer ID: GSCH75

Project Number: NCSUPH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 04/30/2024 09:30
Reported: 05/23/2024 10:53

Work Order Case Narrative

Project: NCSUPH
Workorder: AC15354

This report contains the analytical data for the analysis of 9 samples, and are listed below.

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Sample Date</u>
A-03-742-042424	AC15354-08	04/25/24 18:57
A-04-714B-042424	AC15354-06	04/25/24 18:52
A-05-608J-042424	AC15354-04	04/25/24 19:00
A-06-635-042424	AC15354-05	04/25/24 19:06
A-07-510E-042424	AC15354-02	04/26/24 19:12
A-08-526-042424	AC15354-03	04/25/24 19:11
A-10-400-042424	AC15354-01	04/25/24 19:12
A-14-ROOF-042424	AC15354-09	04/25/24 18:57
DUP-03-742-042424	AC15354-07	04/25/24 18:57

Sample Receipt

The samples were received 04/30/24 09:30 and in good condition unless listed below. The temperature of the cooler at reception was

<u>Cooler</u>	<u>Temp C°</u>
Default Cooler	10.0

Report Revision 1

Replaces report from 05/14/2024

Report amended. Reported aroclors have been revised.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

Attention: Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

EMSL Order ID: 012415354**LIMS Reference ID:** AC15354**EMSL Customer ID:** GSCH75**Project Number:** NCSUPH**Customer PO:****EMSL Sales Rep:** Emily Stressman**Received:** 04/30/2024 09:30**Reported:** 05/23/2024 10:53**Analysis Case Narrative****Analysis list:**

<u>Sample</u>	<u>Method List</u>
AC15354-01	EPA TO-10A
AC15354-02	EPA TO-10A
AC15354-03	EPA TO-10A
AC15354-04	EPA TO-10A
AC15354-05	EPA TO-10A
AC15354-06	EPA TO-10A
AC15354-07	EPA TO-10A
AC15354-08	EPA TO-10A
AC15354-09	EPA TO-10A

Method Reference

USEPA: Compendium TO-10A, Determination Of Pesticides And Polychlorinated Biphenyls In Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed By Gas Chromatographic/Multi-Detector Detection (GC/MD), January 1999, (EPA/625/R-96/010b).

Holding Times:

All holding times were met.

Sample Dilutions:

<u>Sample ID</u>	<u>Analyzed</u>	<u>Dilution</u>
AC15354-01	No Dilutions	
AC15354-02	No Dilutions	
AC15354-03	No Dilutions	
AC15354-04	No Dilutions	
AC15354-05	No Dilutions	
AC15354-06	No Dilutions	
AC15354-07	No Dilutions	
AC15354-08	No Dilutions	
AC15354-09	No Dilutions	

Initial Calibration:

All acceptance criteria were met.

Initial Calibration Verification Standard (ICVS)- Second Source:

All acceptance criteria were met.

Laboratory Control Samples (LCS):

All acceptance criteria were met.

Continuing Calibration Verification Standard (CCVS):

All acceptance criteria were met.

Method Blanks (MB):

<u>Sample</u>	<u>Analyte</u>	<u>Qualifier</u>	<u>Description</u>
<u>BCD2253-BLK1</u>	<u>Decachlorobiphenyl [2C]</u>	<u>S</u>	<u>Surrogate recovery is outside the method control limits.</u>
<u>BCD2253-BLK2</u>	<u>Decachlorobiphenyl [2C]</u>	<u>S</u>	<u>Surrogate recovery is outside the method control limits.</u>
<u>BCD2253-BLK2</u>	<u>Tetrachloro-m-xylene [2C]</u>	<u>S</u>	<u>Surrogate recovery is outside the method control limits.</u>



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

EMSL Order ID: 012415354

LIMS Reference ID: AC15354

EMSL Customer ID: GSCH75

Project Number: NCSUPH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 04/30/2024 09:30
Reported: 05/23/2024 10:53

BCD2253-BLK1 Tetrachloro-m-xylene [2C] S

Surrogate recovery is outside the method control limits.

Samples:

<u>Sample</u>	<u>Analyte</u>	<u>Qualifier</u>	<u>Description</u>
AC15354-05	Decachlorobiphenyl	S	Surrogate recovery is outside the method control limits.
AC15354-05	Decachlorobiphenyl [2C]	S	Surrogate recovery is outside the method control limits.
AC15354-05	Tetrachloro-m-xylene [2C]	S	Surrogate recovery is outside the method control limits.

EMSL Analytical, Inc. certifies that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer ---readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature

Owen McKenna Laboratory Manager or other approved signatory

Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA TO-10A in Tubes</i>		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
NYSDOH	New York State Department of Health	10872	04/01/2025
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

EMSL Order ID: 012415354
LIMS Reference ID: AC15354
EMSL Customer ID: GSCH75

Project Number: NCSUPH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 04/30/2024 09:30
Reported: 05/23/2024 10:53

Notes and Definitions

Item	Definition
S	Surrogate recovery is outside the method control limits.
ND	Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.
U	Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.
J(Target)	Concentration estimated between Reporting Limit and MDL.
J	Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed
B	Compound found in associated method blank as well as in the sample.
E	Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.
D	Compound reported from additional diluted analysis.
N	indicates presumptive evidence of a compound based on library search match.



Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL Order Number / Lab Use Only

AC15354

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer ID:		Billing ID:	
Company Name: Geosyntec Consultants		Company Name: Same as Customer Information	
Contact Name: Jeff Ahrens		Billing Contact:	
Street Address: 1300 S. Mint Street		Street Address:	
City, State, Zip: Charlotte, NC, 28203		City, State, Zip:	
Phone: 704-227-0840		Phone:	
Email(s) for Report: jahrens@geosyntec.com		Email(s) for Invoice:	
Country: USA		Country:	

Project Name/No: NCSUPH

EMSL LIMS Project ID: (If applicable, EMSL will provide)

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

State Reporting Required? Yes No

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

State Reporting Required? Yes No

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

State Reporting Required? Yes No

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

State Reporting Required? Yes No

Client Sample ID	Comp	Lab	Date / Time Collected	Matrix	Preservative	Test 1:	Test 2:	Test 3:	Test 4:	Field PH	Field PH Test Time	Field Temp. Deg.C	Field Temp. Test Time	Comments
A-10-400-042424		<input checked="" type="checkbox"/>	04/25/2024 : 1912	W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other	<input checked="" type="checkbox"/>								
A-07-510E-042424		<input checked="" type="checkbox"/>	04/26/2024 : 1912	A	none	<input checked="" type="checkbox"/>								
A-08-526-042424		<input checked="" type="checkbox"/>	04/25/2024 : 1911	A	none	<input checked="" type="checkbox"/>								
A-05-608J-042424		<input checked="" type="checkbox"/>	04/25/2024 : 1900	A	none	<input checked="" type="checkbox"/>								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Standard Turn-Around-Time: 2 Weeks 1 Week 3 Days 4 Days 1 Day

The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal.

Sampled By Name: Marc Webb

Sampled By Signature: *Marc Webb*

Client Other

EMSL Other (Specify)

US State where samples collected: NC

Reduced Deliverables Results and QC Hzresults EDD Excel Other (Describe Above)

Reporting Requirements: Results Only Results and QC Hzresults EDD Excel Other (Describe Above)

Relinquished by: Marc Webb

Date/Time: 04/29/2024 : 1400

Received by: *Marc Webb*

Date/Time: 4/30/24 9:30am



EMSL ANALYTICAL, INC.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL Order Number / Lab Use Only
AC15354

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line:)							Comments	
						Test 1: PCB Method TO-10A	Test 2:	Test 3:	Test 4:	Field PH	Field PH Test Time	Field Temp. Deg.C		Field Temp. Test Time
A-06-635-042424	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1806	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
A-04-714B-042424	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1852	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
DUP-03-742-042424	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1857	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
A-03-742-042424	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1857	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
A-14-ROOF-042424	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1857	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Sample Condition Upon Receipt:

Method of Shipment:

Relinquished by: **Marc Webb** Date/Time: **04/29/2024 : 1400**

Relinquished by: _____ Date/Time: _____

Received by: *[Signature]* Date/Time: **4/30/24 9:30am**

Received by: _____ Date/Time: _____

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021 AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Emily Stressman
 Account Manager
 EMSL Analytical, Inc.

Phone: 843-958-8150 Direct: 843-480-4009 Cell (843) 259-9734 Toll Free: 888-958-8170

Conduct Field Surveys From Your Smart Device Today! Download EMSL's APP: [iTunes App Store - Apple](#) or [Google Play](#)
 Resources: [LABConnectTM](#) | [Order Products](#) | [Free Webinars](#) | [Additional Resources](#) | [EMSL.tv](#)



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From: Marc Webb <Marc.Webb@Geosyntec.com>
Sent: Thursday, May 2, 2024 12:59 PM
To: Stressman, Emily <estressman@EMSL.com>
Subject: Air Sample Sampling Times

[EXTERNAL E-MAIL]

Hi Emily,

Can you provide the following table to the lab that displays our air sample IDs, pre/post pump flow rates, sampling time, and sample volume (the volume uses the average of the pre and post flow check). Feel free to have the lab check our math:

Sample ID	Pre-Flow (L/min)	Post-Flow (L/min)	Total Sampling Time (min)	Total Sample Volume (L)
A-13-106-042424	5	4.92	1440	7142.4
DUP-01-106-042424	5.15	5.07	1440	7358.4
A-15-117-042424	5.22	5.17	1440	7480.8
A-11-209-042424	5.12	5.08	1440	7344
A-12-228-042424	5.21	5.17	1440	7473.6
A-01-216-042424	5.21	5.17	1440	7473.6
A-02-317F-042424	5.3	5.24	1440	7588.8
A-10-400-042424	5.2	5.17	1440	7466.4
A-09-402G-042624	5.16	5.1	1440	7387.2
DUP-02-402G-042624	5.24	5.2	1440	7516.8
A-07-510E-042424	5.21	5.19	1440	7488
A-08-526-042424	5.25	5.17	1440	7502.4
A-05-608J-042424	5.18	5.09	1440	7394.4
A-06-635-042424	5.13	5.09	1440	7358.4
A-04-714B-042424	5.14	5.16	1440	7416
A-03-742-042424	5.24	5.2	1440	7516.8

DUP-03-742-042424	5.16	5.1	1440	7387.2
A-14-ROOF-042424	5.26	5.25	1440	7567.2
Blank-01-117-042424	N/A	N/A	1440	passive air flow only, no pump

Thanks

Marc Webb, PhD

Senior Staff Professional



engineers | scientists | innovators

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Geosyntec Consultants of NC, P.C.²

 1 – Services Outside of North Carolina

2 – Services Inside North Carolina

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AROCLOR

SAMPLE DATA

1 - FORM I ANALYSIS DATA SHEET

A-10-400-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-01	File ID: L14372.D
Sampled:	04/25/24 19:12	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 18:20
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00485	0.00670	
11104-28-2	Aroclor-1221		0.00485	0.00670	
11141-16-5	Aroclor-1232		0.00485	0.00670	
53469-21-9	Aroclor-1242		0.00485	0.00670	
12672-29-6	Aroclor-1248		0.00128	0.00670	
11097-69-1	Aroclor-1254		0.00128	0.00670	
11096-82-5	Aroclor-1260		0.00128	0.00670	
37324-23-5	Aroclor-1262	0.119	0.00128	0.00670	
11100-14-4	Aroclor-1268		0.00128	0.00670	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14372.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:20 pm
 Operator : AxJ/KC
 Sample : AC15354-01
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:41:11 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

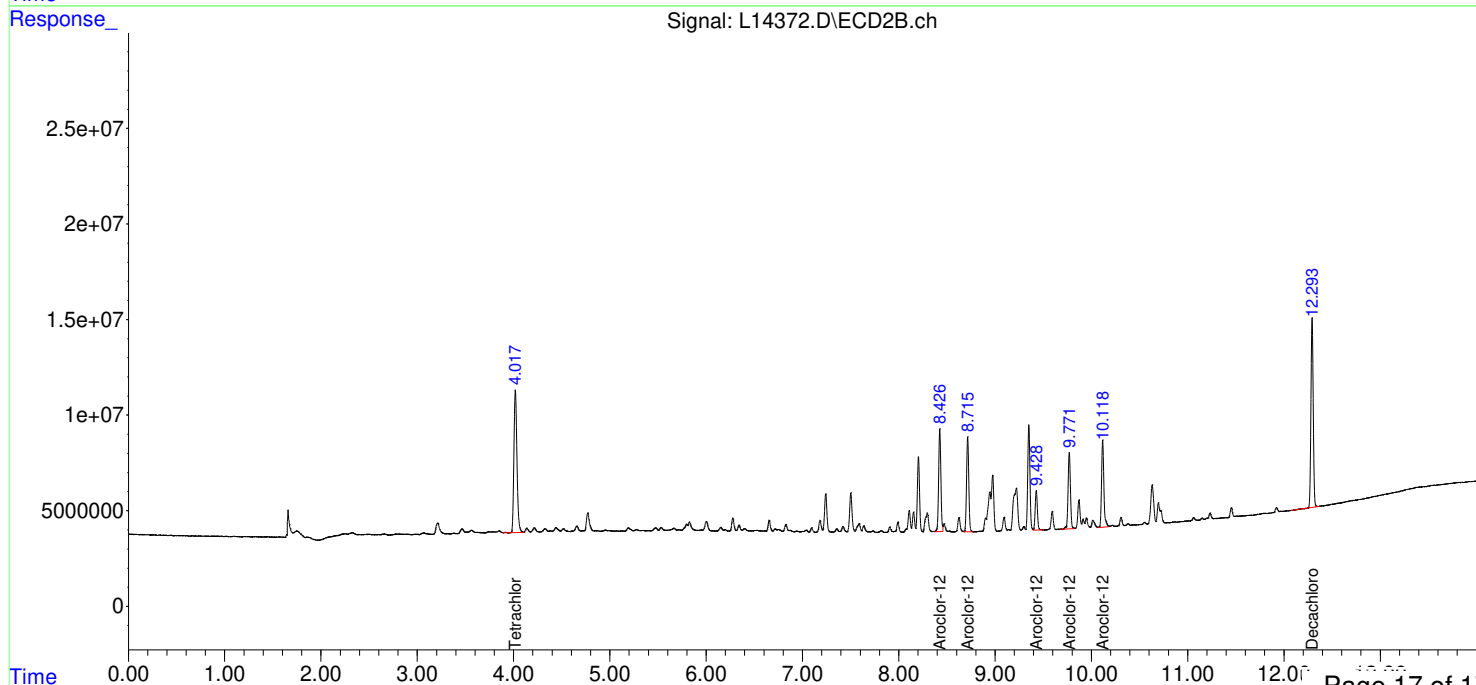
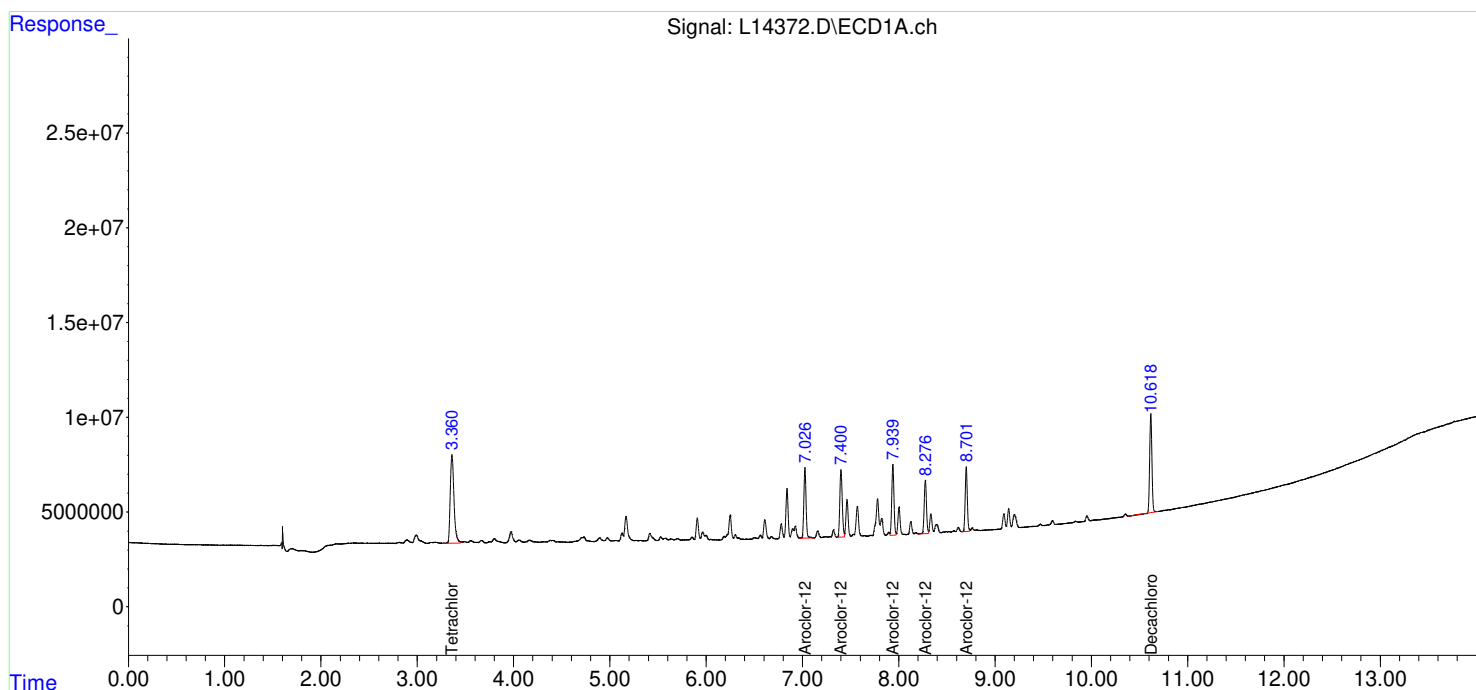
System Monitoring Compounds						
1) SA Tetrachlo...	3.360	4.018	124.8E6	163.2E6	9.827	9.841
Spiked Amount	10.000	Range 60 - 120	Recovery =	98.27%	98.41%	
2) SA Decachlor...	10.618	12.294	83942192	163.0E6	10.037	10.787
Spiked Amount	10.000	Range 60 - 120	Recovery =	100.37%	107.87%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.026	8.426	59915048	86899933	133.791	137.802
34) L7 Aroclor-1...	7.400	8.716	62946273	80211569	104.357	110.687
35) L7 Aroclor-1...	7.939	9.429	58591469	32910419	85.751	86.417
36) L7 Aroclor-1...	8.276	9.772	45705149	67687231	76.110	78.110
37) L7 Aroclor-1...	8.702	10.118	52074421	75709238	44.558	45.408
Sum Aroclor-1262			279.2E6	343.4E6	444.566	458.424
Average Aroclor-1262					88.913	91.685
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14372.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:20 pm
 Operator : AxJ/KC
 Sample : AC15354-01
 Misc :
 ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:41:11 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-07-510E-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-02	File ID: L14373.D
Sampled:	04/26/24 19:12	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 18:36
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00483	0.00668	
11104-28-2	Aroclor-1221		0.00483	0.00668	
11141-16-5	Aroclor-1232		0.00483	0.00668	
53469-21-9	Aroclor-1242		0.00483	0.00668	
12672-29-6	Aroclor-1248		0.00127	0.00668	
11097-69-1	Aroclor-1254		0.00127	0.00668	
11096-82-5	Aroclor-1260		0.00127	0.00668	
37324-23-5	Aroclor-1262	0.0981	0.00127	0.00668	
11100-14-4	Aroclor-1268		0.00127	0.00668	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14373.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:36 pm
 Operator : AxJ/KC
 Sample : AC15354-02
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:45:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

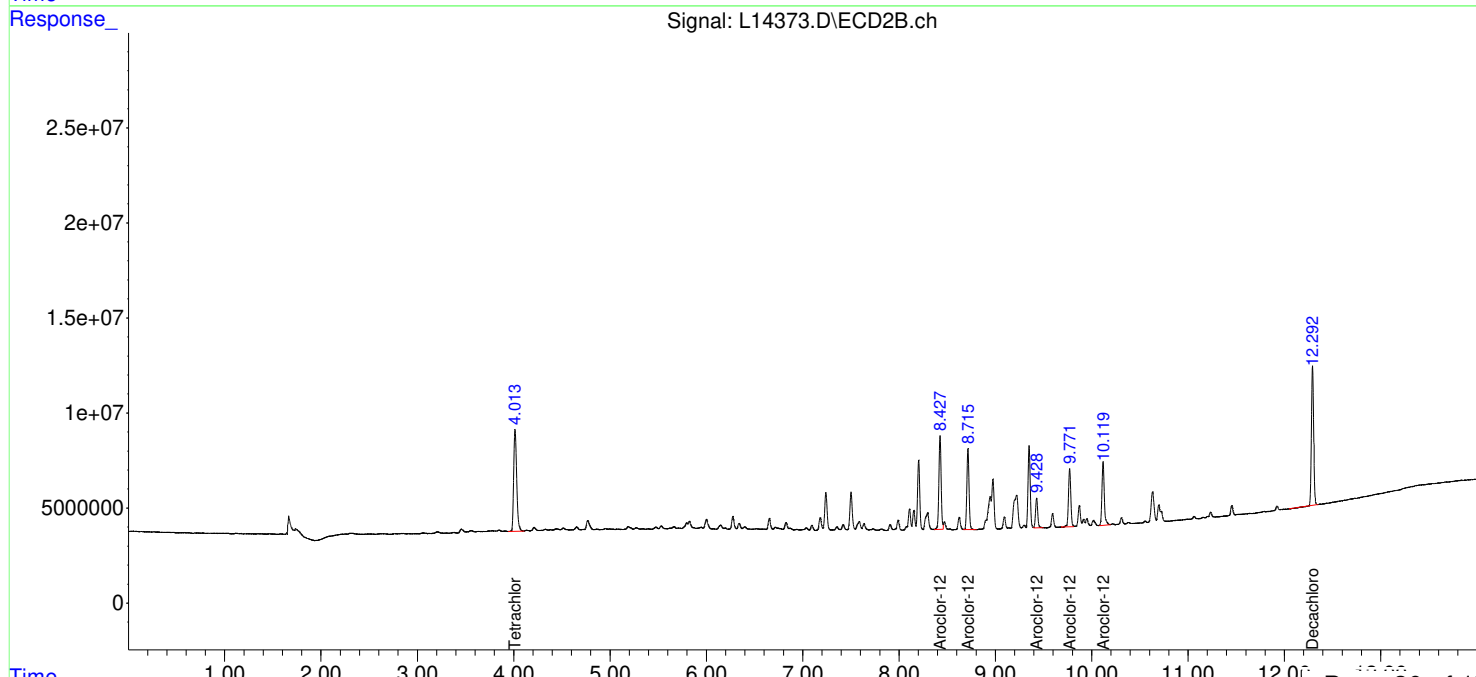
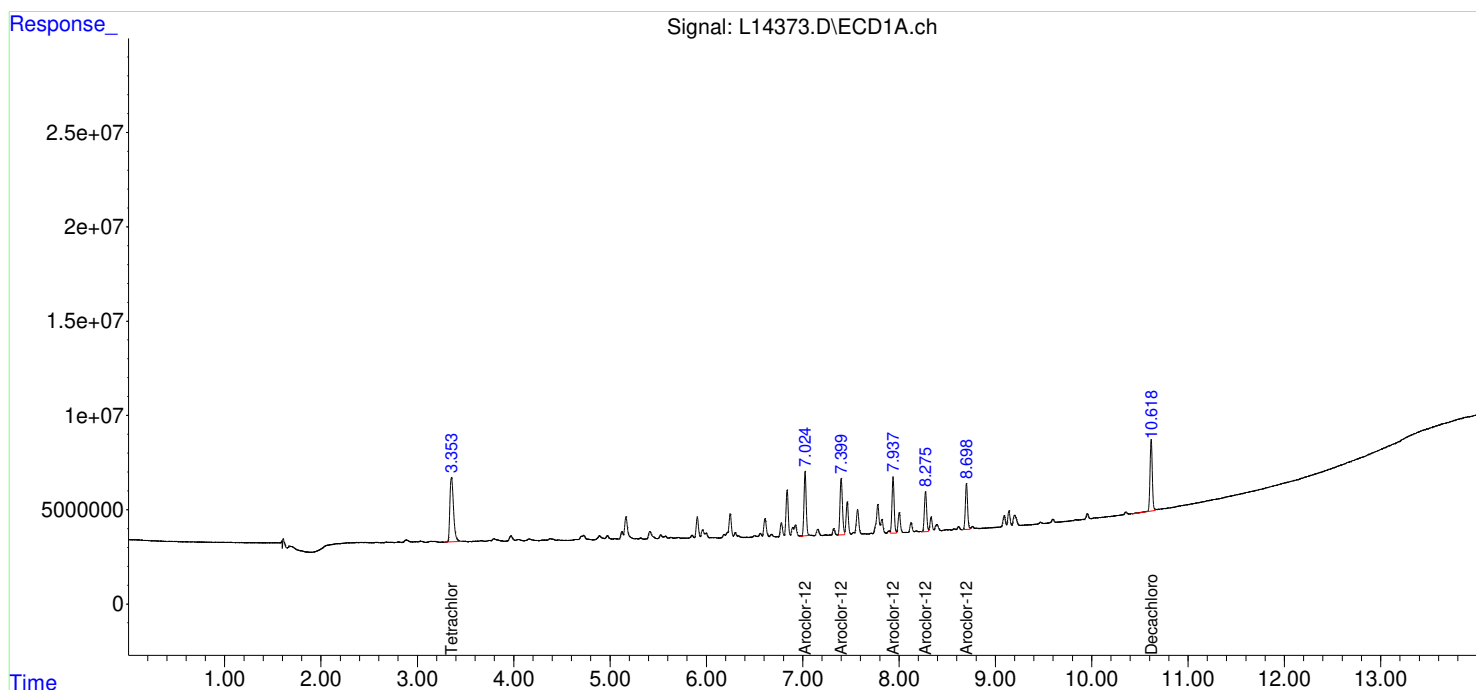
System Monitoring Compounds						
1) SA Tetrachlo...	3.353	4.013	89206324	117.0E6	7.027	7.056
Spiked Amount	10.000	Range	60 - 120	Recovery	= 70.27%	70.56%
2) SA Decachlor...	10.618	12.293	61445512	116.8E6	7.347	7.728
Spiked Amount	10.000	Range	60 - 120	Recovery	= 73.47%	77.28%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	53655940	80126122	119.814	127.061
34) L7 Aroclor-1...	7.399	8.716	53412822	67713201	88.552	93.440
35) L7 Aroclor-1...	7.938	9.429	46334242	24673976	67.812	64.790
36) L7 Aroclor-1...	8.275	9.772	34802952	51219745	57.955	59.107
37) L7 Aroclor-1...	8.700	10.119	38869719	55691841	33.259	33.402
Sum Aroclor-1262			227.1E6	279.4E6	367.392	377.799
Average Aroclor-1262					73.478	75.560
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14373.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:36 pm
 Operator : AxJ/KC
 Sample : AC15354-02
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:45:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-08-526-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-03	File ID: L14374.D
Sampled:	04/25/24 19:11	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 18:53
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00483	0.00666	
11104-28-2	Aroclor-1221		0.00483	0.00666	
11141-16-5	Aroclor-1232		0.00483	0.00666	
53469-21-9	Aroclor-1242		0.00483	0.00666	
12672-29-6	Aroclor-1248		0.00127	0.00666	
11097-69-1	Aroclor-1254		0.00127	0.00666	
11096-82-5	Aroclor-1260		0.00127	0.00666	
37324-23-5	Aroclor-1262	0.0972	0.00127	0.00666	
11100-14-4	Aroclor-1268		0.00127	0.00666	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14374.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:53 pm
 Operator : AxJ/KC
 Sample : AC15354-03
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:46:28 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

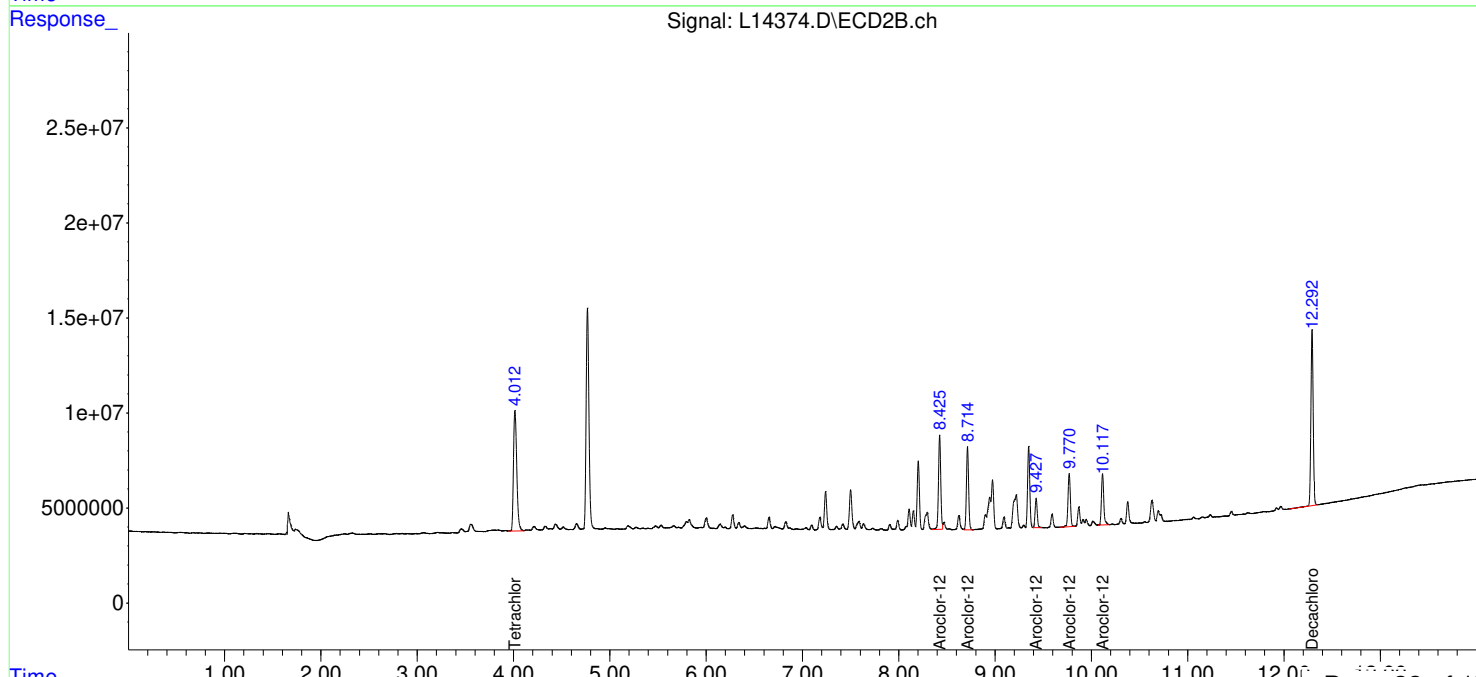
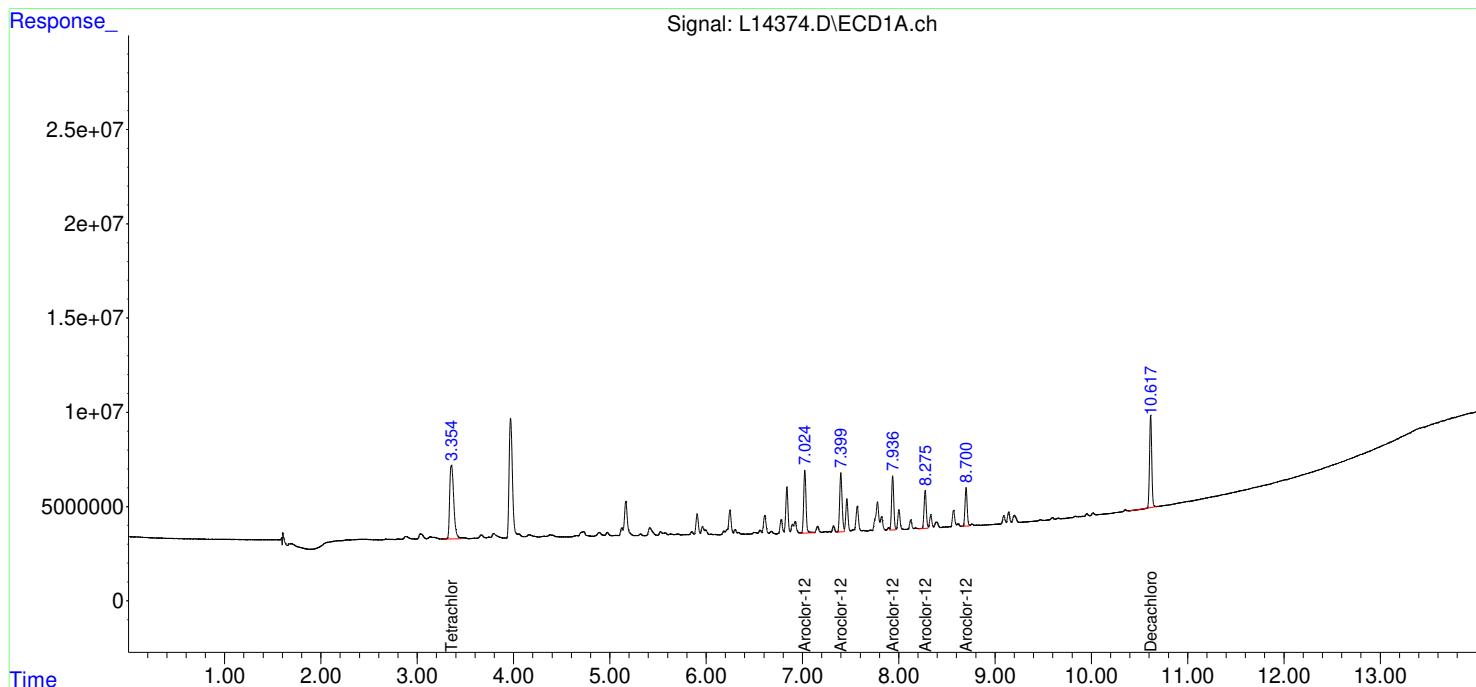
System Monitoring Compounds						
1) SA Tetrachlo...	3.354	4.014	115.1E6	150.2E6	9.064	9.056
Spiked Amount	10.000	Range 60 - 120	Recovery =	90.64%	90.56%	
2) SA Decachlor...	10.617	12.293	77517607	150.8E6	9.269	9.975
Spiked Amount	10.000	Range 60 - 120	Recovery =	92.69%	99.75%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.425	56753703	80661175	126.732	127.909
34) L7 Aroclor-1...	7.399	8.715	54177550	69336402	89.820	95.680
35) L7 Aroclor-1...	7.937	9.428	45232616	24006085	66.200	63.036
36) L7 Aroclor-1...	8.275	9.771	32597974	47745354	54.283	55.097
37) L7 Aroclor-1...	8.700	10.117	32077445	44858040	27.447	26.904
Sum Aroclor-1262			220.8E6	266.6E6	364.481	368.627
Average Aroclor-1262					72.896	73.725
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14374.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 6:53 pm
 Operator : AxJ/KC
 Sample : AC15354-03
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:46:28 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-05-608J-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-04	File ID: L14375.D
Sampled:	04/25/24 19:00	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 19:09
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00490	0.00676	
11104-28-2	Aroclor-1221		0.00490	0.00676	
11141-16-5	Aroclor-1232		0.00490	0.00676	
53469-21-9	Aroclor-1242		0.00490	0.00676	
12672-29-6	Aroclor-1248		0.00129	0.00676	
11097-69-1	Aroclor-1254		0.00129	0.00676	
11096-82-5	Aroclor-1260		0.00129	0.00676	
37324-23-5	Aroclor-1262	0.133	0.00129	0.00676	
11100-14-4	Aroclor-1268		0.00129	0.00676	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14375.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:09 pm
 Operator : AxJ/KC
 Sample : AC15354-04
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:47:20 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

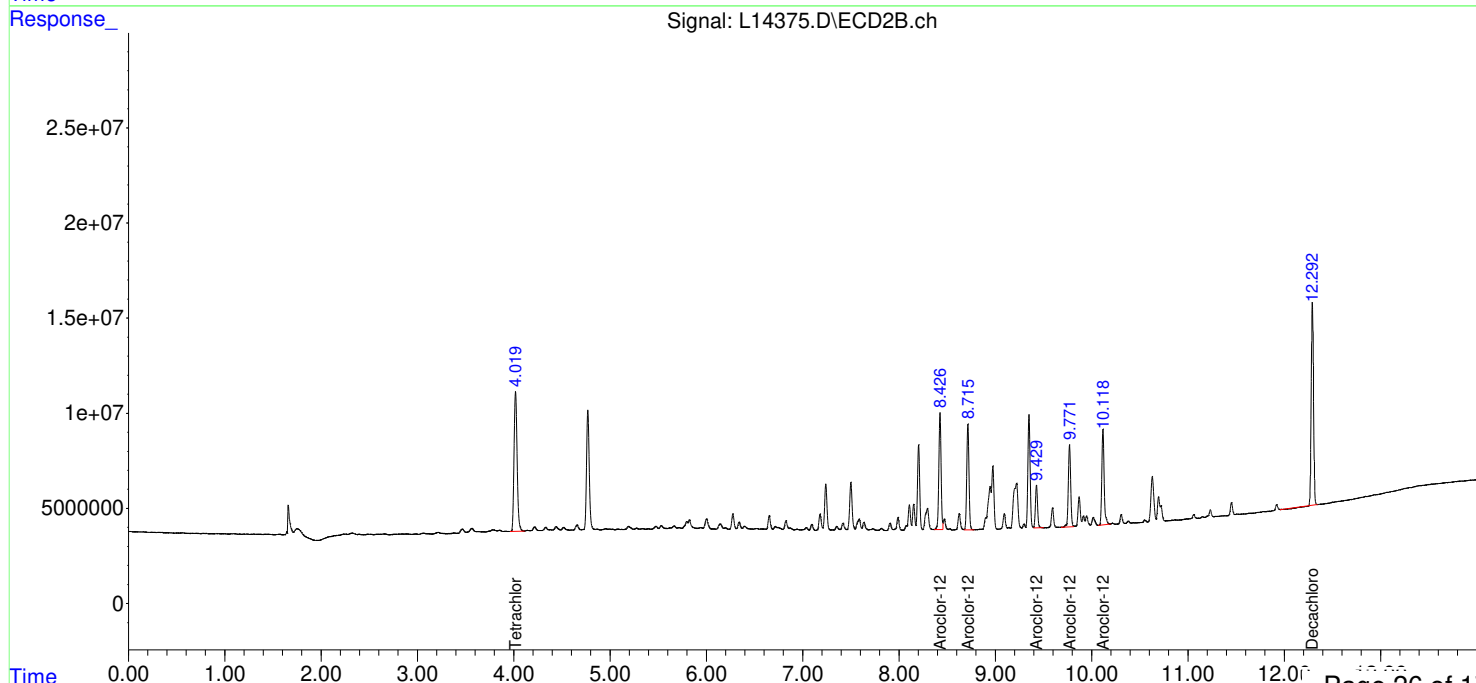
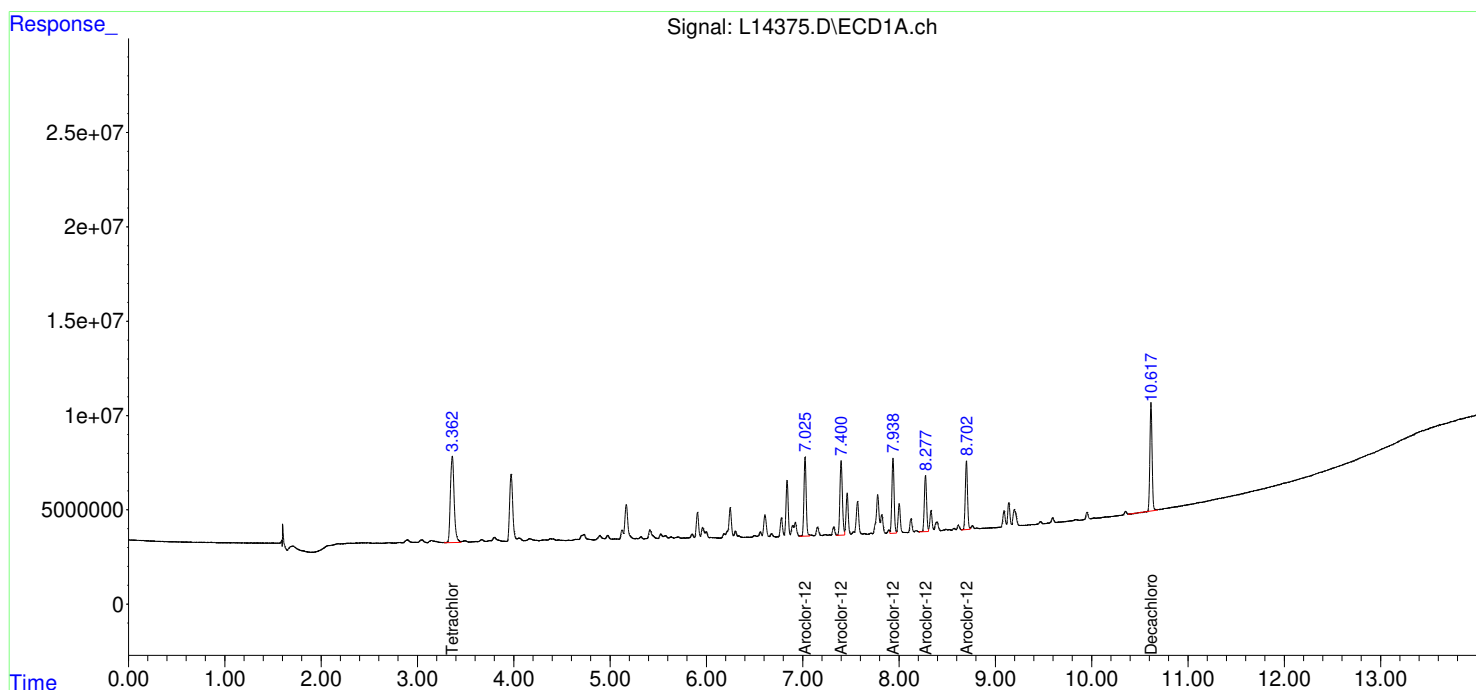
System Monitoring Compounds						
1) SA Tetrachlo...	3.362	4.019	124.4E6	164.0E6	9.797	9.890
Spiked Amount	10.000	Range 60 - 120	Recovery =	97.97%	98.90%	
2) SA Decachlor...	10.618	12.293	90987516	172.3E6	10.879	11.403
Spiked Amount	10.000	Range 60 - 120	Recovery =	108.79%	114.03%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.427	67656010	100.1E6	151.077	158.695
34) L7 Aroclor-1...	7.400	8.716	70229825	89256705	116.433	123.169
35) L7 Aroclor-1...	7.939	9.428	63720460	35182493	93.257	92.383
36) L7 Aroclor-1...	8.276	9.772	48736235	72822050	81.157	84.036
37) L7 Aroclor-1...	8.701	10.119	57838176	83455237	49.490	50.053
Sum Aroclor-1262			308.2E6	380.8E6	491.413	508.335
Average Aroclor-1262					98.283	101.667
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14375.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:09 pm
 Operator : AxJ/KC
 Sample : AC15354-04
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:47:20 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-06-635-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-05	File ID: L14376.D
Sampled:	04/25/24 19:06	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 19:25
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00492	0.00679	
11104-28-2	Aroclor-1221		0.00492	0.00679	
11141-16-5	Aroclor-1232		0.00492	0.00679	
53469-21-9	Aroclor-1242		0.00492	0.00679	
12672-29-6	Aroclor-1248		0.00130	0.00679	
11097-69-1	Aroclor-1254		0.00130	0.00679	
11096-82-5	Aroclor-1260		0.00130	0.00679	
37324-23-5	Aroclor-1262	0.132	0.00130	0.00679	
11100-14-4	Aroclor-1268		0.00130	0.00679	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14376.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:25 pm
 Operator : AxJ/KC
 Sample : AC15354-05
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:48:05 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

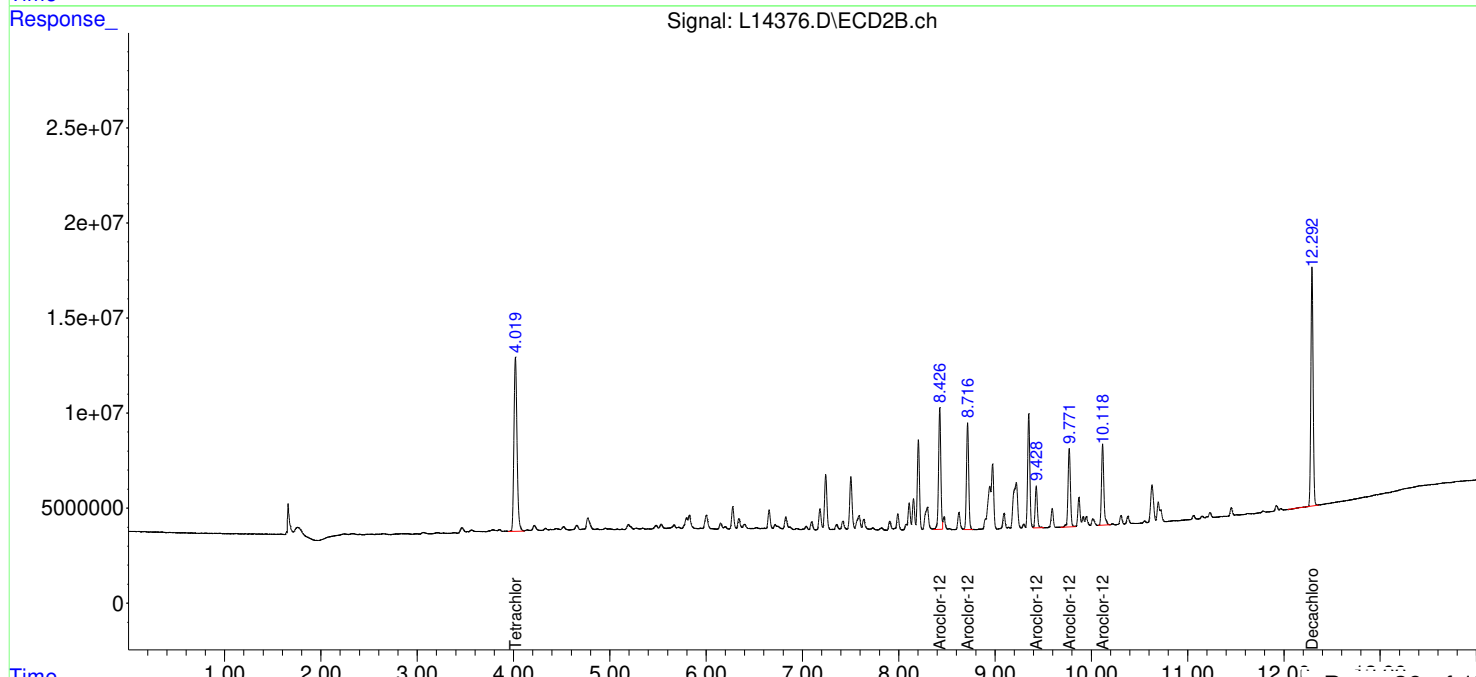
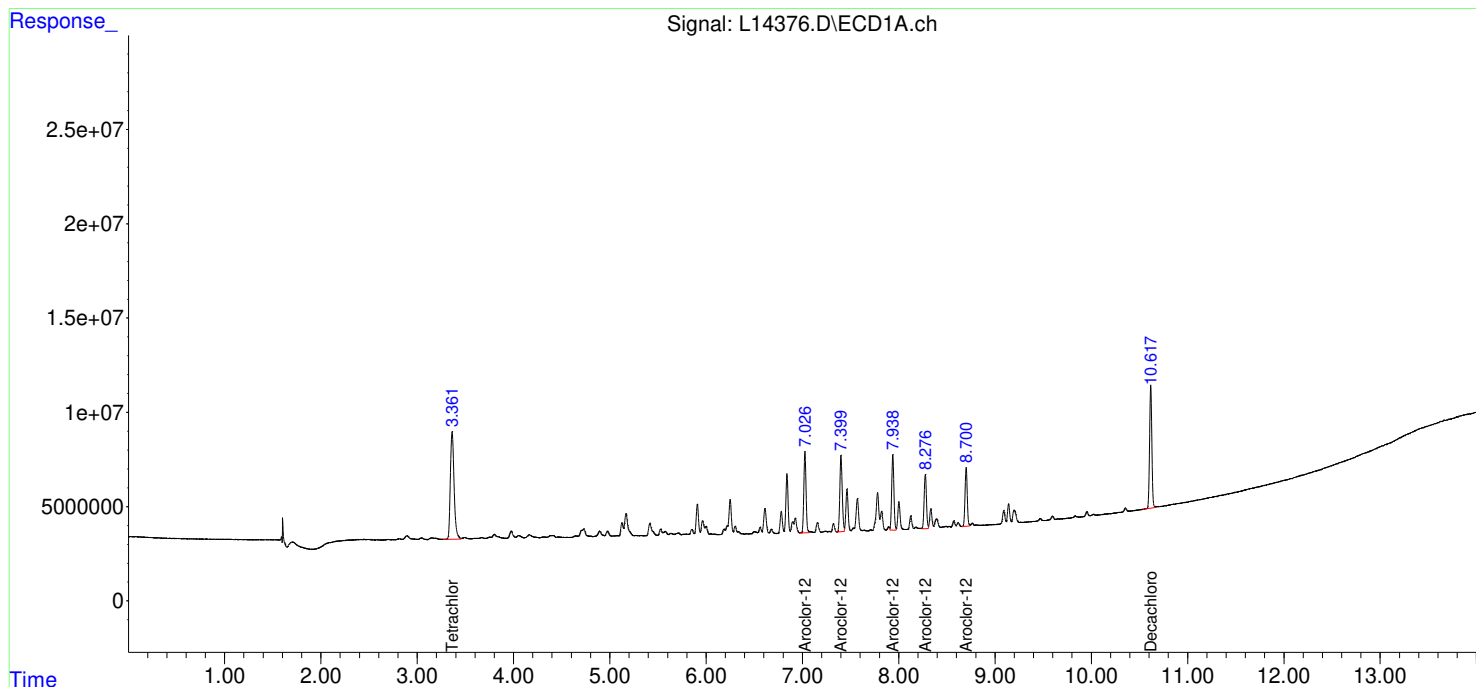
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.019	152.5E6	203.9E6	12.011	12.295
Spiked Amount	10.000	Range 60 - 120	Recovery =	120.11%#	122.95%#	
2) SA Decachlor...	10.618	12.293	105.6E6	202.0E6	12.625	13.364
Spiked Amount	10.000	Range 60 - 120	Recovery =	126.25%#	133.64%#	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.026	8.426	69291226	104.0E6	154.728	164.844
34) L7 Aroclor-1...	7.400	8.716	70216431	89790704	116.410	123.905
35) L7 Aroclor-1...	7.939	9.429	63245624	34674811	92.562	91.050
36) L7 Aroclor-1...	8.277	9.772	47478862	70908730	79.063	81.828
37) L7 Aroclor-1...	8.701	10.118	49762682	71429986	42.580	42.841
Sum Aroclor-1262			300.0E6	370.8E6	485.344	504.468
Average Aroclor-1262					97.069	100.894
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14376.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:25 pm
 Operator : AxJ/KC
 Sample : AC15354-05
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:48:05 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-04-714B-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-06	File ID: L14378.D
Sampled:	04/25/24 18:52	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 19:57
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00488	0.00674	
11104-28-2	Aroclor-1221		0.00488	0.00674	
11141-16-5	Aroclor-1232		0.00488	0.00674	
53469-21-9	Aroclor-1242		0.00488	0.00674	
12672-29-6	Aroclor-1248		0.00129	0.00674	
11097-69-1	Aroclor-1254		0.00129	0.00674	
11096-82-5	Aroclor-1260		0.00129	0.00674	
37324-23-5	Aroclor-1262	0.153	0.00129	0.00674	
11100-14-4	Aroclor-1268		0.00129	0.00674	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14378.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:57 pm
 Operator : AxJ/KC
 Sample : AC15354-06
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:48:53 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

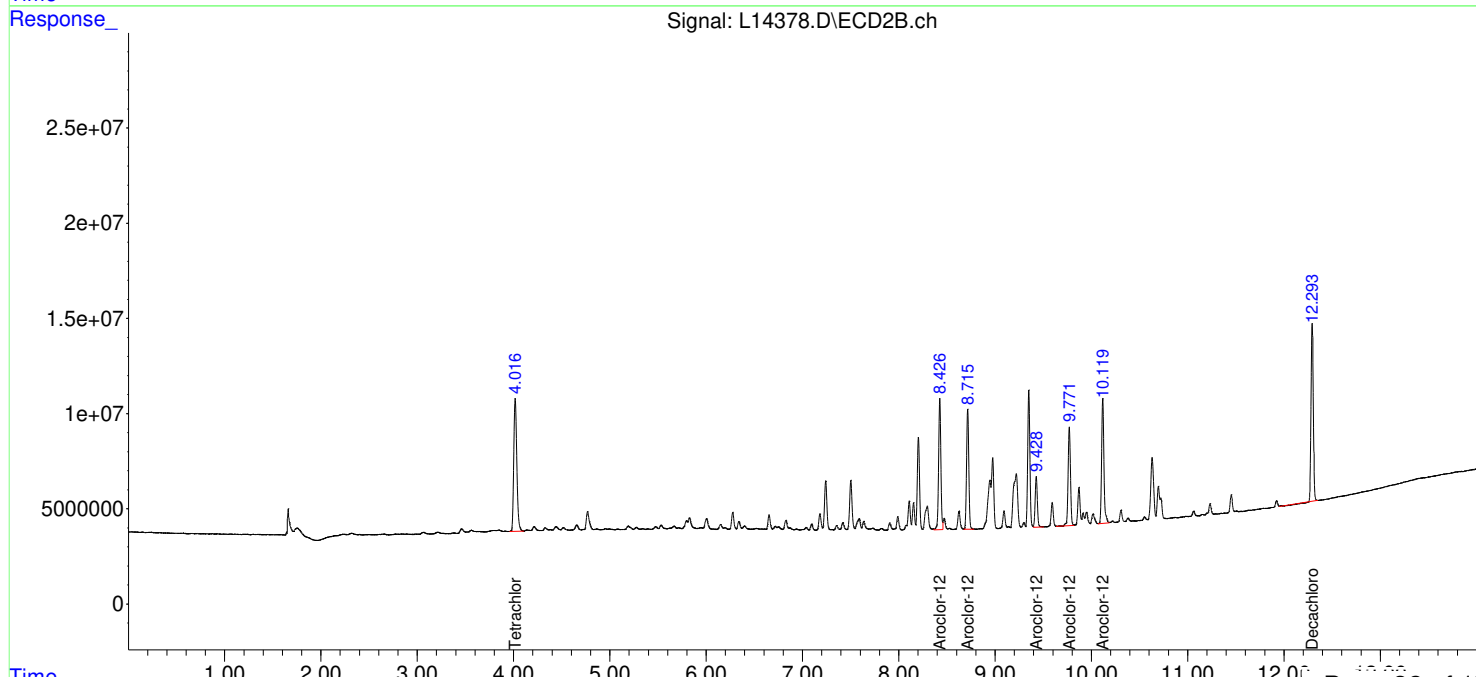
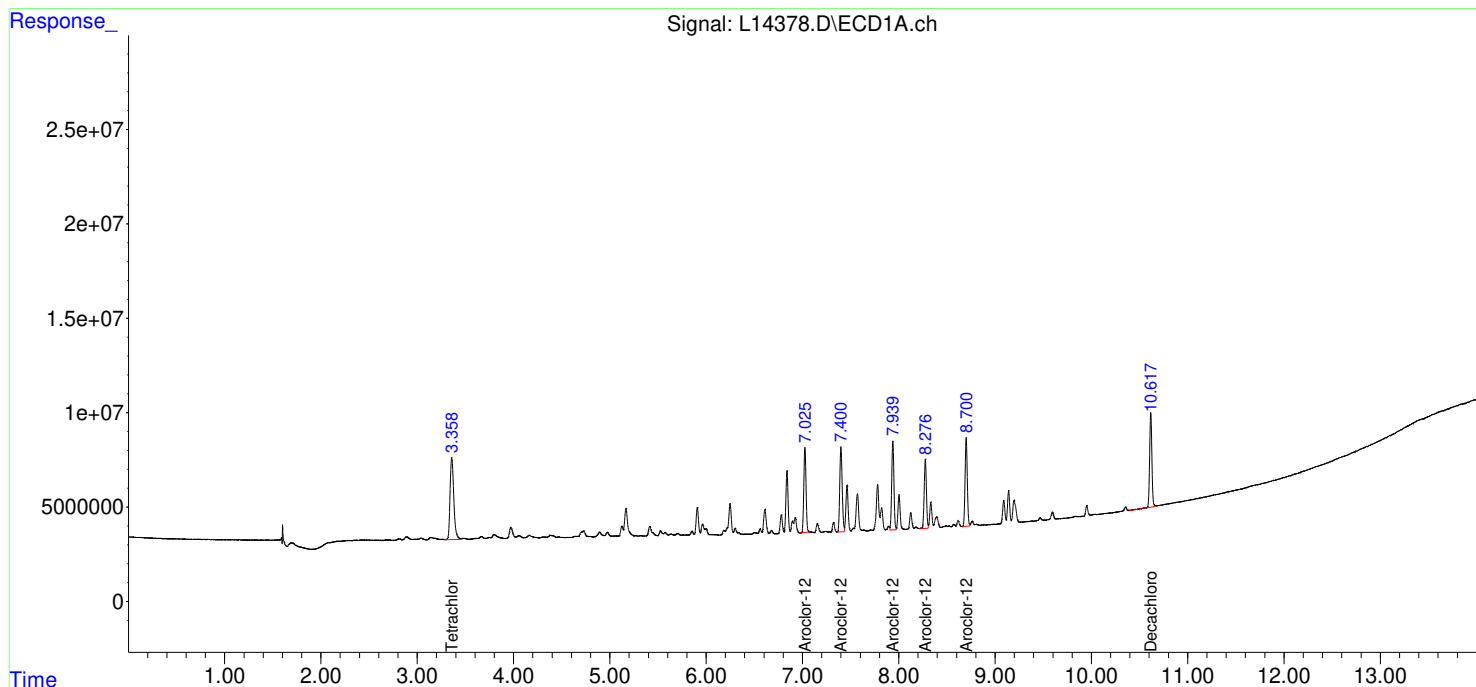
System Monitoring Compounds						
1) SA Tetrachlo...	3.358	4.016	117.0E6	153.7E6	9.215	9.268
Spiked Amount	10.000	Range 60 - 120	Recovery =	92.15%	92.68%	
2) SA Decachlor...	10.618	12.294	80997898	151.2E6	9.685	10.006
Spiked Amount	10.000	Range 60 - 120	Recovery =	96.85%	100.06%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	72929170	112.1E6	162.852	177.725
34) L7 Aroclor-1...	7.400	8.716	79246279	101.4E6	131.381	139.932
35) L7 Aroclor-1...	7.939	9.428	75253472	42069677	110.136	110.468
36) L7 Aroclor-1...	8.276	9.771	59173768	87959080	98.538	101.503
37) L7 Aroclor-1...	8.701	10.119	75495832	109.9E6	64.598	65.888
Sum Aroclor-1262			362.1E6	453.4E6	567.505	595.516
Average Aroclor-1262					113.501	119.103
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14378.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:57 pm
 Operator : AxJ/KC
 Sample : AC15354-06
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:48:53 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

DUP-03-742-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-07	File ID: L14379.D
Sampled:	04/25/24 18:57	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 20:13
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00490	0.00677	
11104-28-2	Aroclor-1221		0.00490	0.00677	
11141-16-5	Aroclor-1232		0.00490	0.00677	
53469-21-9	Aroclor-1242		0.00490	0.00677	
12672-29-6	Aroclor-1248		0.00129	0.00677	
11097-69-1	Aroclor-1254		0.00129	0.00677	
11096-82-5	Aroclor-1260		0.00129	0.00677	
37324-23-5	Aroclor-1262	0.0798	0.00129	0.00677	
11100-14-4	Aroclor-1268		0.00129	0.00677	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14379.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 8:13 pm
 Operator : AxJ/KC
 Sample : AC15354-07
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:49:35 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

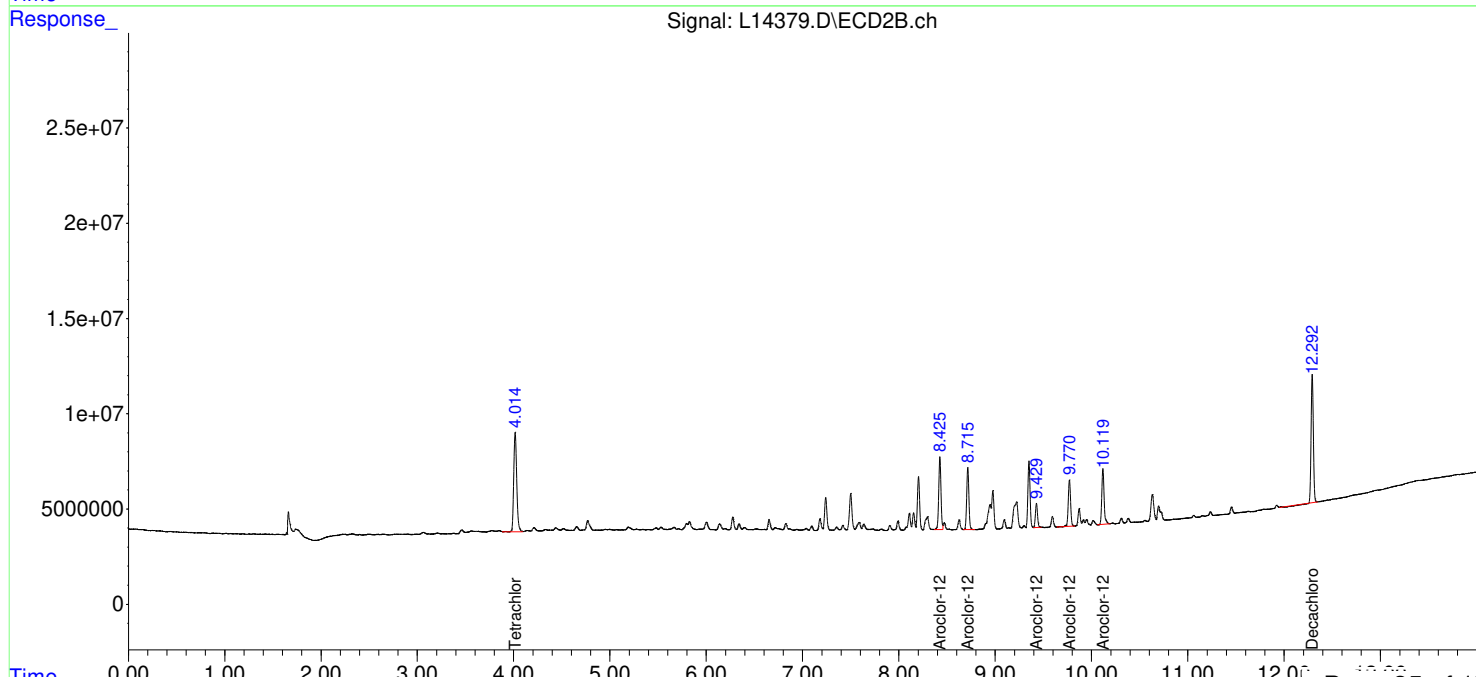
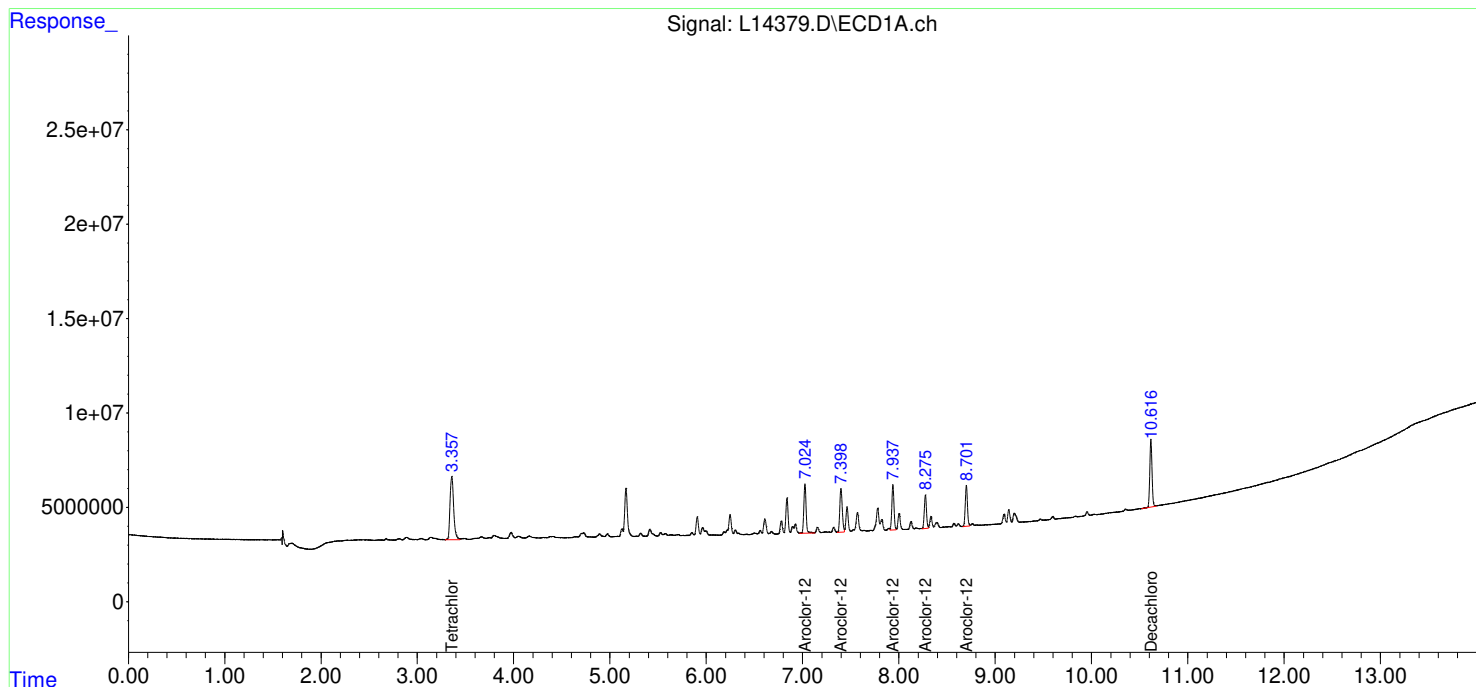
System Monitoring Compounds						
1) SA Tetrachlo...	3.357	4.015	88092033	112.6E6	6.939	6.793
Spiked Amount	10.000	Range	60 - 120	Recovery	= 69.39%	67.93%
2) SA Decachlor...	10.617	12.292	58417708	106.2E6	6.985	7.028
Spiked Amount	10.000	Range	60 - 120	Recovery	= 69.85%	70.28%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.024	8.426	42763370	61092031	95.491	96.877
34) L7 Aroclor-1...	7.399	8.716	41444136	52239439	68.709	72.087
35) L7 Aroclor-1...	7.938	9.429	37467277	19315351	54.835	50.719
36) L7 Aroclor-1...	8.276	9.771	28053491	41768234	46.716	48.200
37) L7 Aroclor-1...	8.701	10.119	33998358	48558075	29.091	29.123
Sum Aroclor-1262			183.7E6	223.0E6	294.842	297.006
Average Aroclor-1262					58.968	59.401
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14379.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 8:13 pm
 Operator : AxJ/KC
 Sample : AC15354-07
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:49:35 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-03-742-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-08	File ID: L14380.D
Sampled:	04/25/24 18:57	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 20:29
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00482	0.00665	
11104-28-2	Aroclor-1221		0.00482	0.00665	
11141-16-5	Aroclor-1232		0.00482	0.00665	
53469-21-9	Aroclor-1242		0.00482	0.00665	
12672-29-6	Aroclor-1248		0.00127	0.00665	
11097-69-1	Aroclor-1254		0.00127	0.00665	
11096-82-5	Aroclor-1260		0.00127	0.00665	
37324-23-5	Aroclor-1262	0.0879	0.00127	0.00665	
11100-14-4	Aroclor-1268		0.00127	0.00665	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14380.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 8:29 pm
 Operator : AxJ/KC
 Sample : AC15354-08
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:50:29 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

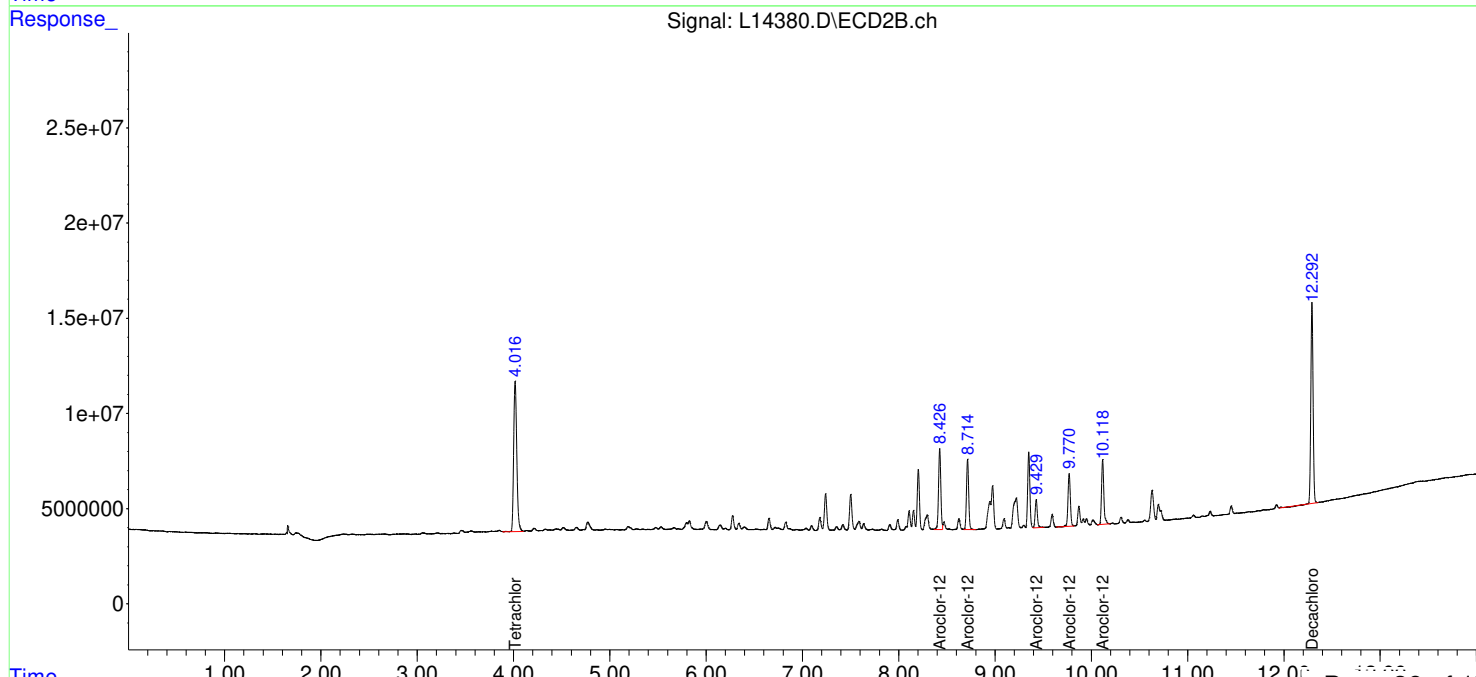
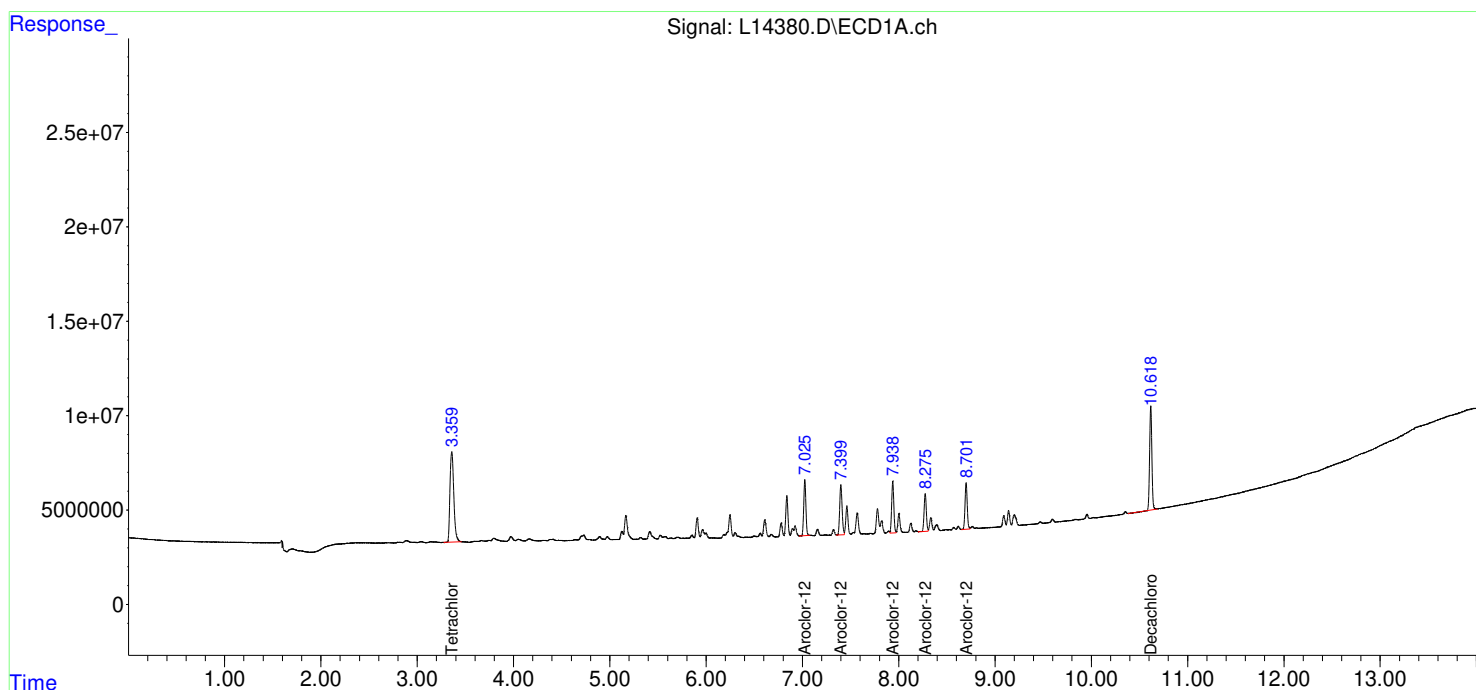
System Monitoring Compounds						
1) SA Tetrachlo...	3.358	4.016	131.7E6	177.6E6	10.377	10.709
Spiked Amount	10.000	Range 60 - 120	Recovery =	103.77%	107.09%	
2) SA Decachlor...	10.618	12.293	87876487	170.0E6	10.507	11.246
Spiked Amount	10.000	Range 60 - 120	Recovery =	105.07%	112.46%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	46123552	70037042	102.994	111.062
34) L7 Aroclor-1...	7.399	8.715	46775106	59100726	77.547	81.555
35) L7 Aroclor-1...	7.938	9.429	42547168	23300690	62.269	61.184
36) L7 Aroclor-1...	8.276	9.771	32401827	48276157	53.957	55.710
37) L7 Aroclor-1...	8.700	10.118	39137923	56130626	33.489	33.665
Sum Aroclor-1262			207.0E6	256.8E6	330.256	343.176
Average Aroclor-1262					66.051	68.635
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14380.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 8:29 pm
 Operator : AxJ/KC
 Sample : AC15354-08
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:50:29 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-14-ROOF-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15354-09	File ID: L14381.D
Sampled:	04/25/24 18:57	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 20:46
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00478	0.00661	
11104-28-2	Aroclor-1221		0.00478	0.00661	
11141-16-5	Aroclor-1232		0.00478	0.00661	
53469-21-9	Aroclor-1242		0.00478	0.00661	
12672-29-6	Aroclor-1248		0.00126	0.00661	
11097-69-1	Aroclor-1254		0.00126	0.00661	
11096-82-5	Aroclor-1260		0.00126	0.00661	
37324-23-5	Aroclor-1262		0.00126	0.00661	
11100-14-4	Aroclor-1268		0.00126	0.00661	

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14381.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 8:46 pm
 Operator : AxJ/KC
 Sample : AC15354-09
 Misc :
 ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:11:06 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

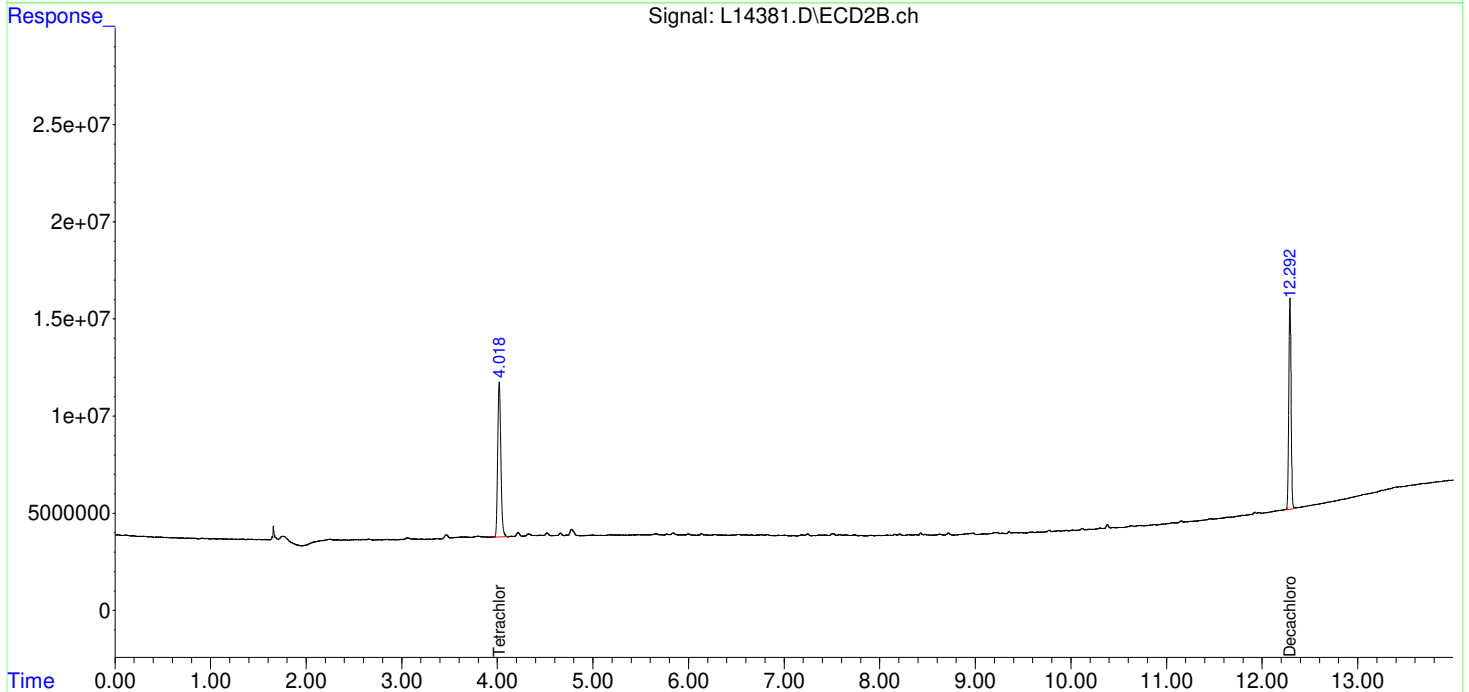
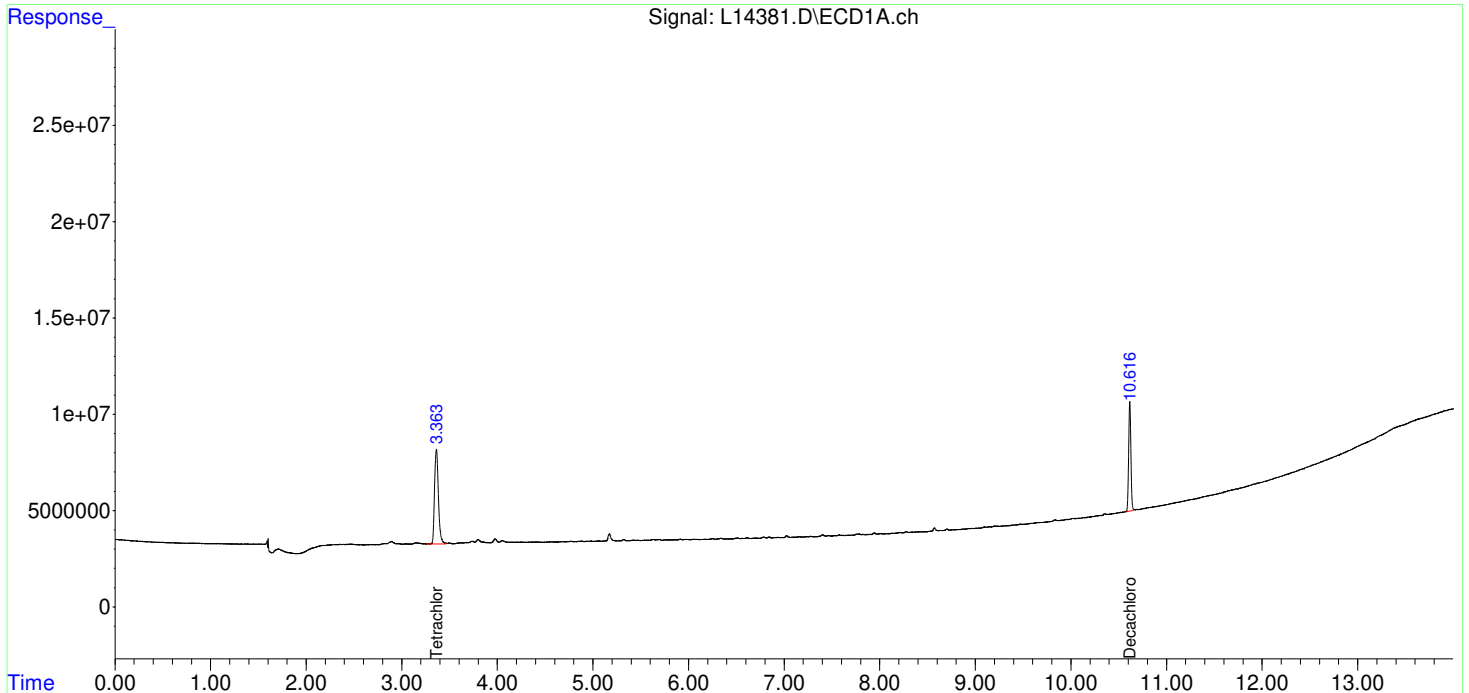
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.362	4.019	138.0E6	182.8E6	10.874	11.022
Spiked Amount	10.000 Range	60 - 120	Recovery	=	108.74%	110.22%
2) SA Decachlor...	10.616f	12.292f	91264029	177.0E6	10.912m	11.714m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	109.12%	117.14%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
Data File : L14381.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 2 May 2024 8:46 pm
Operator : AxJ/KC
Sample : AC15354-09
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 06 10:11:06 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Apr 24 13:46:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



QC DATA

2 - FORM II
SYSTEM MONITORING COMPOUND SUMMARY
EPA TO-10A

Laboratory:	EMSL-CIN-01	SDG:	AC15354
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Instrument:	GCECD-L

(60% - 120%)

AC15354-01	98
AC15354-02	77
AC15354-03	93
AC15354-04	99
AC15354-05	134*
AC15354-06	97
AC15354-07	70
AC15354-08	113
AC15354-09	117
BCD2253-BLK1	120
BCD2253-BLK2	118
BCD2253-BS1	126*
BCD2253-BSD1	95

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Matrix: Tubes	Preparation: EPA TO-10A
Batch: BCD2253	Laboratory ID: BCD2253-BS1
Column: 1	Initial/Final: 1 L / 10 mL

ANALYTE	SPIKE ADDED ($\mu\text{g}/\text{m}^3$)	LCS CONCENTRATION ($\mu\text{g}/\text{m}^3$)	LCS % REC.	QC LIMITS REC.
Aroclor-1016	1000	941	94	70 - 130
Aroclor-1260	1000	955	95	70 - 130

ANALYTE	SPIKE ADDED ($\mu\text{g}/\text{m}^3$)	LCSD CONCENTRATION ($\mu\text{g}/\text{m}^3$)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	1000	856	86	10	25	70 - 130
Aroclor-1260	1000	872	87	9	25	70 - 130

CALIBRATION DATA

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1016	5	495704.6	10	481634.3	25	452246.8	50	468625.8	100	433606.3	250	384879.6
Aroclor-1016 [2C]	5	641160.4	10	626861.8	25	599450	50	595656.4	100	562532.6	250	510296.8
Aroclor-1221												
Aroclor-1221 [2C]												
Aroclor-1232												
Aroclor-1232 [2C]												
Aroclor-1242												
Aroclor-1242 [2C]												
Aroclor-1248												
Aroclor-1248 [2C]												
Aroclor-1254												
Aroclor-1254 [2C]												
Aroclor-1260	5	781026.2	10	765537.4	25	722357.2	50	728444.8	100	684500.9	250	615981.6
Aroclor-1260 [2C]	5	968226.2	10	967714.3	25	951264.8	50	916812.4	100	883149.8	250	803608.8
Aroclor-1262												
Aroclor-1262 [2C]												
Aroclor-1268												
Aroclor-1268 [2C]												
Aroclor-1016{1}	5	254552.2	10	270321.1	25	264005.1	50	301458.6	100	274980.9	250	251097.1
Aroclor-1016{1} [2C]	5	365920.2	10	358800.2	25	363677.5	50	366185.6	100	349709.8	250	316059.6
Aroclor-1016{2}	5	608935	10	584347.7	25	534036	50	555553	100	503969.6	250	442705.2
Aroclor-1016{2} [2C]	5	844491.4	10	843667.7	25	774303.6	50	778699.8	100	743826.3	250	666996.4
Aroclor-1016{3}	5	739685.2	10	705453.6	25	640627.2	50	658738	100	627663.1	250	556929.6
Aroclor-1016{3} [2C]	5	981463	10	933319.1	25	908458	50	883062.4	100	822345.9	250	764595.6
Aroclor-1016{4}	5	513694	10	469486.3	25	462860.8	50	467019.6	100	438457	250	386406.7
Aroclor-1016{4} [2C]	5	652270.6	10	619959.2	25	591106	50	589974	100	573820.6	250	516572.8
Aroclor-1016{5}	5	361656.2	10	378562.9	25	359704.6	50	360360.2	100	322960.9	250	287259
Aroclor-1016{5} [2C]	5	512371.6	10	534671.8	25	490161.2	50	484294.4	100	459988.8	250	424870.8
Aroclor-1221{1}												
Aroclor-1221{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1221{2}												
Aroclor-1221{2} [2C]												
Aroclor-1221{3}												
Aroclor-1221{3} [2C]												
Aroclor-1221{4}												
Aroclor-1221{4} [2C]												
Aroclor-1221{5}												
Aroclor-1221{5} [2C]												
Aroclor-1232{1}												
Aroclor-1232{1} [2C]												
Aroclor-1232{2}												
Aroclor-1232{2} [2C]												
Aroclor-1232{3}												
Aroclor-1232{3} [2C]												
Aroclor-1232{4}												
Aroclor-1232{4} [2C]												
Aroclor-1232{5}												
Aroclor-1232{5} [2C]												
Aroclor-1242{1}												
Aroclor-1242{1} [2C]												
Aroclor-1242{2}												
Aroclor-1242{2} [2C]												
Aroclor-1242{3}												
Aroclor-1242{3} [2C]												
Aroclor-1242{4}												
Aroclor-1242{4} [2C]												
Aroclor-1242{5}												
Aroclor-1242{5} [2C]												
Aroclor-1248{1}												
Aroclor-1248{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1248{2}												
Aroclor-1248{2} [2C]												
Aroclor-1248{3}												
Aroclor-1248{3} [2C]												
Aroclor-1248{4}												
Aroclor-1248{4} [2C]												
Aroclor-1248{5}												
Aroclor-1248{5} [2C]												
Aroclor-1254{1}												
Aroclor-1254{1} [2C]												
Aroclor-1254{2}												
Aroclor-1254{2} [2C]												
Aroclor-1254{3}												
Aroclor-1254{3} [2C]												
Aroclor-1254{4}												
Aroclor-1254{4} [2C]												
Aroclor-1254{5}												
Aroclor-1254{5} [2C]												
Aroclor-1260{1}	5	597196	10	615118.8	25	571516.4	50	570791.2	100	526233.1	250	466735.2
Aroclor-1260{1} [2C]	5	853152.4	10	861418.2	25	802550	50	796291.2	100	746297.4	250	667387.6
Aroclor-1260{2}	5	972630.4	10	880455.3	25	846115.2	50	841838.6	100	790578.1	250	700014
Aroclor-1260{2} [2C]	5	983957.8	10	978288.9	25	943634.8	50	924282	100	885643.1	250	797185.2
Aroclor-1260{3}	5	736063	10	738947.7	25	706010	50	704821.4	100	644869.6	250	590668.1
Aroclor-1260{3} [2C]	5	649772	10	707498.7	25	669852	50	672994.8	100	660185.9	250	595816
Aroclor-1260{4}	5	503132.4	10	501666.7	25	457006	50	485673.6	100	466189.8	250	416470.4
Aroclor-1260{4} [2C]	5	756918	10	744619.4	25	706958	50	698549.6	100	665158.2	250	599864.8
Aroclor-1260{5}	5	1096109	10	1091498	25	1031138	50	1039100	100	994634.5	250	906019.9
Aroclor-1260{5} [2C]	5	1597330	10	1546746	25	1633329	50	1491944	100	1458465	250	1357790
Aroclor-1262{1}												
Aroclor-1262{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1262{2}												
Aroclor-1262{2} [2C]												
Aroclor-1262{3}												
Aroclor-1262{3} [2C]												
Aroclor-1262{4}												
Aroclor-1262{4} [2C]												
Aroclor-1262{5}												
Aroclor-1262{5} [2C]												
Aroclor-1268{1}												
Aroclor-1268{1} [2C]												
Aroclor-1268{2}												
Aroclor-1268{2} [2C]												
Aroclor-1268{3}												
Aroclor-1268{3} [2C]												
Aroclor-1268{4}												
Aroclor-1268{4} [2C]												
Aroclor-1268{5}												
Aroclor-1268{5} [2C]												
Tetrachloro-m-xylene	0.5	1.373183E+07	1	1.370369E+07	2.5	1.295056E+07	5	1.270288E+07	10	1.200848E+07	25	1.1071E+07
Tetrachloro-m-xylene [2C]	0.5	1.759129E+07	1	1.734953E+07	2.5	1.642149E+07	5	1.681078E+07	10	1.606116E+07	25	1.526414E+07
Decachlorobiphenyl	0.5	8980100	1	8709110	2.5	8461256	5	8433468	10	8215975	25	7380793
Decachlorobiphenyl [2C]	0.5	1.6305E+07	1	1.638365E+07	2.5	1.532663E+07	5	1.518878E+07	10	1.453701E+07	25	1.294063E+07

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1016												
Aroclor-1016 [2C]												
Aroclor-1221	50	180090.8										
Aroclor-1221 [2C]	50	241326.4										
Aroclor-1232			50	229836.8								
Aroclor-1232 [2C]			50	301519.2								
Aroclor-1242					50	237983.2						
Aroclor-1242 [2C]					50	310751.4						
Aroclor-1248							50	353867.4				
Aroclor-1248 [2C]							50	471050.4				
Aroclor-1254	50	556874.6										
Aroclor-1254 [2C]	50	698202										
Aroclor-1260												
Aroclor-1260 [2C]												
Aroclor-1262									50	700699.1		
Aroclor-1262 [2C]									50	854000.4		
Aroclor-1268											50	1087378
Aroclor-1268 [2C]											50	1726582
Aroclor-1016{1}												
Aroclor-1016{1} [2C]												
Aroclor-1016{2}												
Aroclor-1016{2} [2C]												
Aroclor-1016{3}												
Aroclor-1016{3} [2C]												
Aroclor-1016{4}												
Aroclor-1016{4} [2C]												
Aroclor-1016{5}												
Aroclor-1016{5} [2C]												
Aroclor-1221{1}	50	142867.8										
Aroclor-1221{1} [2C]	50	152274.7										

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1221{2}	50	168075.4										
Aroclor-1221{2} [2C]	50	226172.8										
Aroclor-1221{3}	50	96479.2										
Aroclor-1221{3} [2C]	50	156360.2										
Aroclor-1221{4}	50	433043.2										
Aroclor-1221{4} [2C]	50	545992.8										
Aroclor-1221{5}	50	59988.36										
Aroclor-1221{5} [2C]	50	125831.5										
Aroclor-1232{1}			50	316758								
Aroclor-1232{1} [2C]			50	400962.6								
Aroclor-1232{2}			50	225561								
Aroclor-1232{2} [2C]			50	335247.4								
Aroclor-1232{3}			50	285282.8								
Aroclor-1232{3} [2C]			50	351087.6								
Aroclor-1232{4}			50	192028.9								
Aroclor-1232{4} [2C]			50	240175.6								
Aroclor-1232{5}			50	129553.8								
Aroclor-1232{5} [2C]			50	180123								
Aroclor-1242{1}					50	143820						
Aroclor-1242{1} [2C]					50	186095.7						
Aroclor-1242{2}					50	286096.4						
Aroclor-1242{2} [2C]					50	394589.4						
Aroclor-1242{3}					50	342929.6						
Aroclor-1242{3} [2C]					50	438497.8						
Aroclor-1242{4}					50	234113.8						
Aroclor-1242{4} [2C]					50	295635						
Aroclor-1242{5}					50	182956.2						
Aroclor-1242{5} [2C]					50	238939.2						
Aroclor-1248{1}							50	338190.8				
Aroclor-1248{1} [2C]							50	491841.8				

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1248{2}							50	444846				
Aroclor-1248{2} [2C]							50	603202.8				
Aroclor-1248{3}							50	251369.2				
Aroclor-1248{3} [2C]							50	325640.4				
Aroclor-1248{4}							50	492573.2				
Aroclor-1248{4} [2C]							50	632091.6				
Aroclor-1248{5}							50	242358				
Aroclor-1248{5} [2C]							50	302475.4				
Aroclor-1254{1}	50	430212										
Aroclor-1254{1} [2C]	50	682960.2										
Aroclor-1254{2}	50	627298.2										
Aroclor-1254{2} [2C]	50	794484.6										
Aroclor-1254{3}	50	442914.2										
Aroclor-1254{3} [2C]	50	552104										
Aroclor-1254{4}	50	764233.8										
Aroclor-1254{4} [2C]	50	1009289										
Aroclor-1254{5}	50	519715										
Aroclor-1254{5} [2C]	50	452172.2										
Aroclor-1260{1}												
Aroclor-1260{1} [2C]												
Aroclor-1260{2}												
Aroclor-1260{2} [2C]												
Aroclor-1260{3}												
Aroclor-1260{3} [2C]												
Aroclor-1260{4}												
Aroclor-1260{4} [2C]												
Aroclor-1260{5}												
Aroclor-1260{5} [2C]												
Aroclor-1262{1}									50	447826		
Aroclor-1262{1} [2C]									50	630612.6		

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1262{2}									50	603180.6		
Aroclor-1262{2} [2C]									50	724671.1		
Aroclor-1262{3}									50	683276.9		
Aroclor-1262{3} [2C]									50	380832.6		
Aroclor-1262{4}									50	600515.6		
Aroclor-1262{4} [2C]									50	866562		
Aroclor-1262{5}									50	1168696		
Aroclor-1262{5} [2C]									50	1667324		
Aroclor-1268{1}											50	1294797
Aroclor-1268{1} [2C]											50	1943574
Aroclor-1268{2}											50	1241666
Aroclor-1268{2} [2C]											50	1885616
Aroclor-1268{3}											50	1028872
Aroclor-1268{3} [2C]											50	1581801
Aroclor-1268{4}											50	442752
Aroclor-1268{4} [2C]											50	686694.4
Aroclor-1268{5}											50	1428800
Aroclor-1268{5} [2C]											50	2535224
Tetrachloro-m-xylene												
Tetrachloro-m-xylene [2C]												
Decachlorobiphenyl												
Decachlorobiphenyl [2C]												

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15354

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1016	452782.9	8.8			20	
Aroclor-1016 [2C]	589326.3	8.0			20	
Aroclor-1221		0.0			20	
Aroclor-1221 [2C]		0.0			20	
Aroclor-1232		0.0			20	
Aroclor-1232 [2C]		0.0			20	
Aroclor-1242		0.0			20	
Aroclor-1242 [2C]		0.0			20	
Aroclor-1248		0.0			20	
Aroclor-1248 [2C]		0.0			20	
Aroclor-1254		0.0			20	
Aroclor-1254 [2C]		0.0			20	
Aroclor-1260	716308	8.3			20	
Aroclor-1260 [2C]	915129.4	7.0			20	
Aroclor-1262		0.0			20	
Aroclor-1262 [2C]		0.0			20	
Aroclor-1268		0.0			20	
Aroclor-1268 [2C]		0.0			20	
Aroclor-1016{1}	269402.5	6.7			20	
Aroclor-1016{1} [2C]	353392.1	5.5			20	
Aroclor-1016{2}	538257.8	11.1			20	
Aroclor-1016{2} [2C]	775330.9	8.6			20	
Aroclor-1016{3}	654849.5	9.7			20	
Aroclor-1016{3} [2C]	882207.3	8.9			20	
Aroclor-1016{4}	456320.7	9.2			20	
Aroclor-1016{4} [2C]	590617.2	7.7			20	
Aroclor-1016{5}	345084	9.8			20	
Aroclor-1016{5} [2C]	484393.1	8.0			20	
Aroclor-1221{1}		0.0			20	
Aroclor-1221{1} [2C]		0.0			20	
Aroclor-1221{2}		0.0			20	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15354

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1221{2} [2C]		0.0			20	
Aroclor-1221{3}		0.0			20	
Aroclor-1221{3} [2C]		0.0			20	
Aroclor-1221{4}		0.0			20	
Aroclor-1221{4} [2C]		0.0			20	
Aroclor-1221{5}		0.0			20	
Aroclor-1221{5} [2C]		0.0			20	
Aroclor-1232{1}		0.0			20	
Aroclor-1232{1} [2C]		0.0			20	
Aroclor-1232{2}		0.0			20	
Aroclor-1232{2} [2C]		0.0			20	
Aroclor-1232{3}		0.0			20	
Aroclor-1232{3} [2C]		0.0			20	
Aroclor-1232{4}		0.0			20	
Aroclor-1232{4} [2C]		0.0			20	
Aroclor-1232{5}		0.0			20	
Aroclor-1232{5} [2C]		0.0			20	
Aroclor-1242{1}		0.0			20	
Aroclor-1242{1} [2C]		0.0			20	
Aroclor-1242{2}		0.0			20	
Aroclor-1242{2} [2C]		0.0			20	
Aroclor-1242{3}		0.0			20	
Aroclor-1242{3} [2C]		0.0			20	
Aroclor-1242{4}		0.0			20	
Aroclor-1242{4} [2C]		0.0			20	
Aroclor-1242{5}		0.0			20	
Aroclor-1242{5} [2C]		0.0			20	
Aroclor-1248{1}		0.0			20	
Aroclor-1248{1} [2C]		0.0			20	
Aroclor-1248{2}		0.0			20	
Aroclor-1248{2} [2C]		0.0			20	

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15354

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1248{3}		0.0			20	
Aroclor-1248{3} [2C]		0.0			20	
Aroclor-1248{4}		0.0			20	
Aroclor-1248{4} [2C]		0.0			20	
Aroclor-1248{5}		0.0			20	
Aroclor-1248{5} [2C]		0.0			20	
Aroclor-1254{1}		0.0			20	
Aroclor-1254{1} [2C]		0.0			20	
Aroclor-1254{2}		0.0			20	
Aroclor-1254{2} [2C]		0.0			20	
Aroclor-1254{3}		0.0			20	
Aroclor-1254{3} [2C]		0.0			20	
Aroclor-1254{4}		0.0			20	
Aroclor-1254{4} [2C]		0.0			20	
Aroclor-1254{5}		0.0			20	
Aroclor-1254{5} [2C]		0.0			20	
Aroclor-1260{1}	557931.8	9.6			20	
Aroclor-1260{1} [2C]	787849.5	9.2			20	
Aroclor-1260{2}	838605.3	10.8			20	
Aroclor-1260{2} [2C]	918832	7.6			20	
Aroclor-1260{3}	686896.6	8.4			20	
Aroclor-1260{3} [2C]	659353.2	5.6			20	
Aroclor-1260{4}	471689.8	7.0			20	
Aroclor-1260{4} [2C]	695344.7	8.2			20	
Aroclor-1260{5}	1026417	6.9			20	
Aroclor-1260{5} [2C]	1514267	6.6			20	
Aroclor-1262{1}		0.0			20	
Aroclor-1262{1} [2C]		0.0			20	
Aroclor-1262{2}		0.0			20	
Aroclor-1262{2} [2C]		0.0			20	
Aroclor-1262{3}		0.0			20	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15354

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1262{3} [2C]		0.0			20	
Aroclor-1262{4}		0.0			20	
Aroclor-1262{4} [2C]		0.0			20	
Aroclor-1262{5}		0.0			20	
Aroclor-1262{5} [2C]		0.0			20	
Aroclor-1268{1}		0.0			20	
Aroclor-1268{1} [2C]		0.0			20	
Aroclor-1268{2}		0.0			20	
Aroclor-1268{2} [2C]		0.0			20	
Aroclor-1268{3}		0.0			20	
Aroclor-1268{3} [2C]		0.0			20	
Aroclor-1268{4}		0.0			20	
Aroclor-1268{4} [2C]		0.0			20	
Aroclor-1268{5}		0.0			20	
Aroclor-1268{5} [2C]		0.0			20	
Tetrachloro-m-xylene	1.269474E+07	8.1			20	
Tetrachloro-m-xylene [2C]	1.658307E+07	5.2			20	
Decachlorobiphenyl	8363450	6.6			20	
Decachlorobiphenyl [2C]	1.511362E+07	8.4			20	

Method Path : T:\METHODS\ECD-L\
 Method File : PCB240116L.M
 Title : 8082a PCB
 Last Update : Tue May 14 14:39:44 2024
 Response Via : Initial Calibration

Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L13622.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
1) SA	Tetrachloro-m...		1.373	1.370	1.107	1.201	1.270	1.295	E7	8.08
2) SA	Decachlorobip...		8.980	8.709	7.381	8.216	8.433	8.461	E6	6.55
3) L1	Aroclor-1016{1}		2.546	2.703	2.511	2.750	3.015	2.640	E5	6.73
4) L1	Aroclor-1016{2}		6.089	5.843	4.427	5.040	5.556	5.340	E5	11.07
5) L1	Aroclor-1016{3}		7.397	7.055	5.569	6.277	6.587	6.406	E5	9.73
6) L1	Aroclor-1016{4}		5.137	4.695	3.864	4.385	4.670	4.629	E5	9.21
7) L1	Aroclor-1016{5}		3.617	3.786	2.873	3.230	3.604	3.597	E5	9.76
8) L2	Aroclor-1221{1}						1.429		E5	0.00
9) L2	Aroclor-1221{2}					1.681		1.681	E5	0.00
10) L2	Aroclor-1221{3}					9.648		9.648	E4	0.00
11) L2	Aroclor-1221{4}					4.330		4.330	E5	0.00
12) L2	Aroclor-1221{5}					5.999		5.999	E4	0.00
13) L3	Aroclor-1232{1}					3.168		3.168	E5	0.00
14) L3	Aroclor-1232{2}					2.256		2.256	E5	0.00
15) L3	Aroclor-1232{3}					2.853		2.853	E5	0.00
16) L3	Aroclor-1232{4}					1.920		1.920	E5	0.00
17) L3	Aroclor-1232{5}					1.296		1.296	E5	0.00
18) L4	Aroclor-1242{1}					1.438		1.438	E5	0.00
19) L4	Aroclor-1242{2}					2.861		2.861	E5	0.00
20) L4	Aroclor-1242{3}					3.429		3.429	E5	0.00
21) L4	Aroclor-1242{4}					2.341		2.341	E5	0.00
22) L4	Aroclor-1242{5}					1.830		1.830	E5	0.00
23) L5	Aroclor-1248{1}					3.382		3.382	E5	0.00
24) L5	Aroclor-1248{2}					4.448		4.448	E5	0.00
25) L5	Aroclor-1248{3}					2.514		2.514	E5	0.00
26) L5	Aroclor-1248{4}					4.926		4.926	E5	0.00
27) L5	Aroclor-1248{5}					2.424		2.424	E5	0.00
28) L6	Aroclor-1254{1}					4.302		4.302	E5	0.00
29) L6	Aroclor-1254{2}					6.273		6.273	E5	0.00
30) L6	Aroclor-1254{3}					4.429		4.429	E5	0.00
31) L6	Aroclor-1254{4}					7.642		7.642	E5	0.00
32) L6	Aroclor-1254{5}					5.197		5.197	E5	0.00
33) L7	Aroclor-1262{1}					4.478		4.478	E5	0.00
34) L7	Aroclor-1262{2}					6.032		6.032	E5	0.00
35) L7	Aroclor-1262{3}					6.833		6.833	E5	0.00
36) L7	Aroclor-1262{4}					6.005		6.005	E5	0.00
37) L7	Aroclor-1262{5}					1.169		1.169	E6	0.00
38) L8	Aroclor-1268{1}					1.295		1.295	E6	0.00
39) L8	Aroclor-1268{2}					1.242		1.242	E6	0.00
40) L8	Aroclor-1268{3}					1.029		1.029	E6	0.00
41) L8	Aroclor-1268{4}					4.428		4.428	E5	0.00
42) L8	Aroclor-1268{5}					1.429		1.429	E6	0.00
43) L9	Aroclor-1260{1}		5.972	6.151	4.667	5.262	5.708	5.715	E5	9.65
44) L9	Aroclor-1260{2}		9.726	8.805	7.000	7.906	8.418	8.461	E5	10.84
45) L9	Aroclor-1260{3}		7.361	7.389	5.907	6.449	7.048	7.060	E5	8.45
46) L9	Aroclor-1260{4}		5.031	5.017	4.165	4.662	4.857	4.570	E5	6.95
47) L9	Aroclor-1260{5}		1.096	1.091	0.906	0.995	1.039	1.031	E6	6.86

Signal #2 Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L14014.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
1) SA	Tetrachloro-m...		1.759	1.735	1.526	1.606	1.681	1.642	E7	5.18
2) SA	Decachlorobip...		1.630	1.638	1.294	1.454	1.519	1.533	E7	8.44
3) L1	Aroclor-1016{1}		3.659	3.588	3.161	3.497	3.662	3.637	E5	5.46
4) L1	Aroclor-1016{2}		8.445	8.437	6.670	7.438	7.787	7.743	E5	8.59
5) L1	Aroclor-1016{3}		9.815	9.333	7.646	8.223	8.831	9.085	E5	8.86
6) L1	Aroclor-1016{4}		6.523	6.200	5.166	5.738	5.900	5.911	E5	7.73
7) L1	Aroclor-1016{5}		5.124	5.347	4.249	4.600	4.843	4.902	E5	7.99
8) L2	Aroclor-1221{1}						1.523		E5	0.00

Method Path : T:\METHODS\ECD-L\
 Method File : PCB240116L.M
 Title : 8082a PCB
 Last Update : Tue May 14 14:39:44 2024
 Response Via : Initial Calibration

Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L13622.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
9)	L2	Aroclor-1221{2}				2.262		2.262 E5	0.00	
10)	L2	Aroclor-1221{3}				1.564		1.564 E5	0.00	
11)	L2	Aroclor-1221{4}				5.460		5.460 E5	0.00	
12)	L2	Aroclor-1221{5}				1.258		1.258 E5	0.00	
13)	L3	Aroclor-1232{1}				4.010		4.010 E5	0.00	
14)	L3	Aroclor-1232{2}				3.352		3.352 E5	0.00	
15)	L3	Aroclor-1232{3}				3.511		3.511 E5	0.00	
16)	L3	Aroclor-1232{4}				2.402		2.402 E5	0.00	
17)	L3	Aroclor-1232{5}				1.801		1.801 E5	0.00	
18)	L4	Aroclor-1242{1}				1.861		1.861 E5	0.00	
19)	L4	Aroclor-1242{2}				3.946		3.946 E5	0.00	
20)	L4	Aroclor-1242{3}				4.385		4.385 E5	0.00	
21)	L4	Aroclor-1242{4}				2.956		2.956 E5	0.00	
22)	L4	Aroclor-1242{5}				2.389		2.389 E5	0.00	
23)	L5	Aroclor-1248{1}				4.918		4.918 E5	0.00	
24)	L5	Aroclor-1248{2}				6.032		6.032 E5	0.00	
25)	L5	Aroclor-1248{3}				3.256		3.256 E5	0.00	
26)	L5	Aroclor-1248{4}				6.321		6.321 E5	0.00	
27)	L5	Aroclor-1248{5}				3.025		3.025 E5	0.00	
28)	L6	Aroclor-1254{1}				6.830		6.830 E5	0.00	
29)	L6	Aroclor-1254{2}				7.945		7.945 E5	0.00	
30)	L6	Aroclor-1254{3}				5.521		5.521 E5	0.00	
31)	L6	Aroclor-1254{4}				1.009		1.009 E6	0.00	
32)	L6	Aroclor-1254{5}				4.522		4.522 E5	0.00	
33)	L7	Aroclor-1262{1}				6.306		6.306 E5	0.00	
34)	L7	Aroclor-1262{2}				7.247		7.247 E5	0.00	
35)	L7	Aroclor-1262{3}				3.808		3.808 E5	0.00	
36)	L7	Aroclor-1262{4}				8.666		8.666 E5	0.00	
37)	L7	Aroclor-1262{5}				1.667		1.667 E6	0.00	
38)	L8	Aroclor-1268{1}				1.944		1.944 E6	0.00	
39)	L8	Aroclor-1268{2}				1.886		1.886 E6	0.00	
40)	L8	Aroclor-1268{3}				1.582		1.582 E6	0.00	
41)	L8	Aroclor-1268{4}				6.867		6.867 E5	0.00	
42)	L8	Aroclor-1268{5}				2.535		2.535 E6	0.00	
43)	L9	Aroclor-1260{1}	8.532	8.614	6.674	7.463	7.963	8.025	7.878 E5	9.19
44)	L9	Aroclor-1260{2}	9.840	9.783	7.972	8.856	9.243	9.436	9.188 E5	7.59
45)	L9	Aroclor-1260{3}	6.498	7.075	5.958	6.602	6.730	6.699	6.594 E5	5.57
46)	L9	Aroclor-1260{4}	7.569	7.446	5.999	6.652	6.985	7.070	6.953 E5	8.23
47)	L9	Aroclor-1260{5}	1.597	1.547	1.358	1.458	1.492	1.633	1.514 E6	6.62

(#) = Out of Range ### Number of calibration levels exceeded format ###

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13618.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:11 pm
 Operator : TL1
 Sample : SEQ-CAL1
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:32:03 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

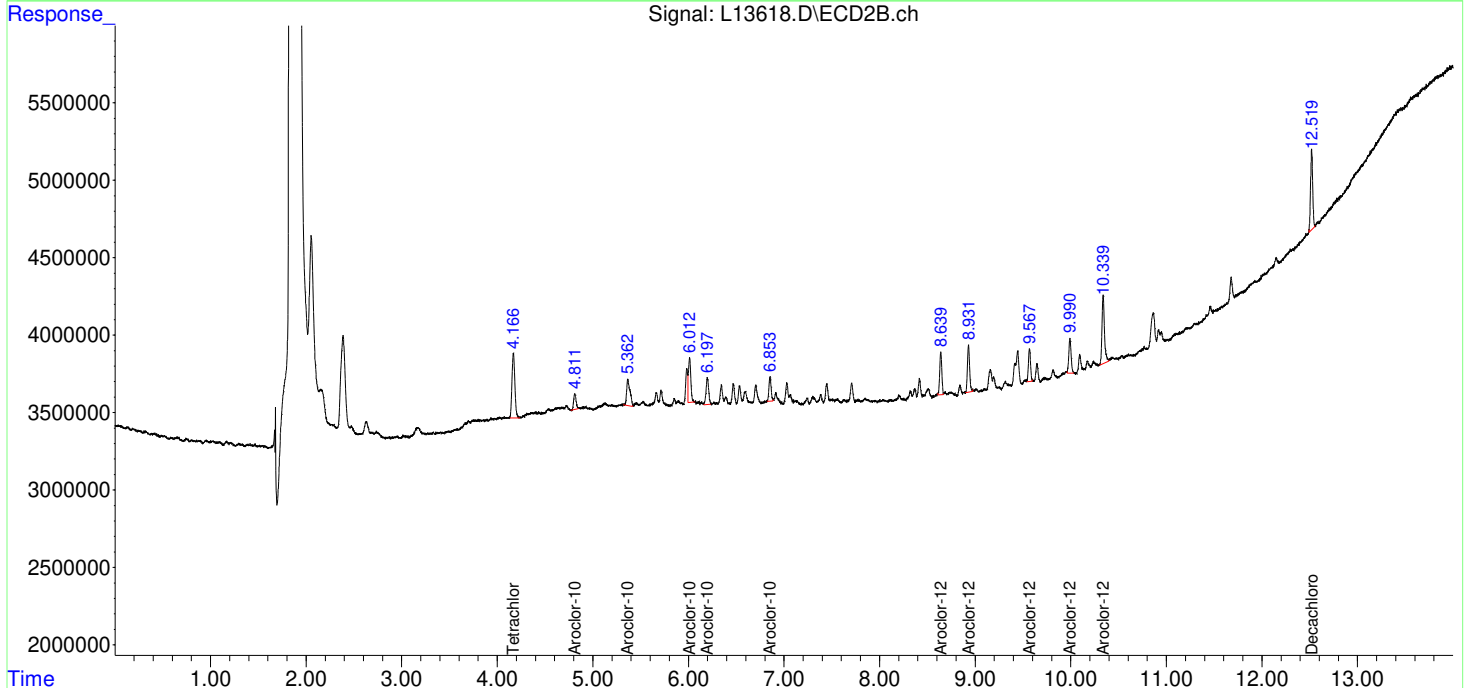
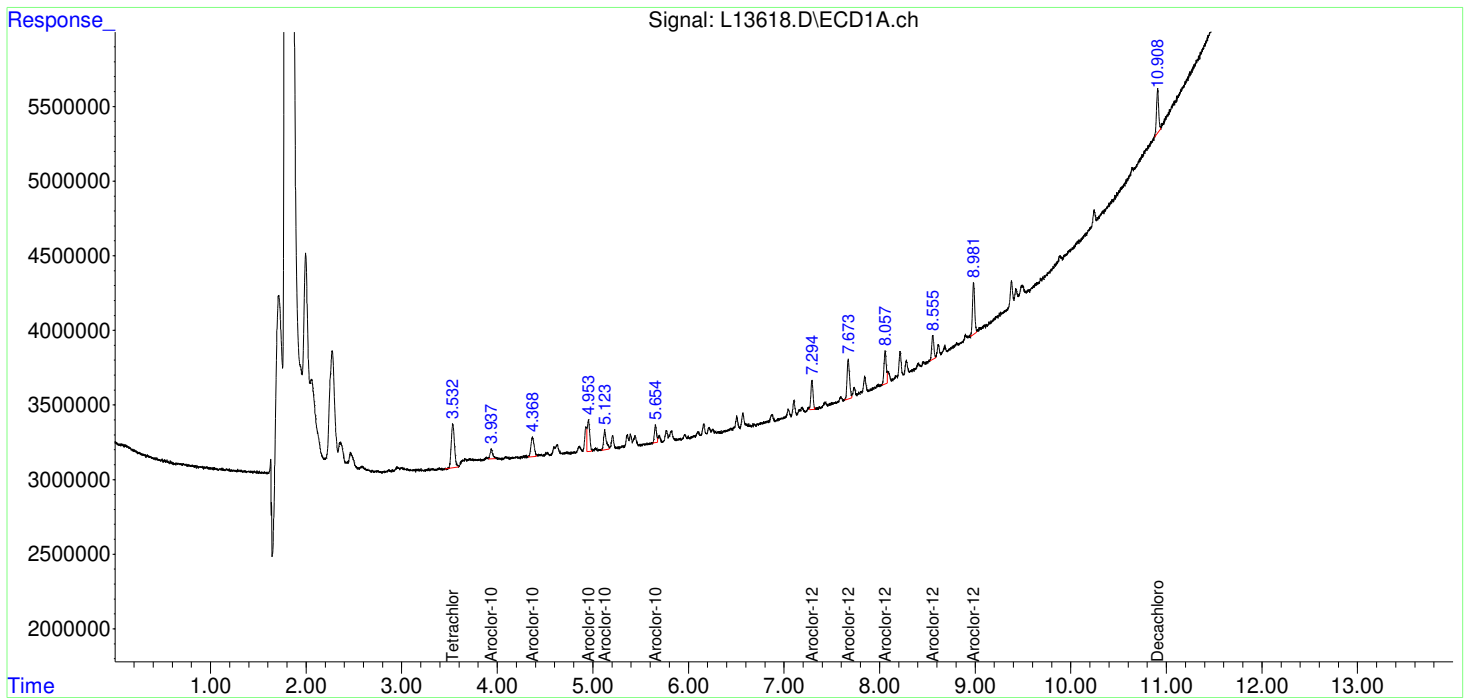
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.167	6865916	8795643	0.600	0.617
Spiked Amount	10.000 Range	60 - 120	Recovery =		6.00%#	6.17%#
2) SA Decachlor...	10.908f	12.519f	4490050	8152498	0.602m	0.617m
Spiked Amount	10.000 Range	60 - 120	Recovery =		6.02%#	6.17%#
Target Compounds						
3) L1 Aroclor-1...	3.937	4.811	1272761	1829601	5.764m	6.031m
4) L1 Aroclor-1...	4.368f	5.362f	3044675	4222457	6.687m	6.432m
5) L1 Aroclor-1...	4.953f	6.012f	3698426	4907315	6.623m	6.649
6) L1 Aroclor-1...	5.123f	6.197f	2568470	3261353	6.537m	6.546m
7) L1 Aroclor-1...	5.654f	6.853f	1808281	2561858	6.068m	6.107m
Sum Aroclor-1016			12392614	16782584	31.680	31.765
Average Aroclor-1016					6.336	6.353
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.294	8.639	2985980	4265762	6.034m	6.548m
44) L9 Aroclor-1...	7.673	8.931	4863152	4919789	6.417m	6.067m
45) L9 Aroclor-1...	8.057	9.567	3680315	3248860	6.116m	5.773m
46) L9 Aroclor-1...	8.555	9.990	2515662	3784590	6.045m	6.159m
47) L9 Aroclor-1...	8.981f	10.339f	5480547	7986652	5.974m	6.185m
Sum Aroclor-1260			19525656	24205654	30.586	30.733
Average Aroclor-1260					6.117	6.147

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13618.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 8:11 pm
Operator : TL1
Sample : SEQ-CAL1
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 12:32:03 2024
Quant Method : T:\METHODS\ECD-L\PCB230926L.M
Quant Title : 8082a PCB
QLast Update : Tue Jan 02 09:10:57 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13619.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:28 pm
 Operator : TL1
 Sample : SEQ-CAL2
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:38:29 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

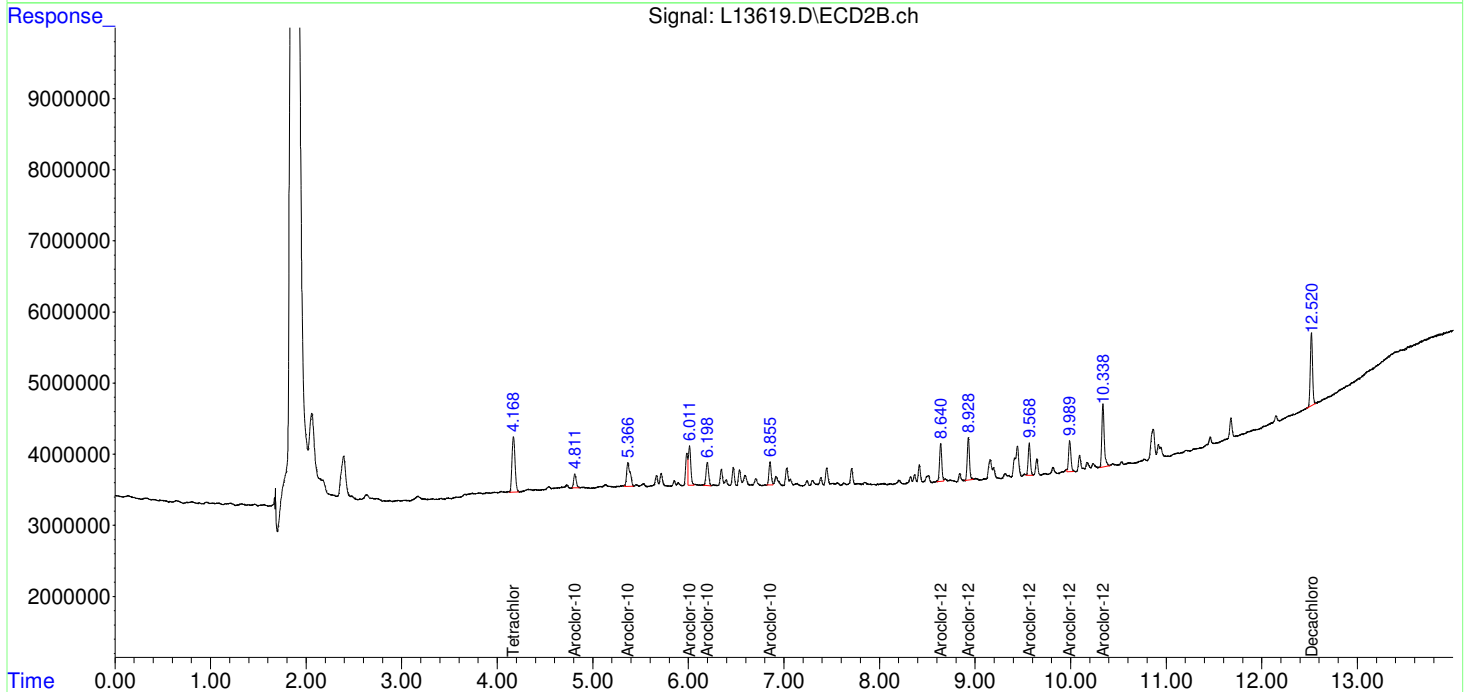
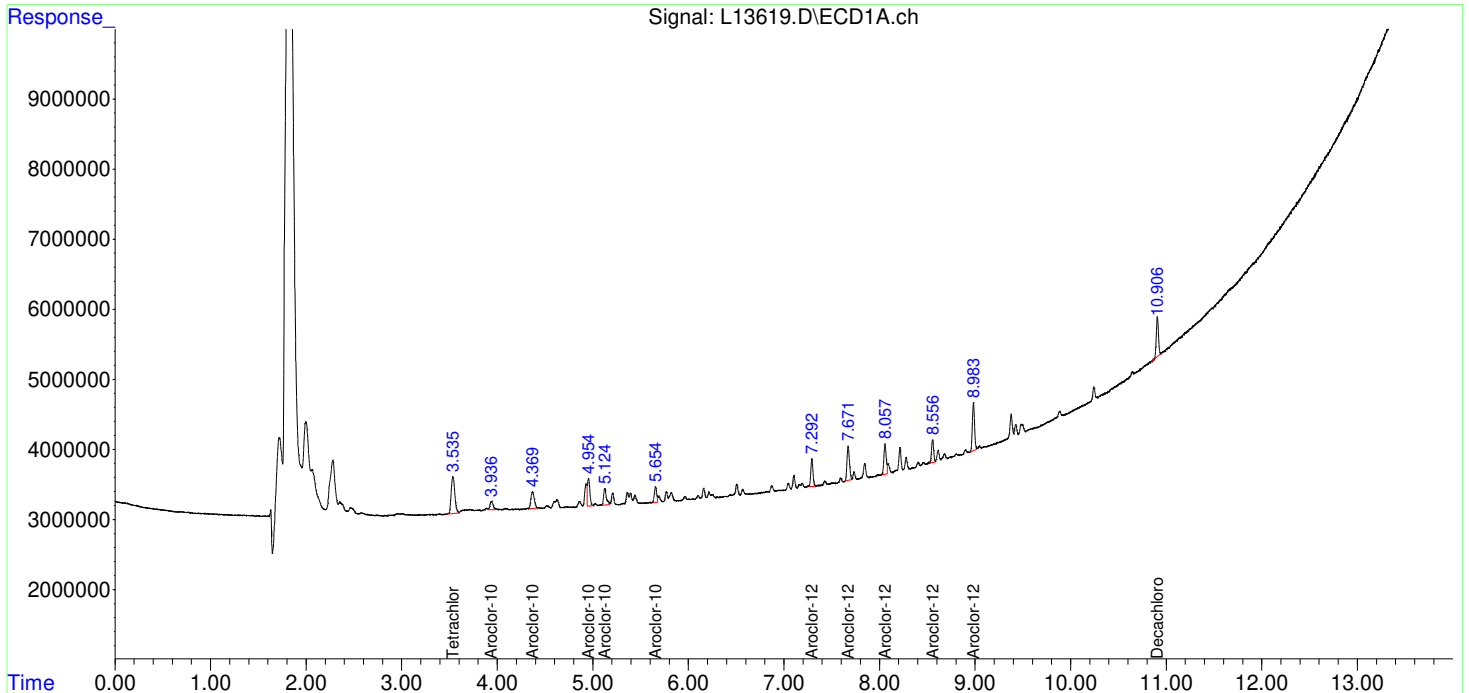
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.536	4.168	13703693	17349533	1.197	1.218m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	11.97%#	12.18%#
2) SA Decachlor...	10.908f	12.521f	8709110	16383652	1.167	1.240
Spiked Amount	10.000 Range	60 - 120	Recovery	=	11.67%#	12.40%#
Target Compounds						
3) L1 Aroclor-1...	3.936f	4.811	2703211	3588002	12.243m	11.827m
4) L1 Aroclor-1...	4.369	5.366	5843477	8436677	12.834m	12.852m
5) L1 Aroclor-1...	4.954f	6.011f	7054536	9333191	12.633m	12.645m
6) L1 Aroclor-1...	5.124f	6.198f	4694863	6199592	11.949m	12.444m
7) L1 Aroclor-1...	5.654f	6.855f	3785629	5346718	12.703m	12.745m
Sum Aroclor-1016			24081716	32904181	62.362	62.513
Average Aroclor-1016					12.472	12.503
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.292	8.640	6151188	8614182	12.431m	13.224m
44) L9 Aroclor-1...	7.671	8.928	8804553	9782889	11.618m	12.064m
45) L9 Aroclor-1...	8.057	9.568	7389477	7074987	12.279m	12.573m
46) L9 Aroclor-1...	8.556	9.989	5016667	7446194	12.055m	12.119m
47) L9 Aroclor-1...	8.983f	10.338f	10914982	15467462	11.898m	11.977m
Sum Aroclor-1260			38276867	48385714	60.281	61.957
Average Aroclor-1260					12.056	12.391

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13619.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:28 pm
 Operator : TL1
 Sample : SEQ-CAL2
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:38:29 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13620.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:44 pm
 Operator : TL1
 Sample : SEQ-CAL3
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:42:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

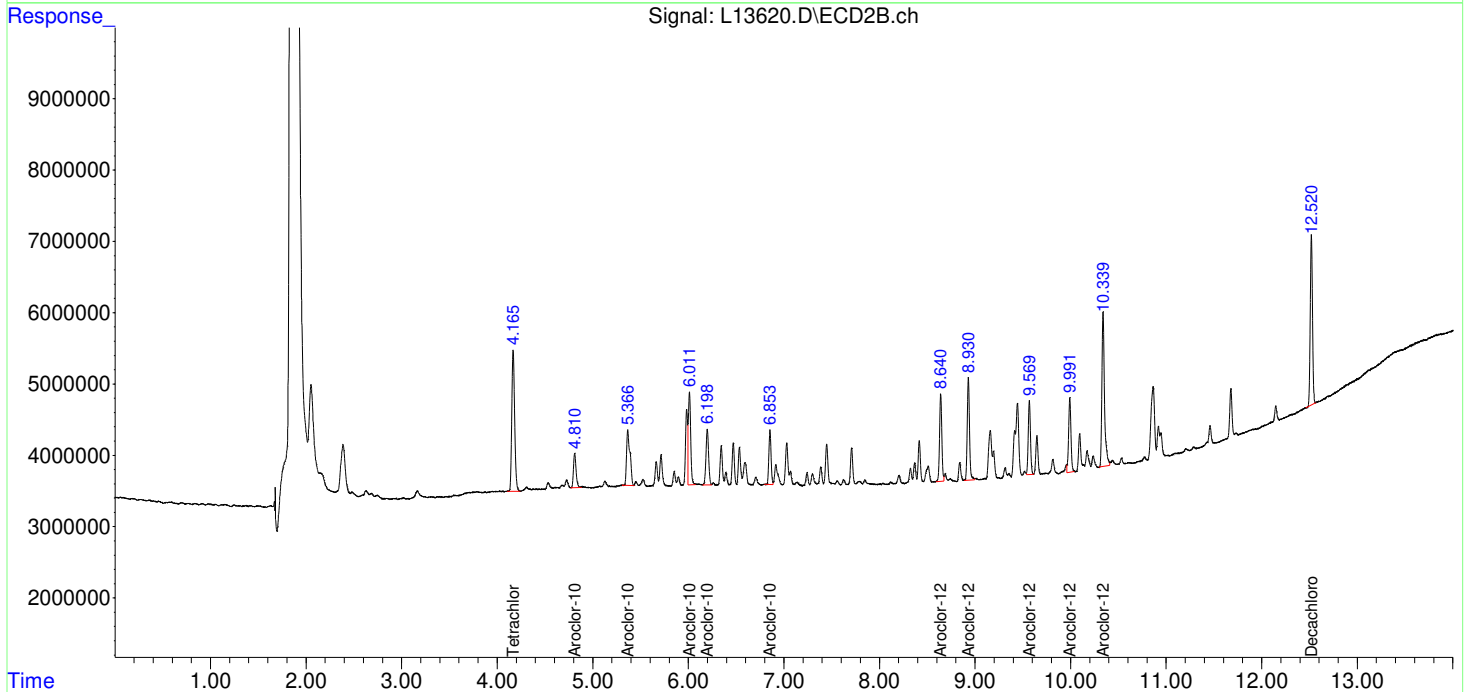
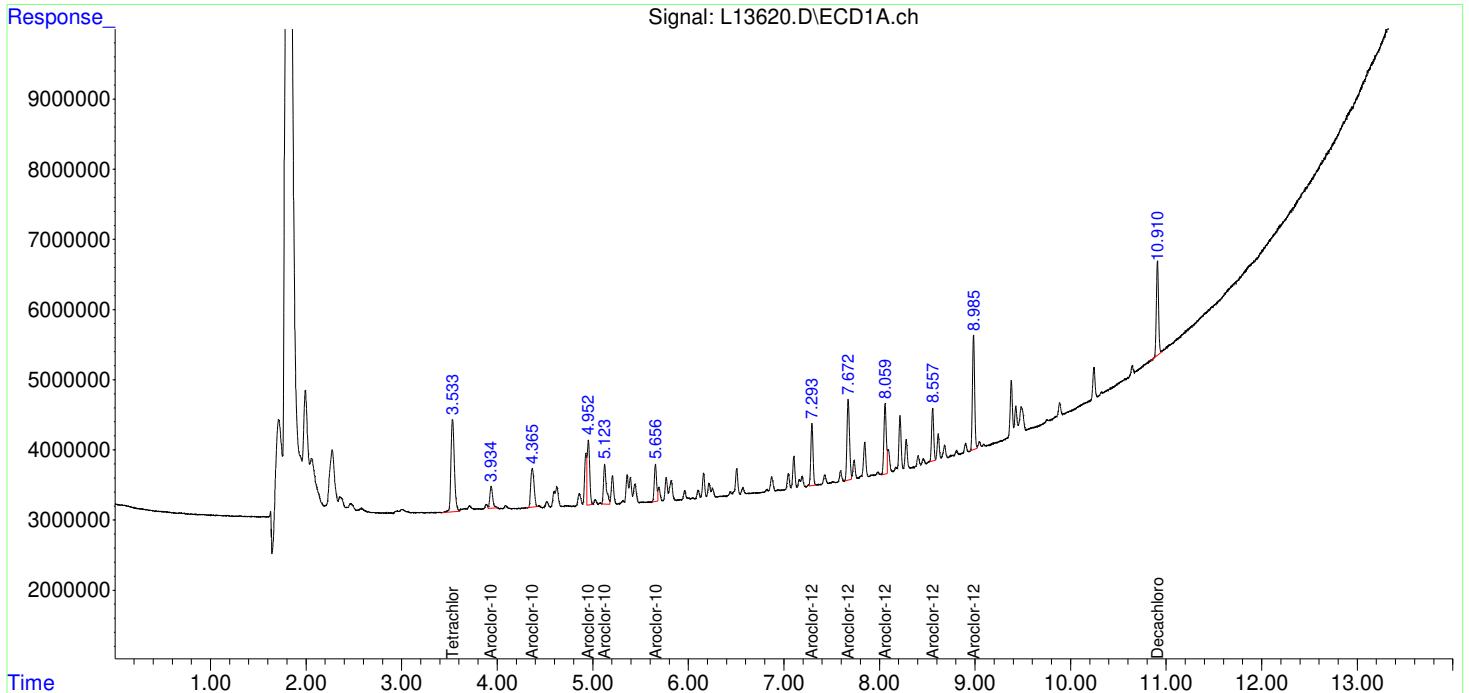
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.532f	4.166	32376409	41053727	2.828	2.881
Spiked Amount	10.000 Range	60 - 120	Recovery	=	28.28%#	28.81%#
2) SA Decachlor...	10.910f	12.521f	21153145	38316575	2.835	2.901
Spiked Amount	10.000 Range	60 - 120	Recovery	=	28.35%#	29.01%#
Target Compounds						
3) L1 Aroclor-1...	3.936f	4.810	6600128	9091937	29.892	29.970
4) L1 Aroclor-1...	4.366f	5.365f	13350897	19357593	29.323	29.489
5) L1 Aroclor-1...	4.954f	6.012f	16015684	22711451	28.680	30.770
6) L1 Aroclor-1...	5.124f	6.198f	11571518	14777645	29.452	29.663m
7) L1 Aroclor-1...	5.656f	6.854f	8992616	12254029	30.176m	29.209
Sum Aroclor-1016			56530843	78192655	147.522	149.101
Average Aroclor-1016					29.504	29.820
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	14287910	20063747	28.874m	30.800m
44) L9 Aroclor-1...	7.672	8.930	21152882	23590870	27.912m	29.092m
45) L9 Aroclor-1...	8.059	9.569	17650253	16746300	29.330m	29.759m
46) L9 Aroclor-1...	8.557	9.991	11425150	17673953	27.455m	28.765m
47) L9 Aroclor-1...	8.985f	10.339f	25778441	40833228	28.100m	31.619m
Sum Aroclor-1260			90294636	118.9E6	141.671	150.035
Average Aroclor-1260					28.334	30.007

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13620.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 8:44 pm
Operator : TL1
Sample : SEQ-CAL3
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 12:42:38 2024
Quant Method : T:\METHODS\ECD-L\PCB230926L.M
Quant Title : 8082a PCB
QLast Update : Tue Jan 02 09:10:57 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13621.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:00 pm
 Operator : TL1
 Sample : SEQ-CAL4
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:47:23 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

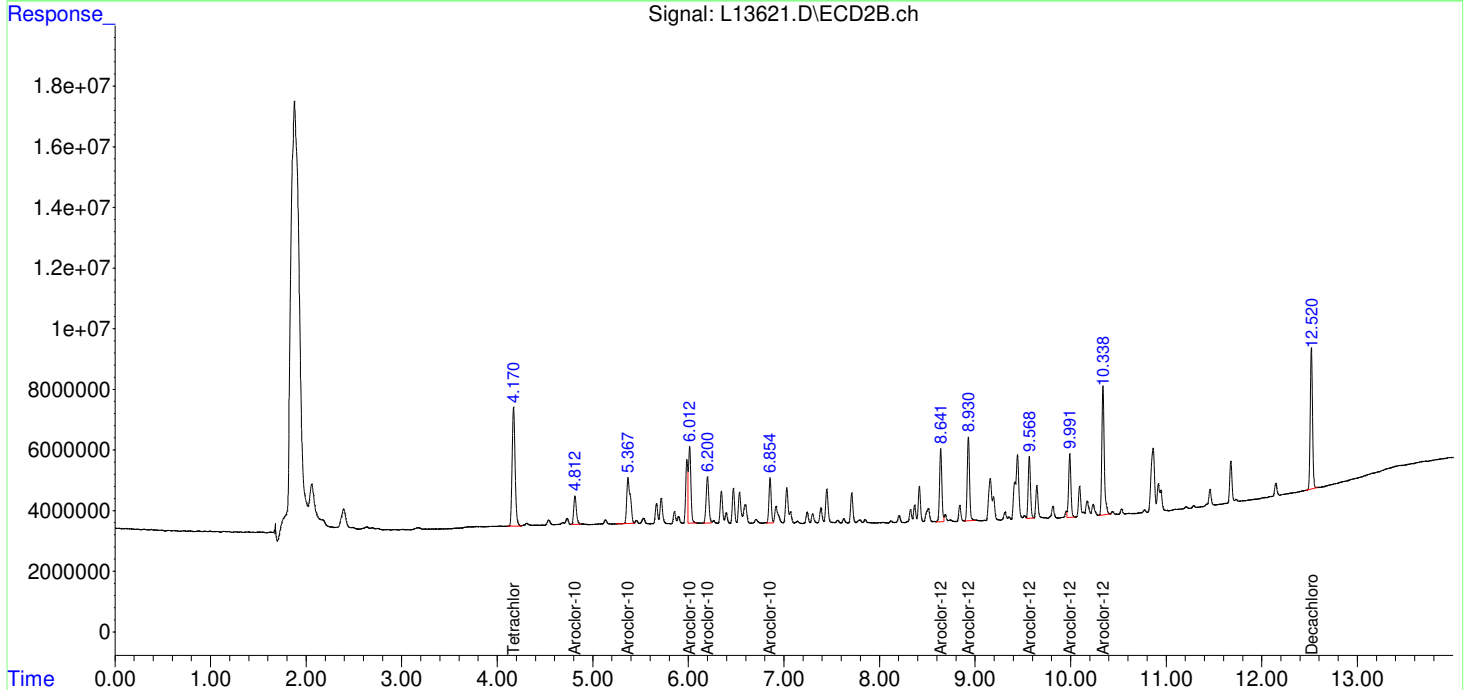
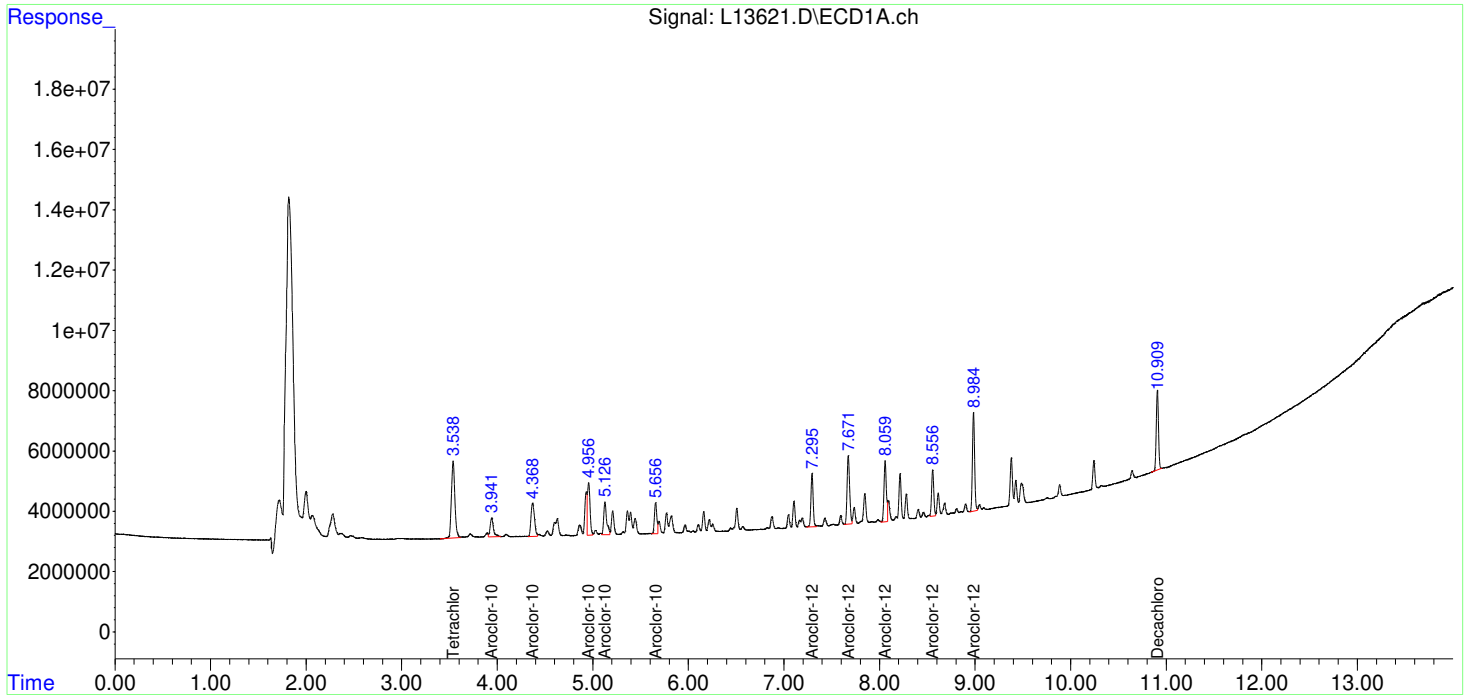
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.538	4.170	63514382	84053905	5.548	5.899
Spiked Amount	10.000 Range	60 - 120	Recovery	=	55.48%#	58.99%#
2) SA Decachlor...	10.909f	12.520f	42167337	75943898	5.651	5.750
Spiked Amount	10.000 Range	60 - 120	Recovery	=	56.51%#	57.50%#
Target Compounds						
3) L1 Aroclor-1...	3.941	4.813	15072931	18309278	68.265	60.353
4) L1 Aroclor-1...	4.368f	5.368	27777653	38934987	61.008m	59.313
5) L1 Aroclor-1...	4.957f	6.013	32936899	44153115	58.982	59.820
6) L1 Aroclor-1...	5.126f	6.200	23350985	29498704	59.433m	59.211m
7) L1 Aroclor-1...	5.657f	6.854f	18018006	24214720	60.462	57.719m
Sum Aroclor-1016			117.2E6	155.1E6	308.150	296.417
Average Aroclor-1016					61.630	59.283
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.294	8.641	28539560	39814565	57.674	61.120m
44) L9 Aroclor-1...	7.673	8.931	42091931	46214097	55.542	56.991
45) L9 Aroclor-1...	8.059	9.568	35241070	33649740	58.562m	59.798
46) L9 Aroclor-1...	8.556	9.991	24283685	34927485	58.355m	56.845m
47) L9 Aroclor-1...	8.984f	10.339f	51954975	74597191	56.633m	57.765
Sum Aroclor-1260			182.1E6	229.2E6	286.766	292.518
Average Aroclor-1260					57.353	58.504

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13621.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:00 pm
 Operator : TL1
 Sample : SEQ-CAL4
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:47:23 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13622.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:16 pm
 Operator : TL1
 Sample : SEQ-CAL5
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:50:12 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

1) SA Tetrachlo...	3.531f	4.166	120.1E6	160.6E6	10.490	11.272
Spiked Amount	10.000 Range	60 - 120	Recovery	=	104.90%	112.72%
2) SA Decachlor...	10.909f	12.520f	82159738	145.4E6	11.010	11.006
Spiked Amount	10.000 Range	60 - 120	Recovery	=	110.10%	110.06%

Target Compounds

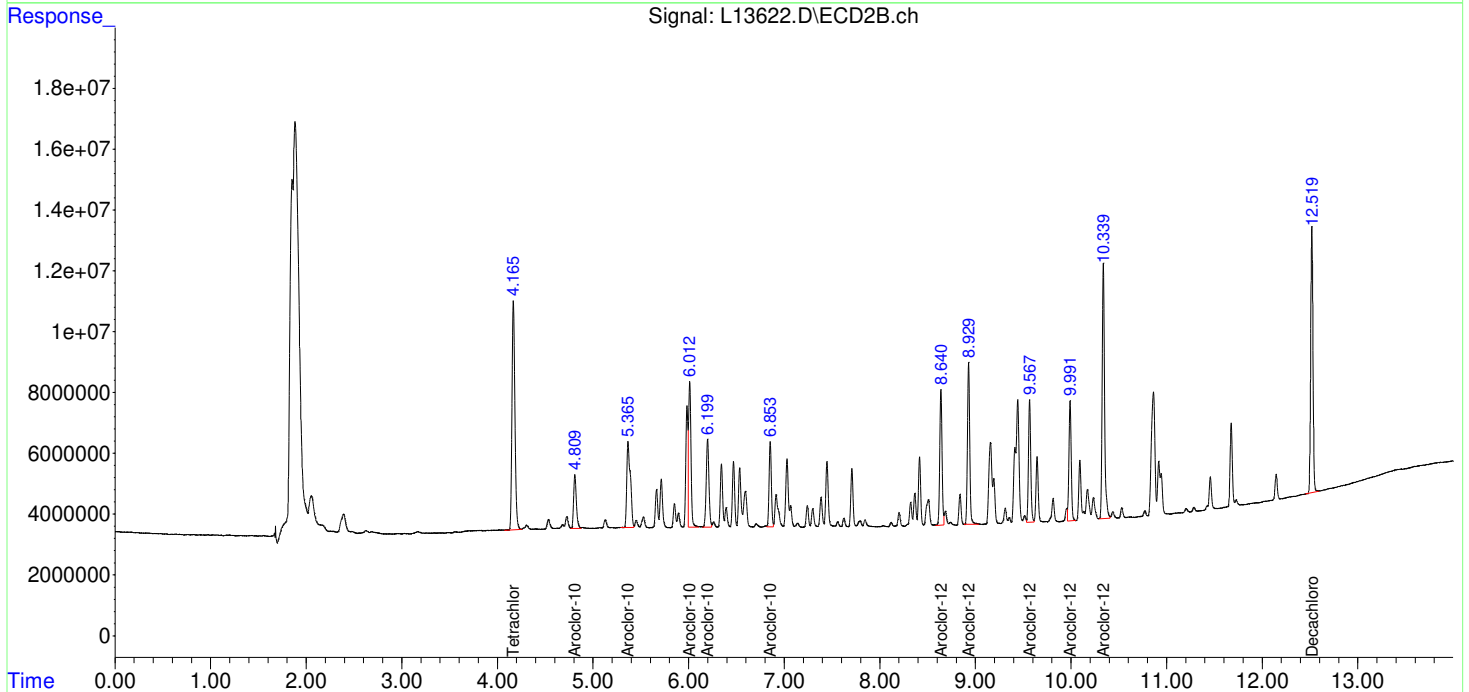
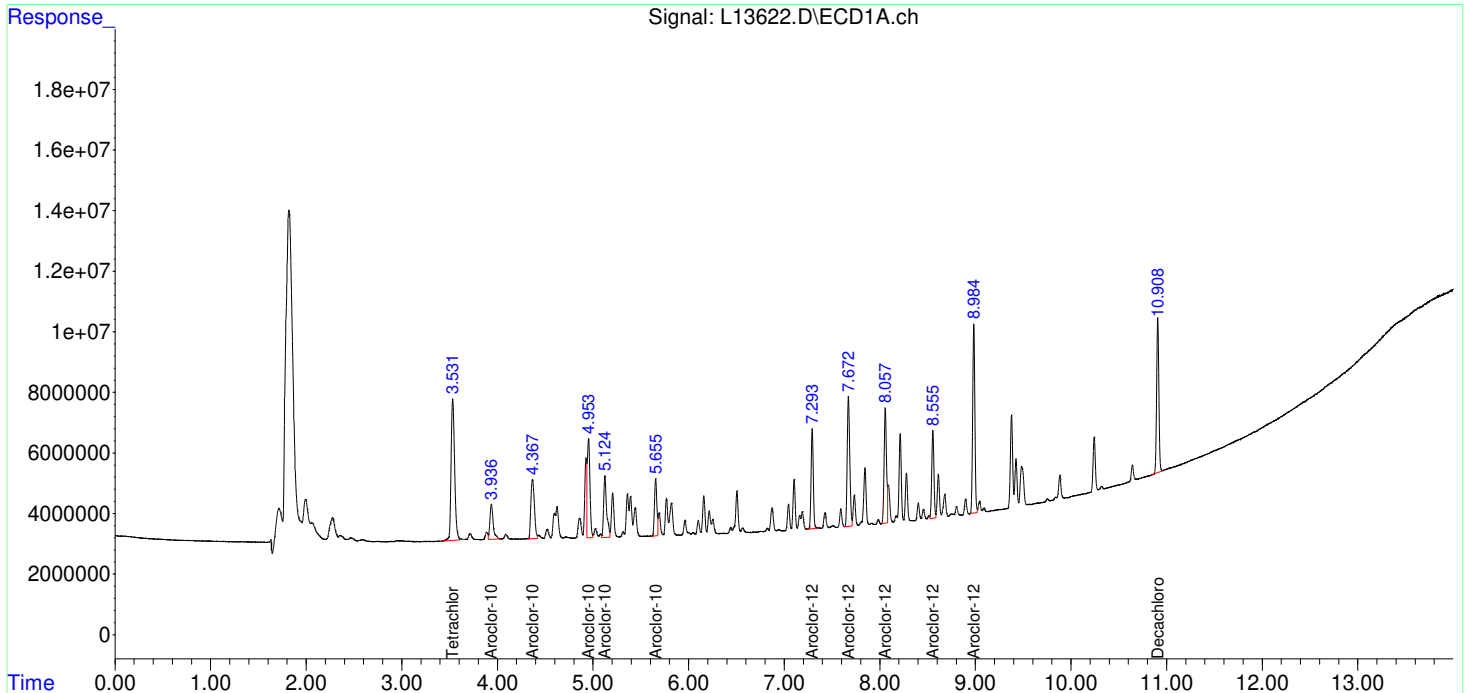
3) L1 Aroclor-1...	3.936f	4.809	27498087	34970975	124.538	115.275m
4) L1 Aroclor-1...	4.367f	5.366f	50396955	74382623	110.688m	113.314
5) L1 Aroclor-1...	4.953f	6.012f	62766312	82234589	112.398	111.415m
6) L1 Aroclor-1...	5.124f	6.199f	43845705	57382054	111.597	115.181m
7) L1 Aroclor-1...	5.655f	6.853f	32296086	45998881	108.374m	109.645m
Sum Aroclor-1016			216.8E6	295.0E6	567.595	564.829
Average Aroclor-1016					113.519	112.966
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	52623311	74629733	106.344	114.565m
44) L9 Aroclor-1...	7.672	8.929	79057804	88564304	104.320	109.217m
45) L9 Aroclor-1...	8.057	9.568	64486957	66018591	107.161m	117.319
46) L9 Aroclor-1...	8.555	9.991	46618983	66515824	112.028m	108.255m
47) L9 Aroclor-1...	8.984f	10.339f	99463448	145.8E6	108.419m	112.937m
Sum Aroclor-1260			342.3E6	441.6E6	538.272	562.293
Average Aroclor-1260					107.654	112.459

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13622.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:16 pm
 Operator : TL1
 Sample : SEQ-CAL5
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:50:12 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13623.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:32 pm
 Operator : TL1
 Sample : SEQ-CAL6
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:54:02 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

1) SA Tetrachlo...	3.534	4.168	276.8E6	381.6E6	24.178	26.782
Spiked Amount	10.000 Range	60 - 120	Recovery	=	241.78%#	267.82%#
2) SA Decachlor...	10.908f	12.520f	184.5E6	323.5E6	24.727	24.494
Spiked Amount	10.000 Range	60 - 120	Recovery	=	247.27%#	244.94%#

Target Compounds

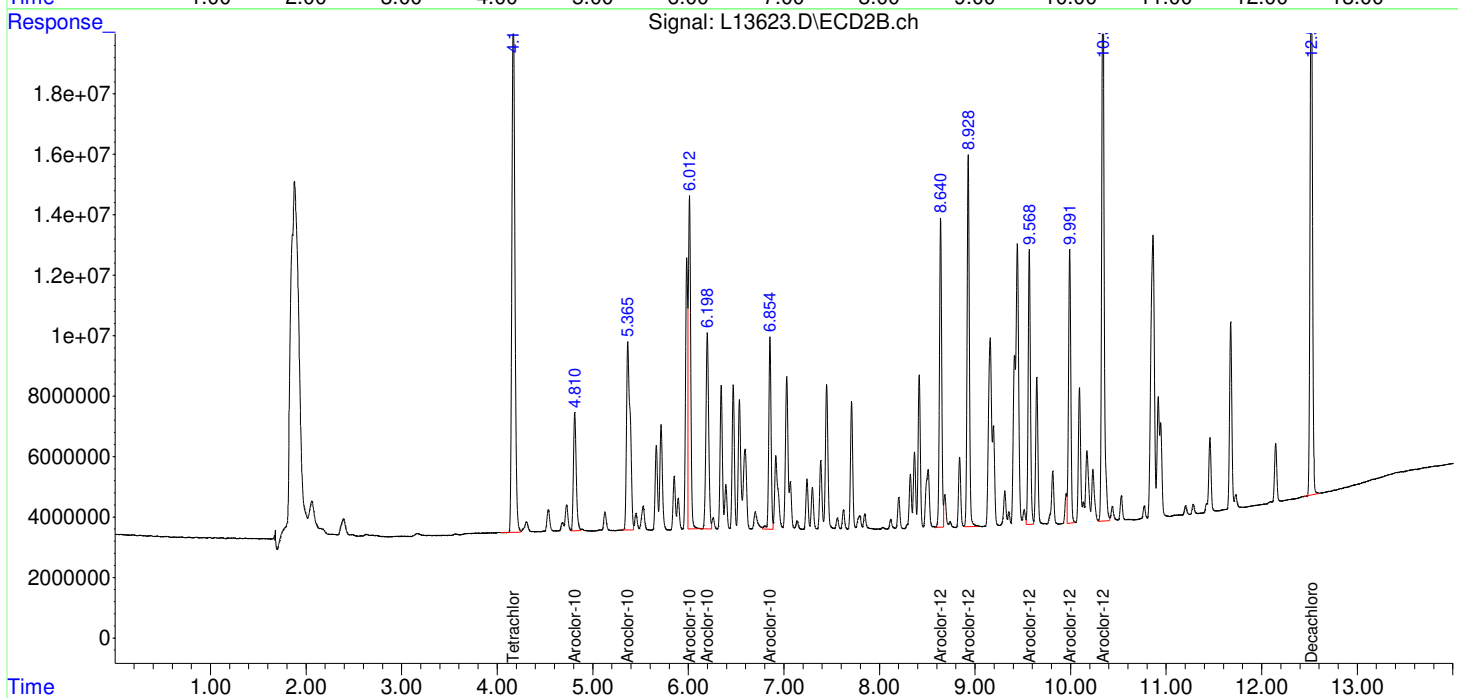
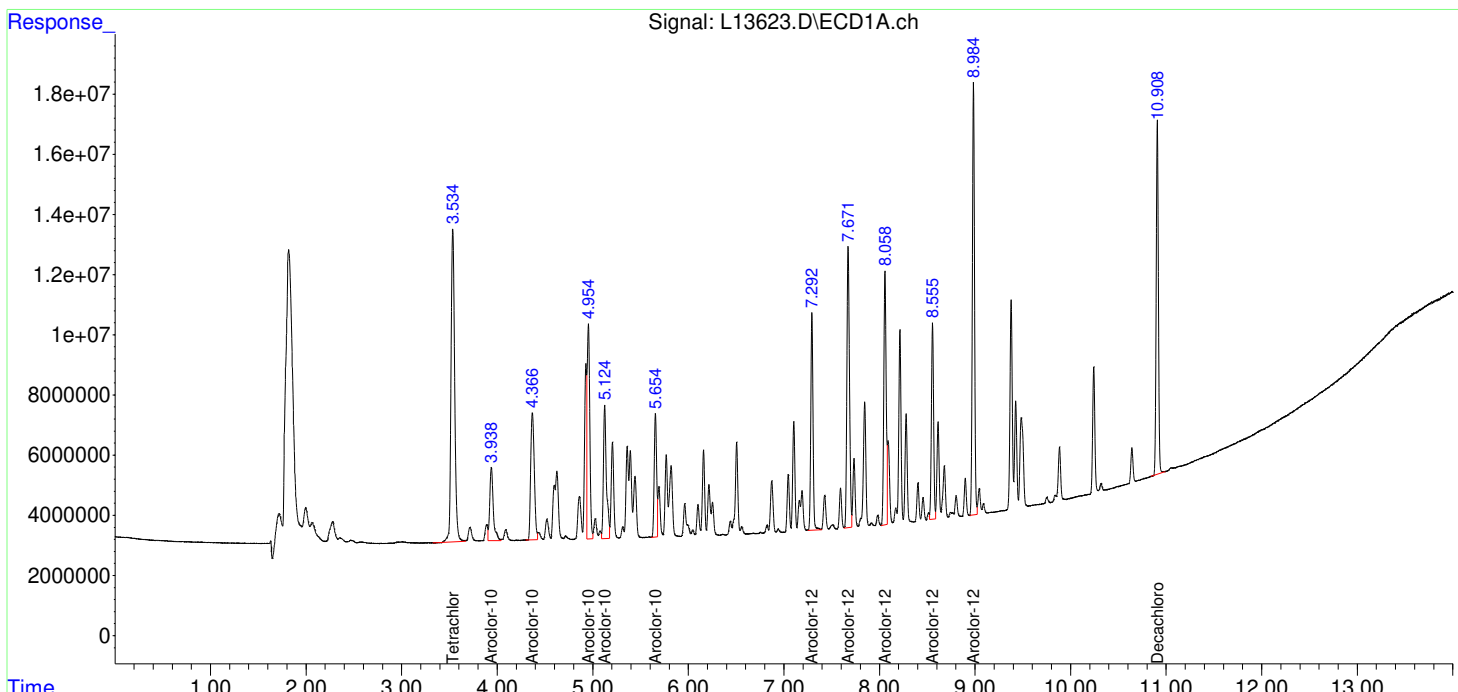
3) L1 Aroclor-1...	3.938	4.810	62774280	79014902	284.302	260.456m
4) L1 Aroclor-1...	4.367f	5.366	110.7E6	166.7E6	243.080	254.024
5) L1 Aroclor-1...	4.954f	6.012f	139.2E6	191.1E6	249.330	258.976
6) L1 Aroclor-1...	5.124f	6.198f	96601684	129.1E6	245.873	259.224
7) L1 Aroclor-1...	5.654f	6.854f	71814751	106.2E6	240.984m	253.186
Sum Aroclor-1016			481.1E6	672.3E6	1263.568	1285.866
Average Aroclor-1016					252.714	257.173
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	116.7E6	166.8E6	235.801	256.128m
44) L9 Aroclor-1...	7.672	8.928	175.0E6	199.3E6	230.924	245.770m
45) L9 Aroclor-1...	8.058	9.568	147.7E6	149.0E6	245.385m	264.701
46) L9 Aroclor-1...	8.555	9.991	104.1E6	150.0E6	250.201m	244.072m
47) L9 Aroclor-1...	8.984f	10.338f	226.5E6	339.4E6	246.900m	262.853
Sum Aroclor-1260			770.0E6	1004.5E6	1209.210	1273.524
Average Aroclor-1260					241.842	254.705

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13623.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:32 pm
 Operator : TL1
 Sample : SEQ-CAL6
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:54:02 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13626.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:21 pm
 Operator : TL1
 Sample : SEQ-CAL7
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:05:21 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

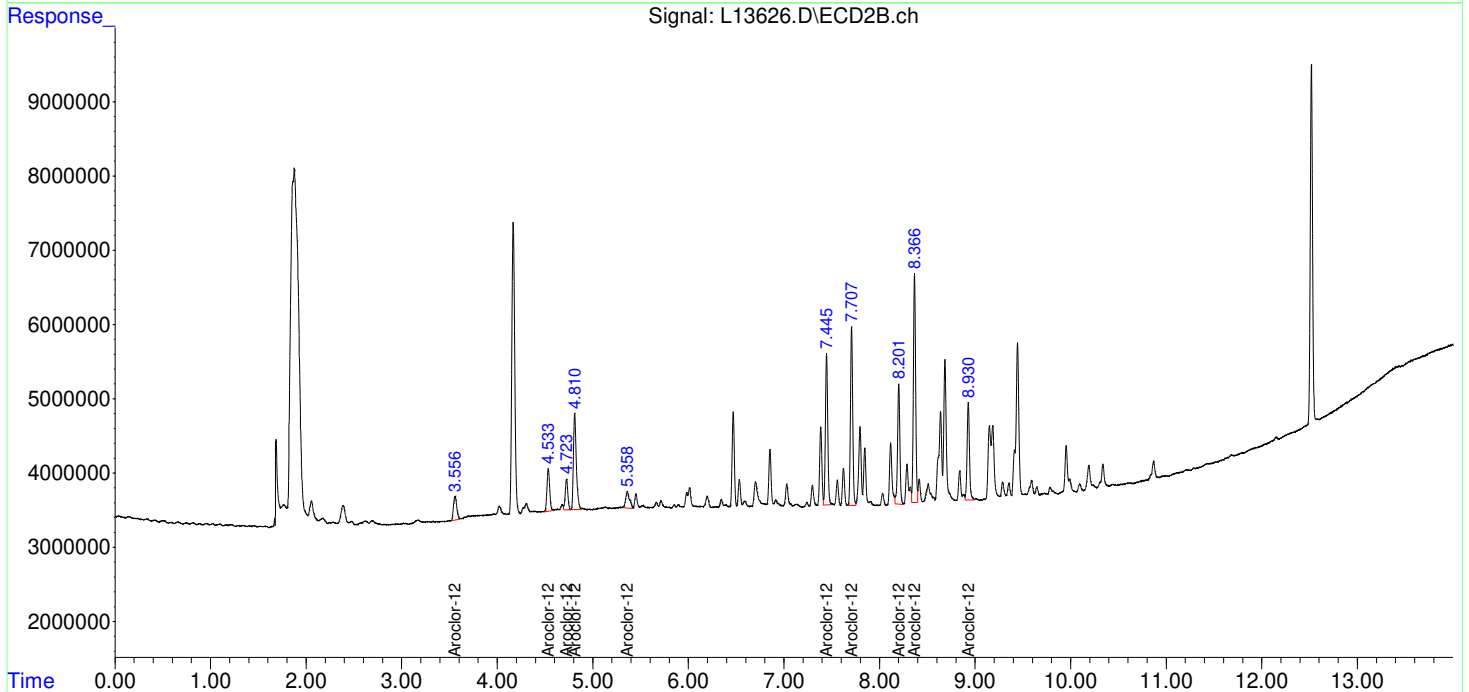
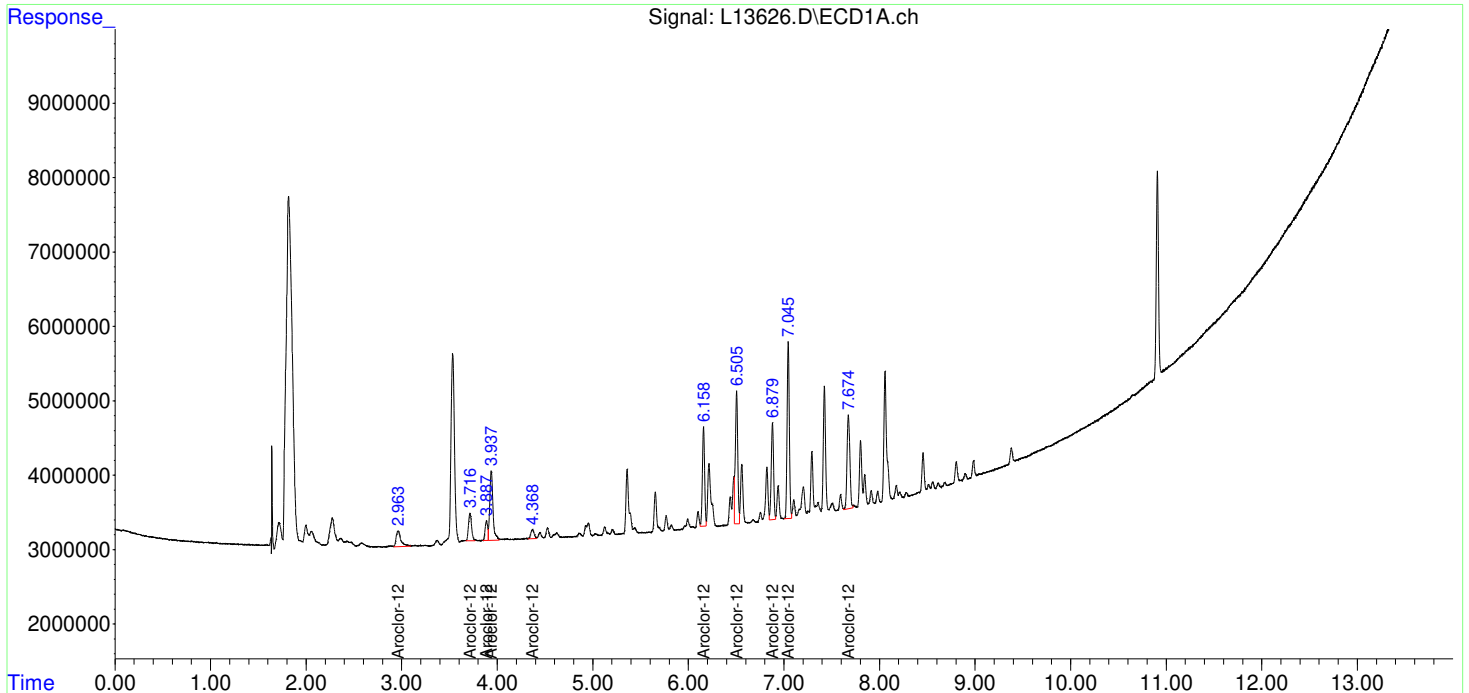
System Monitoring Compounds						
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
8) L2 Aroclor-1...	2.963f	3.556f	7143390	7613736	68.179m	56.085m
9) L2 Aroclor-1...	3.716f	4.533f	8403769	11308644	59.186m	56.477m
10) L2 Aroclor-1...	3.887f	4.723f	4823960	7818012	60.594m	56.063m
11) L2 Aroclor-1...	3.937f	4.810f	21652161	27299642	59.517m	57.716m
12) L2 Aroclor-1...	4.368f	5.358f	2999418	6291573	61.879m	62.033m
Sum Aroclor-1221			45022697	60331607	309.354	288.374
Average Aroclor-1221					61.871	57.675
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
28) L6 Aroclor-1...	6.158f	7.445f	21510599	34148007	55.339m	55.482m
29) L6 Aroclor-1...	6.505f	7.707f	31364914	39724229	56.846m	57.980m
30) L6 Aroclor-1...	6.879f	8.201f	22145710	27605200	56.276m	55.518m
31) L6 Aroclor-1...	7.045f	8.366f	38211692	50464460	57.508m	56.927m
32) L6 Aroclor-1...	7.674f	8.930f	25985753	22608608	55.931m	55.504m
Sum Aroclor-1254			139.2E6	174.6E6	281.900	281.411
Average Aroclor-1254					56.380	56.282
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13626.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 10:21 pm
Operator : TL1
Sample : SEQ-CAL7
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 13:05:21 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Jan 17 13:00:01 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13627.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:37 pm
 Operator : TL1
 Sample : SEQ-CAL8
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:11:26 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

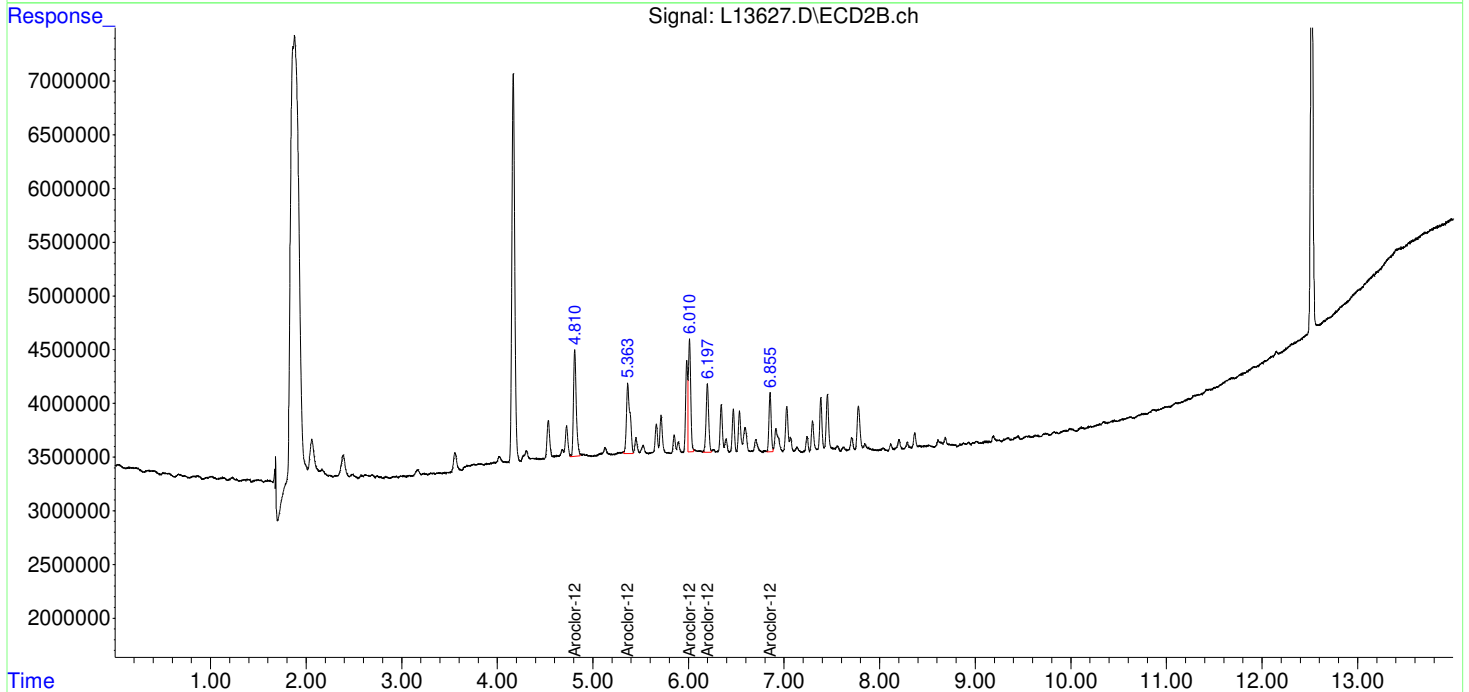
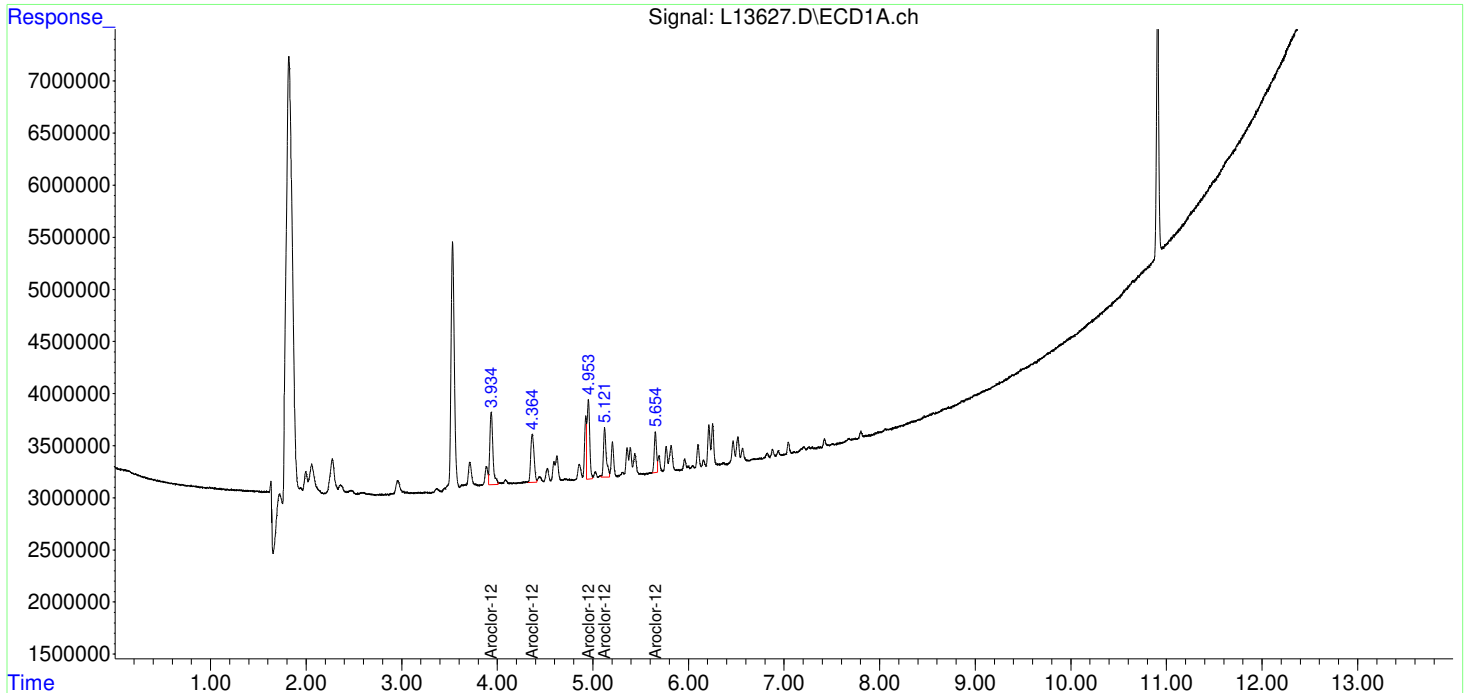
System Monitoring Compounds						
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
13) L3 Aroclor-1...	3.934f	4.810f	15837895	20048134	57.252m	55.013m
14) L3 Aroclor-1...	4.364f	5.363f	11278052	16762368	57.449m	56.573m
15) L3 Aroclor-1...	4.953f	6.010f	14264139	17554380	58.174m	54.165m
16) L3 Aroclor-1...	5.121f	6.197f	9601446	12008780	59.092m	55.275m
17) L3 Aroclor-1...	5.654f	6.855f	6477690	9006148	55.091m	52.956m
Sum Aroclor-1232			57459222	75379810	287.057	273.982
Average Aroclor-1232					57.411	54.796
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13627.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 10:37 pm
Operator : TL1
Sample : SEQ-CAL8
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 13:11:26 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Jan 17 13:00:01 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13628.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:53 pm
 Operator : TL1
 Sample : SEQ-CAL9
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:14:30 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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 System Monitoring Compounds

Target Compounds

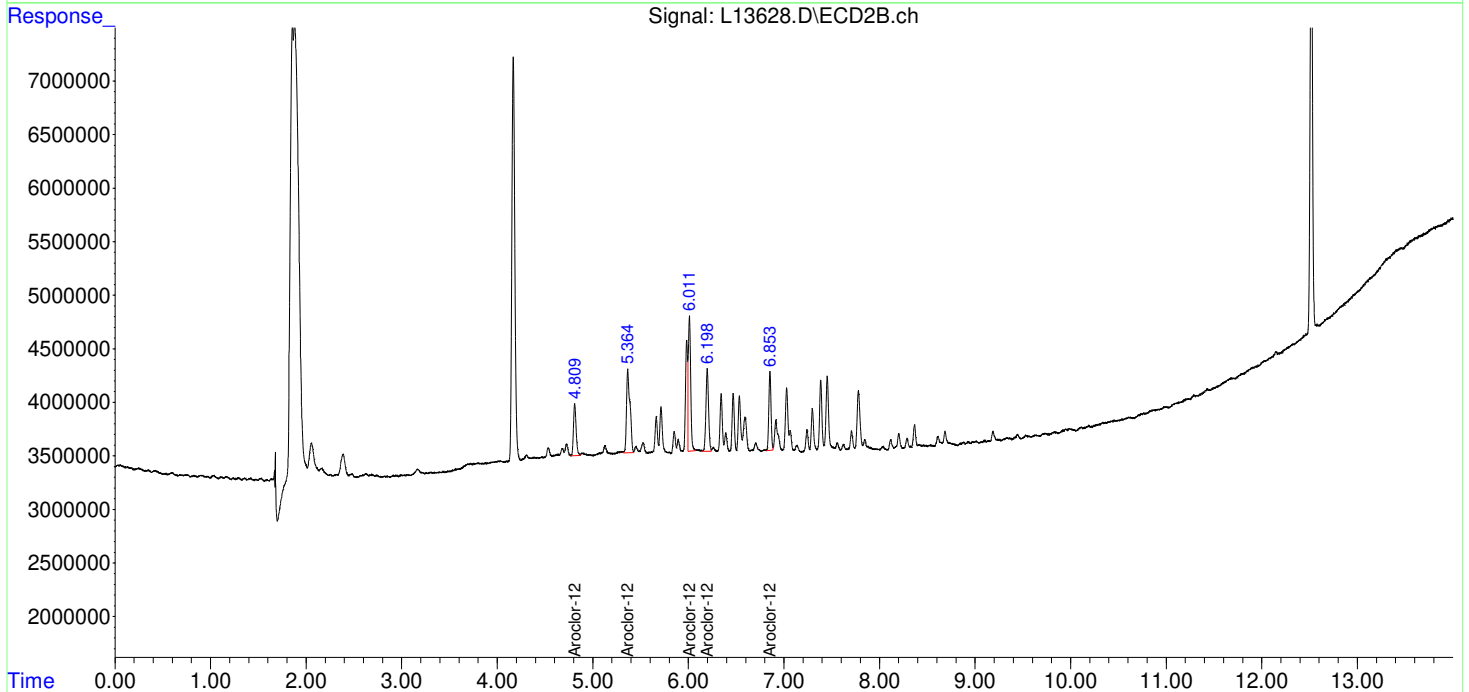
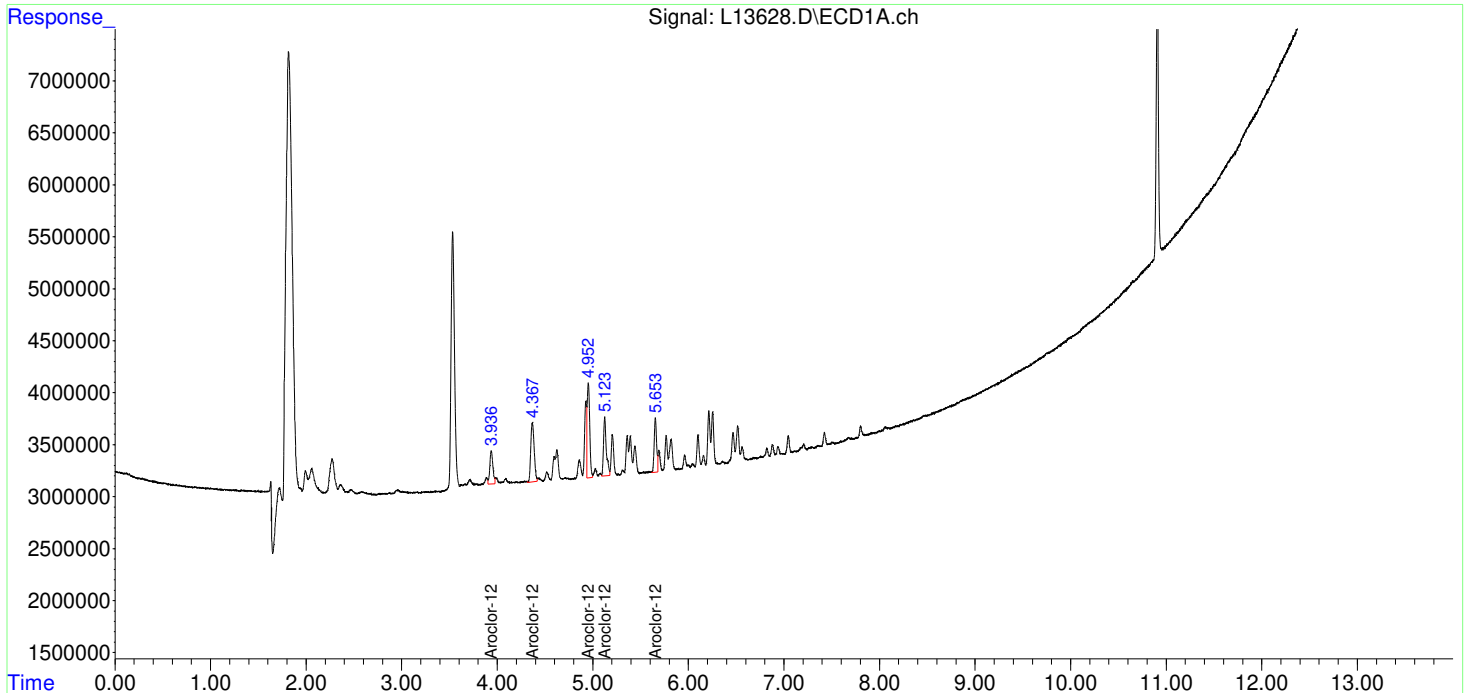
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
18) L4 Aroclor-1...	3.936f	4.809f	7191001	9304784	60.187m	55.633m
19) L4 Aroclor-1...	4.367f	5.364f	14304819	19729467	60.434m	57.055m
20) L4 Aroclor-1...	4.952f	6.011f	17146482	21924886	59.232m	57.433m
21) L4 Aroclor-1...	5.123f	6.198f	11705688	14781752	99.800m	56.472m#
22) L4 Aroclor-1...	5.653f	6.853f	9147812	11946961	60.298m	54.530m
Sum Aroclor-1242			59495801	77687850	339.950	281.124
Average Aroclor-1242					67.990	56.225
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13628.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:53 pm
 Operator : TL1
 Sample : SEQ-CAL9
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:14:30 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13629.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:09 pm
 Operator : TL1
 Sample : SEQ-CALA
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:17:58 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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 System Monitoring Compounds

Target Compounds

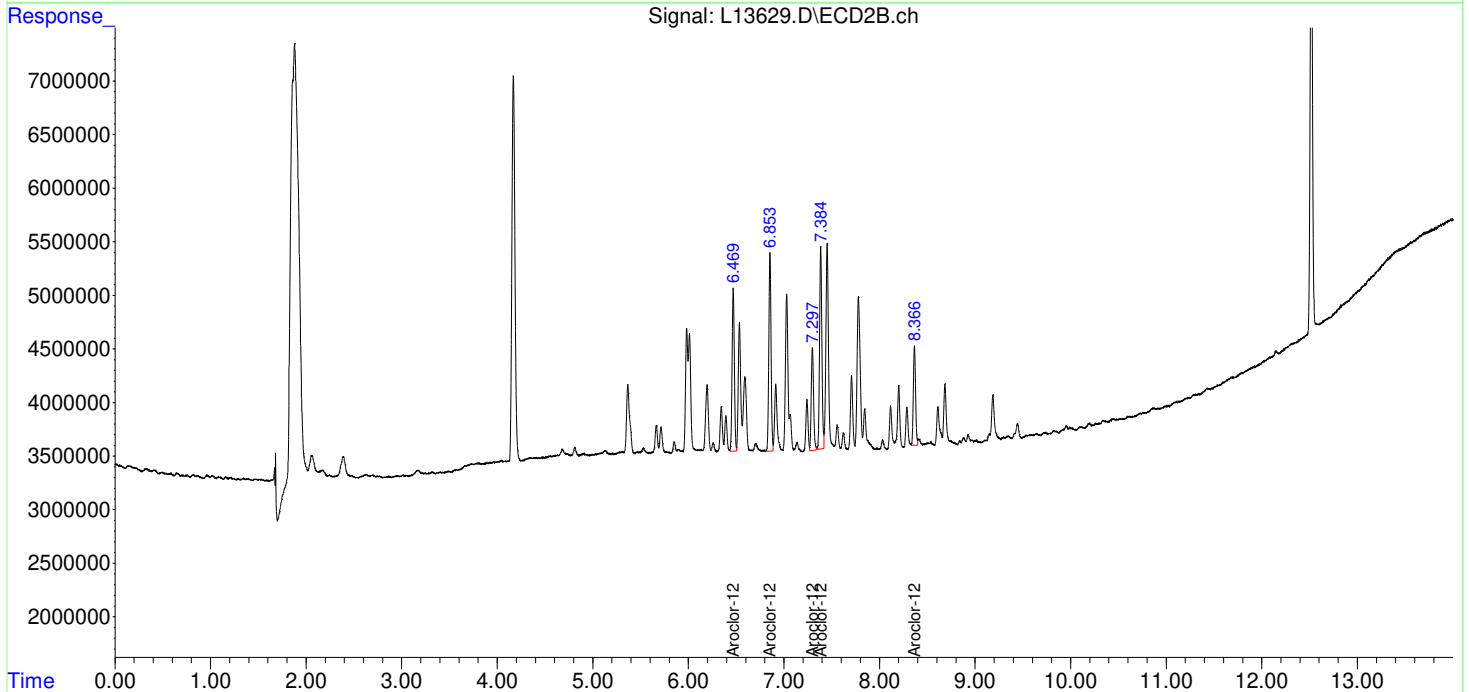
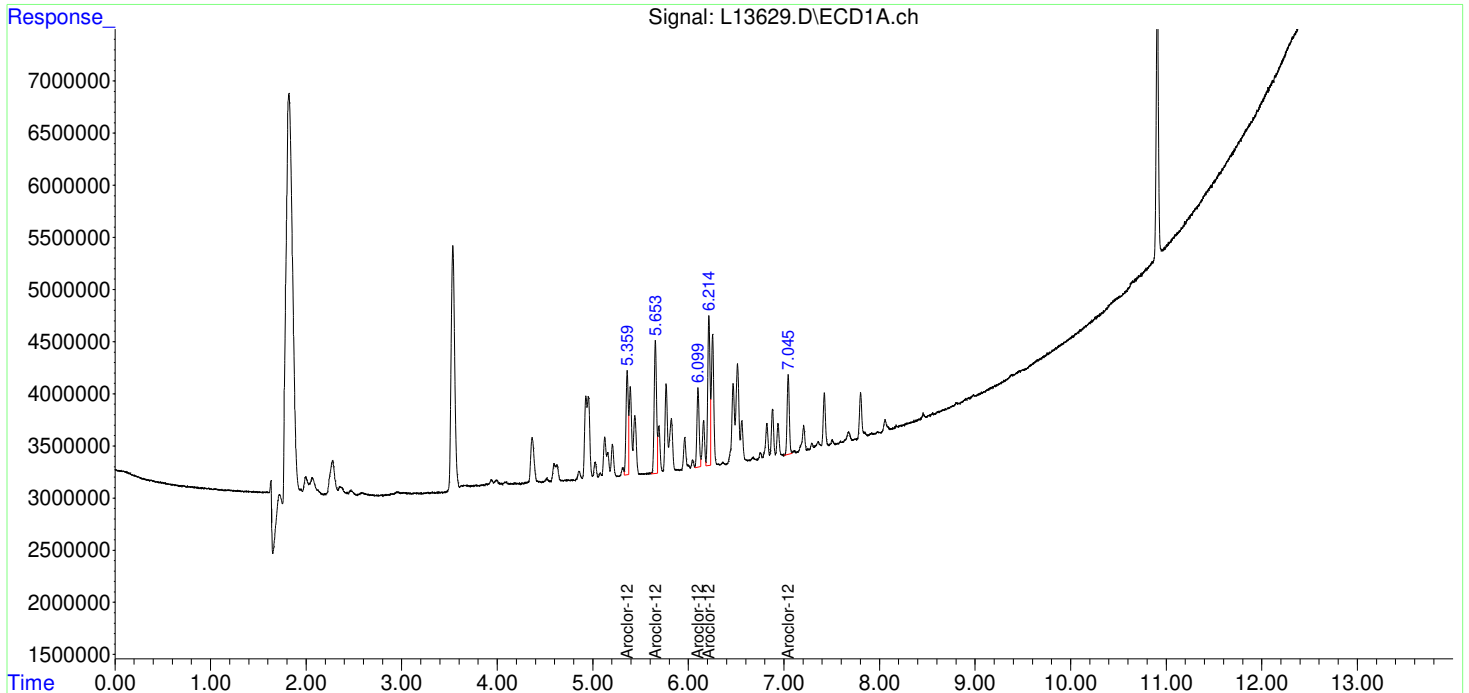
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
23) L5 Aroclor-1...	5.359f	6.469f	16909541	24592088	55.084m	54.726m
24) L5 Aroclor-1...	5.653f	6.853f	22242298	30160137	56.577m	54.070m
25) L5 Aroclor-1...	6.099f	7.297f	12568464	16282017	54.119m	50.824m
26) L5 Aroclor-1...	6.213f	7.384f	24628661	31604575	62.356m	52.978m
27) L5 Aroclor-1...	7.045f	8.366f	12117904	15123769	52.772m	52.007m
Sum Aroclor-1248			88466868	117.8E6	280.909	264.604
Average Aroclor-1248					56.182	52.921
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13629.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:09 pm
 Operator : TL1
 Sample : SEQ-CALA
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:17:58 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13630.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:25 pm
 Operator : TL1
 Sample : SEQ-CALB
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:22:14 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

Target Compounds

Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000

Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000

Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000

Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000

Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000

Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000

33) L7 Aroclor-1...	7.292f	8.639f	22391299	31530632	56.308m	58.440m
34) L7 Aroclor-1...	7.670f	8.929f	30159030	36233551	57.713m	57.418m
35) L7 Aroclor-1...	8.214f	9.646	34163847	19041630	56.848m	23.110m#
36) L7 Aroclor-1...	8.555f	9.991f	30025785	43328103	56.025m	57.769m
37) L7 Aroclor-1...	8.984f	10.339f	58434777	83366172	57.417m	57.760m
Sum Aroclor-1262			175.2E6	213.5E6	284.311	254.497
Average Aroclor-1262					56.862	50.899

Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000

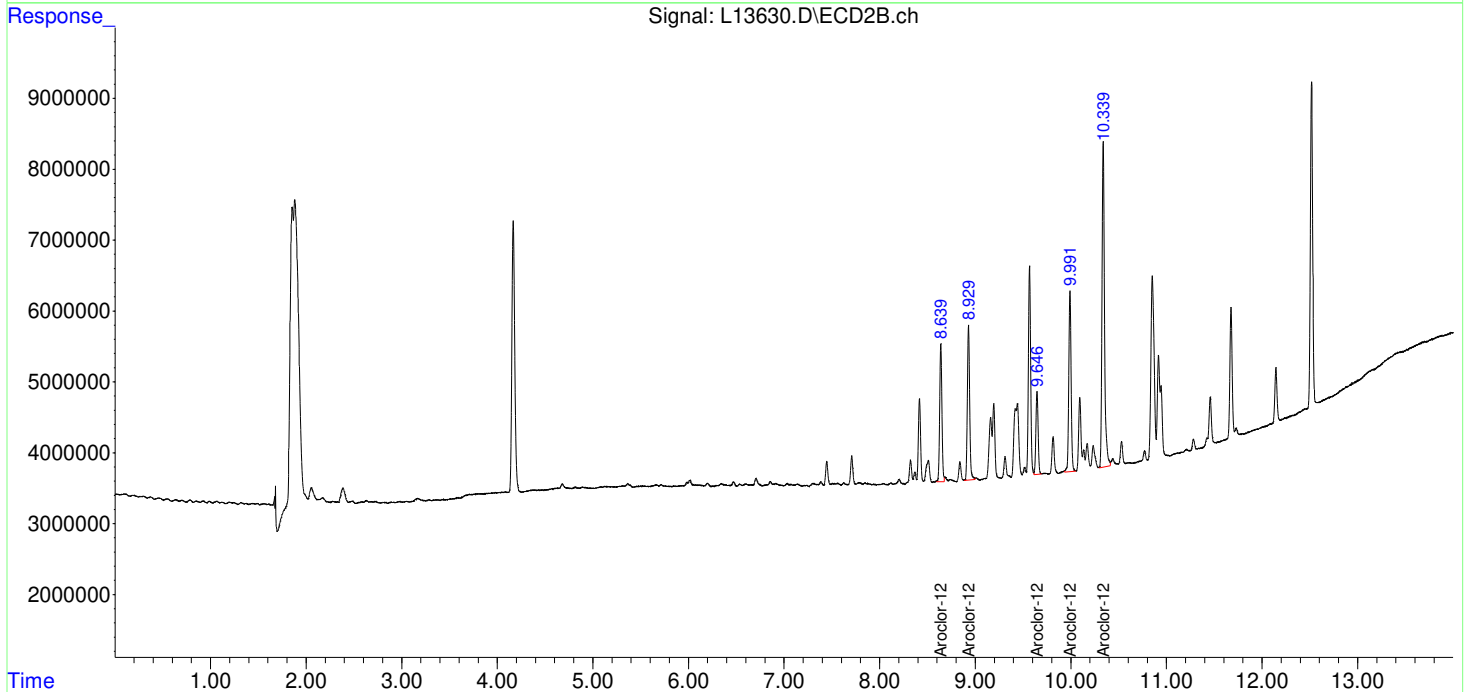
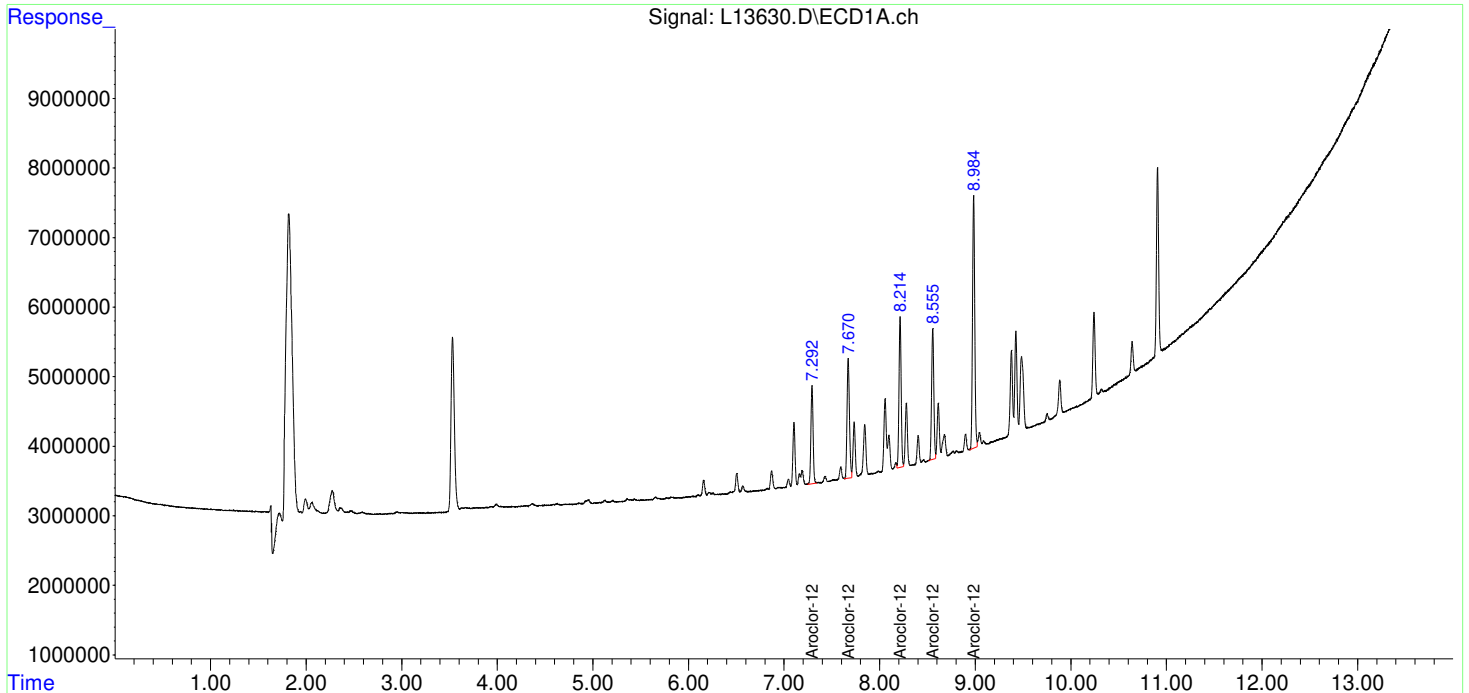
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13630.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:25 pm
 Operator : TL1
 Sample : SEQ-CALB
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:22:14 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13631.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:41 pm
 Operator : TL1
 Sample : SEQ-CALC
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:25:11 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

Target Compounds

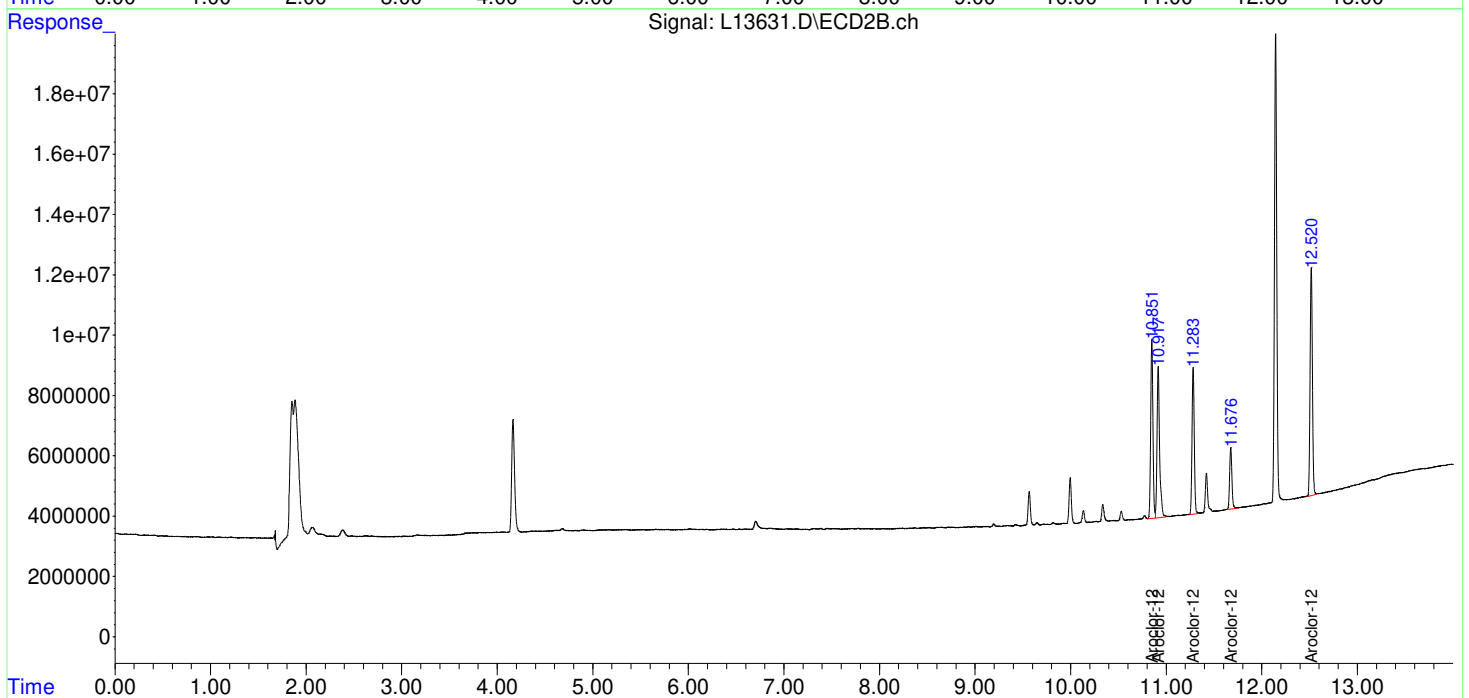
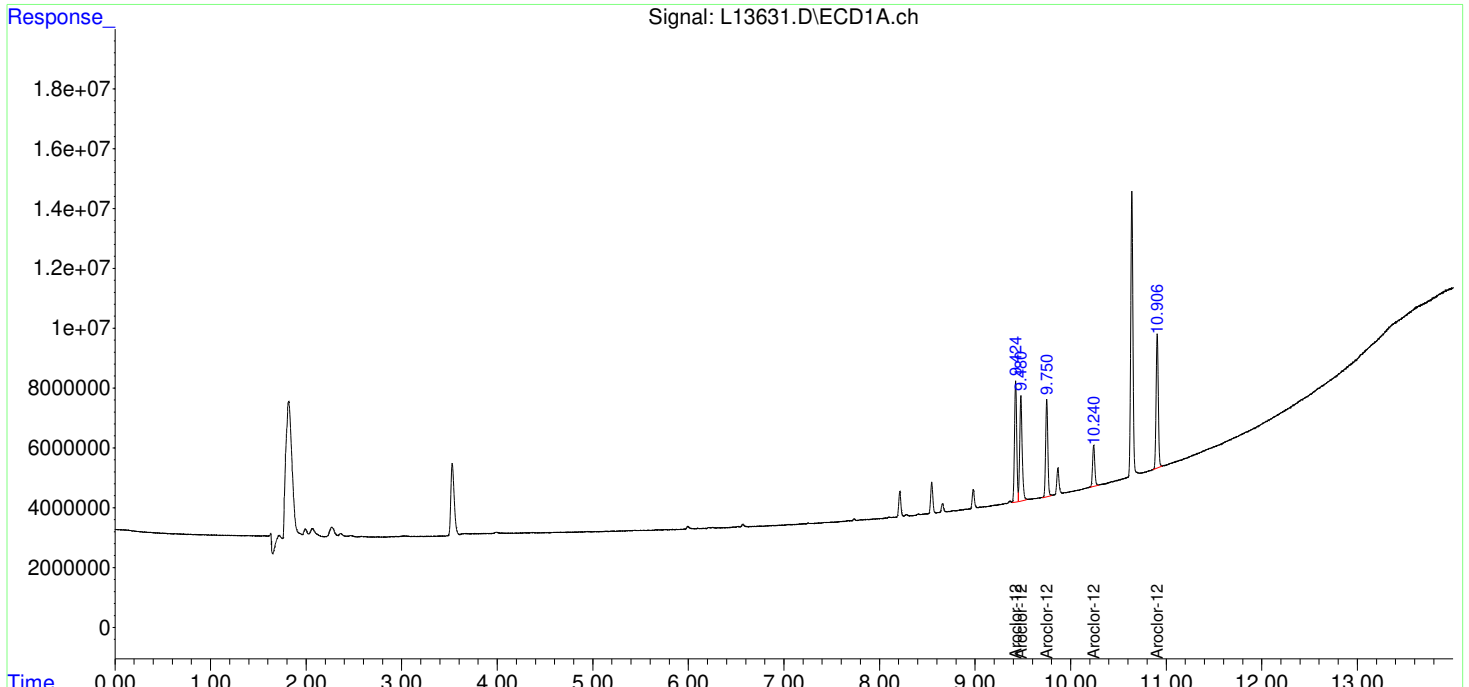
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
38) L8 Aroclor-1...	9.424f	10.851f	64739853	97178718	54.745m	55.565m
39) L8 Aroclor-1...	9.480f	10.917f	62083282	94280774	55.088m	56.271m
40) L8 Aroclor-1...	9.750f	11.283f	51443610	79090046	56.121m	55.995m
41) L8 Aroclor-1...	10.240f	11.676f	22137604	34334721	54.845m	55.809m
42) L8 Aroclor-1...	10.906f	12.520f	71440019	126.8E6	54.416m	55.103m
Sum Aroclor-1268			271.8E6	431.6E6	275.214	278.743
Average Aroclor-1268					55.043	55.749
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13631.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:41 pm
 Operator : TL1
 Sample : SEQ-CALC
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:25:11 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII

INITIAL CALIBRATION VERIFICATION

EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L13625.D	Calibration Date: 01/16/24 00:00
Sequence: SCA0465	Injection Date: 01/16/24
Lab Sample ID: SCA0465-ICV1	Injection Time: 22:04

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV
Aroclor-1016	A	50.00	48.6	452782.9	437674.2	-2.8	20
Aroclor-1260	A	50.00	46.6	716308	667207.2	-6.8	20
Tetrachloro-m-xylene	A	5.000	4.67	1.269474E+07	1.186843E+07	-6.6	20
Decachlorobiphenyl	A	5.000	4.64	8363450	7759872	-7.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.168	59342150	78381099	4.675	4.727
Spiked Amount	10.000	Range	60 - 120	Recovery	= 46.75%#	47.27%#
2) SA Decachlor...	10.908	12.520	38799363	70512983	4.639	4.666
Spiked Amount	10.000	Range	60 - 120	Recovery	= 46.39%#	46.66%#
Target Compounds						
3) L1 Aroclor-1...	3.939	4.811	13859686	17491536	51.446	49.496
4) L1 Aroclor-1...	4.367	5.366	25883501	36139906	48.088m	46.612
5) L1 Aroclor-1...	4.954	6.012	31562750	41331826	48.198	46.850
6) L1 Aroclor-1...	5.123	6.199	21647523	27477708	47.439m	46.524m
7) L1 Aroclor-1...	5.655	6.854	16465073	22375890	47.713	46.194
Sum Aroclor-1016			109.4E6	144.8E6	242.885	235.676
Average Aroclor-1016					48.577	47.135
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.639	26980059	38343729	48.357	48.669m
44) L9 Aroclor-1...	7.671	8.929	39091530	43264591	46.615	47.087
45) L9 Aroclor-1...	8.058	9.568	30473912	31481769	44.365m	47.746
46) L9 Aroclor-1...	8.556	9.991	21974952	33959169	46.588m	48.838
47) L9 Aroclor-1...	8.982	10.338	48281346	69178793	47.039m	45.685
Sum Aroclor-1260			166.8E6	216.2E6	232.963	238.024
Average Aroclor-1260					46.593	47.605

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

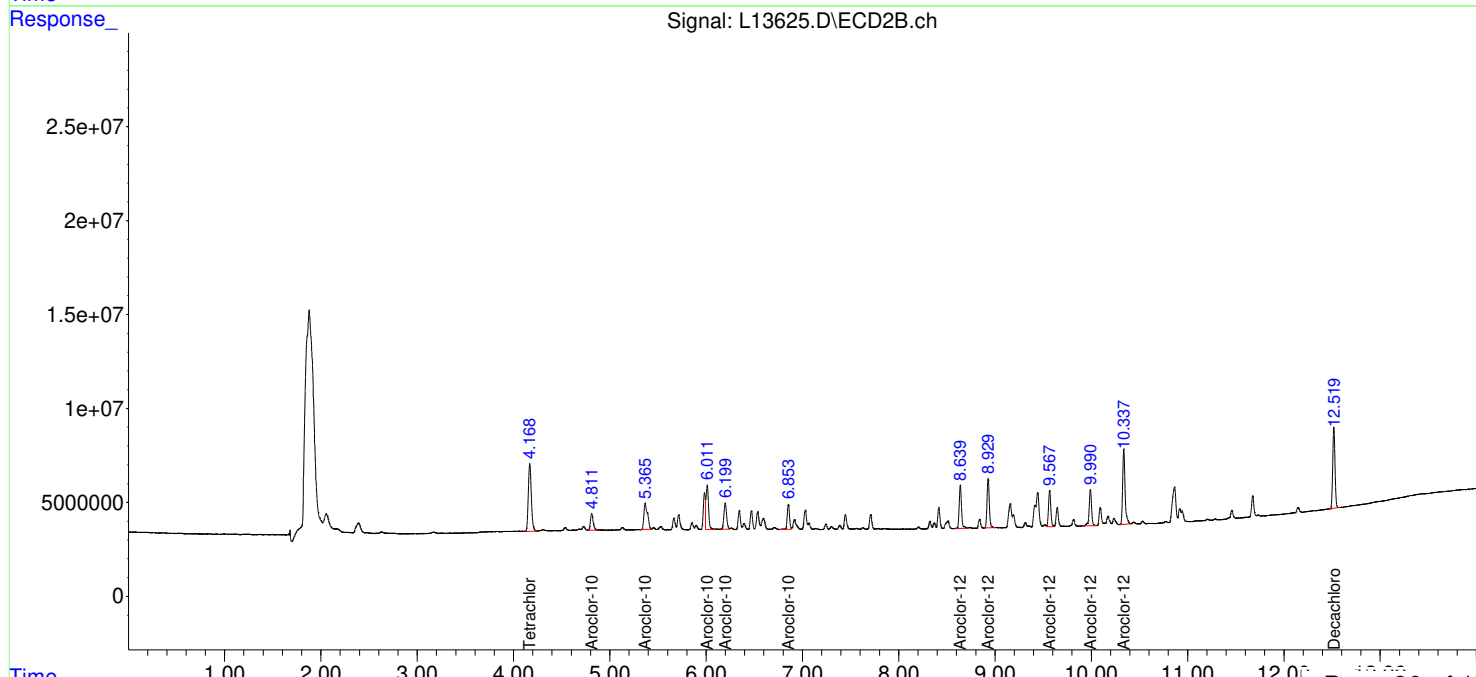
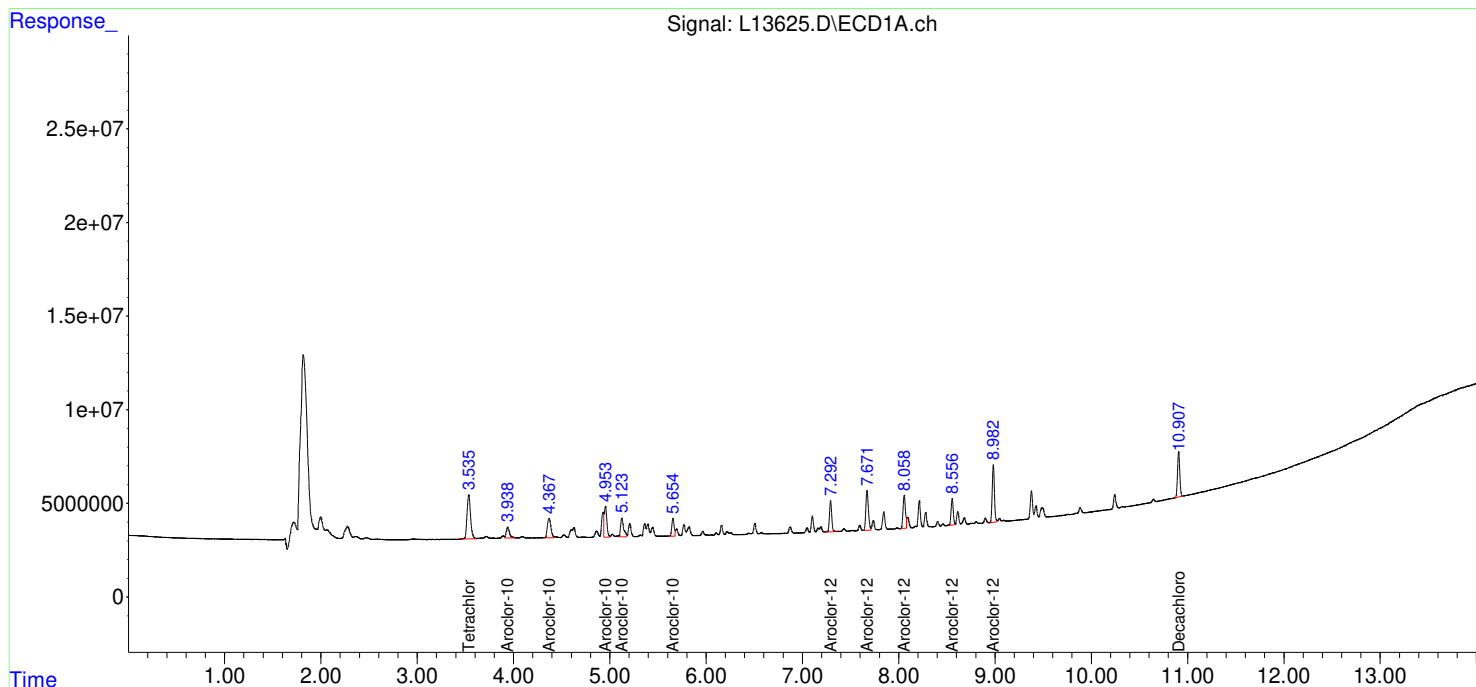
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

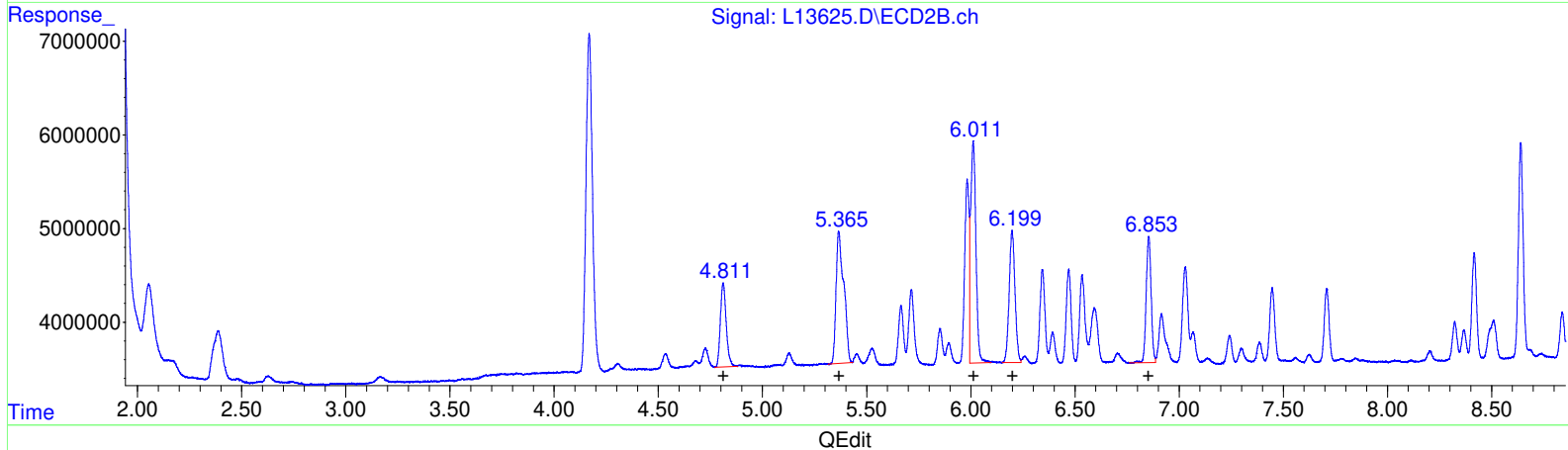
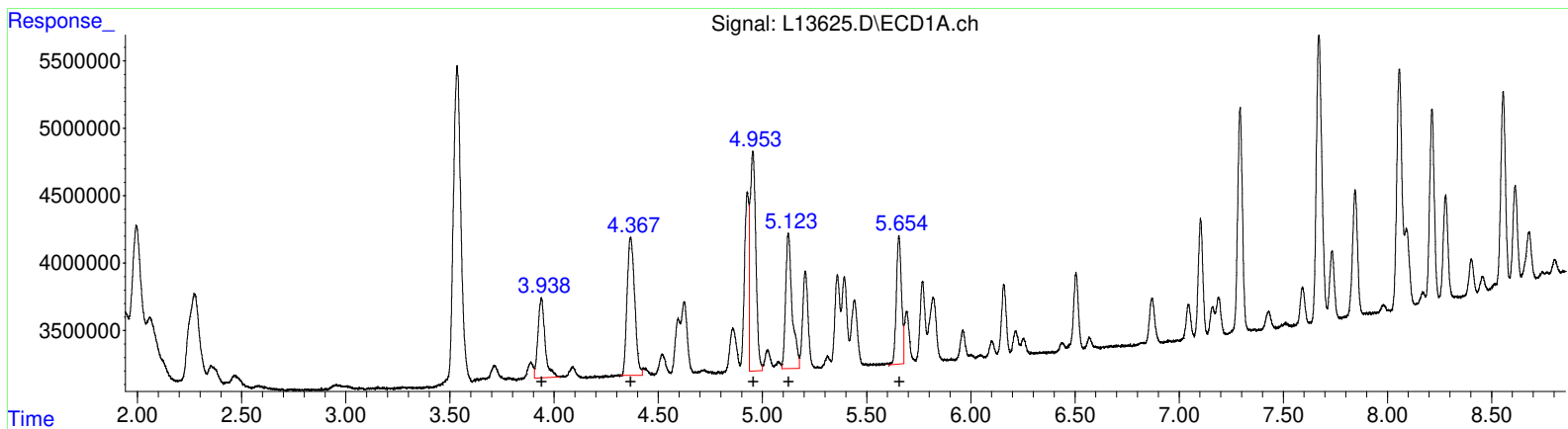
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



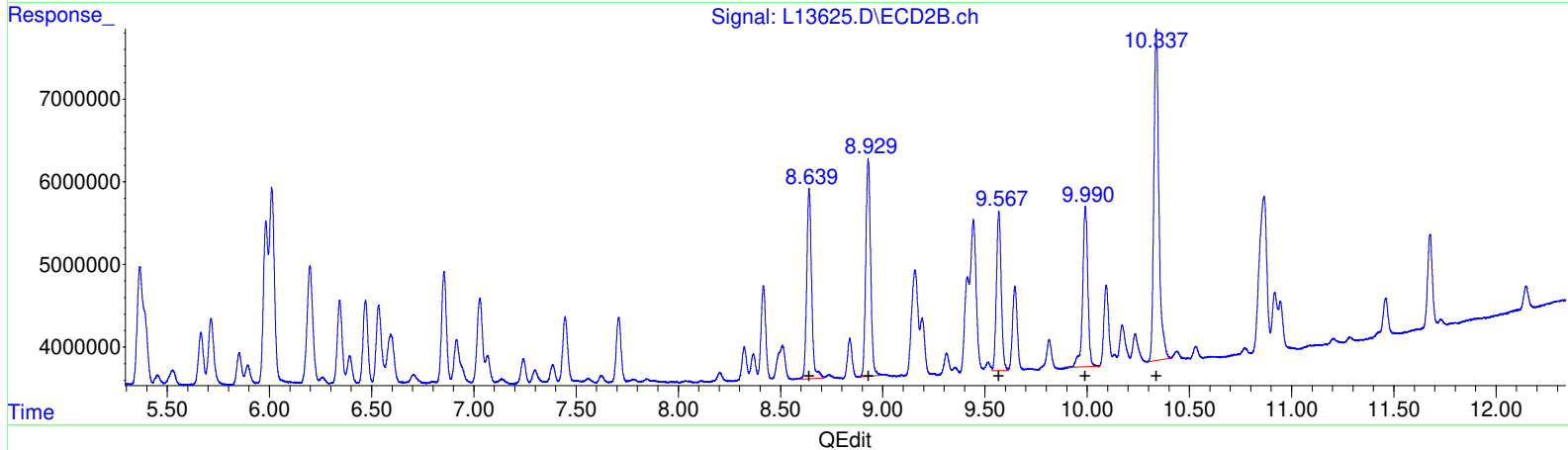
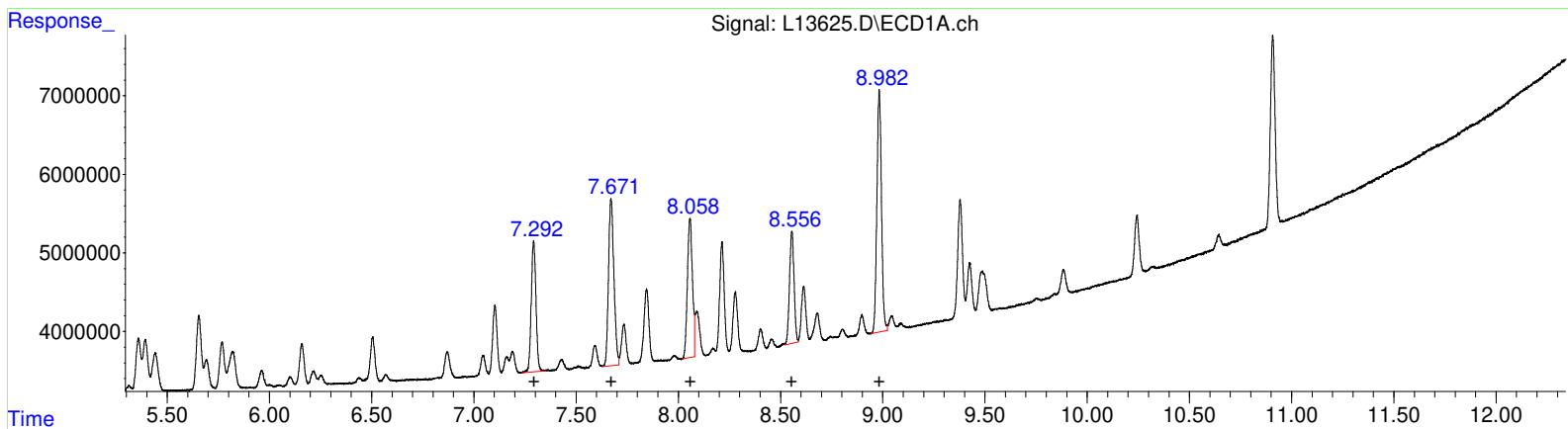
QEdit

(3) Aroclor-1016{1} (L1)			
R.T.	Response	Conc	
3.94	13859686	51.45	
4.37	25883501	48.09	
4.95	31562750	48.20	
5.12	21647523	47.44	
5.65	16465073	47.71	
(3) Aroclor-1016{1} #2 (L1)			
R.T.	Response	Conc	
4.81	17491536	49.50	
5.37	36139906	46.61	
6.01	41331826	46.85	
6.20	27477708	46.52	
6.85	22375890	46.19	

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



QEdit

(43) Aroclor-1260{1} (L9)			
R.T.	Response	Conc	
7.29	26980059	48.36	
7.67	39091530	46.61	
8.06	30473912	44.36	
8.56	21974952	46.59	
8.98	48281346	47.04	
(43) Aroclor-1260{1} #2 (L9)			
R.T.	Response	Conc	
8.64	38343729	48.67	
8.93	43264591	47.09	
9.57	31481769	47.75	
9.99	33959169	48.84	
10.34	69178793	45.68	

7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L13632.D	Calibration Date: 01/16/24 00:00
Sequence: SCA0465	Injection Date: 01/16/24
Lab Sample ID: SCA0465-CCV1	Injection Time: 23:57

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016	A	50.00	48.7	452782.9			-2.6	20
Aroclor-1260	A	50.00	47.1	716308			-5.8	20
Tetrachloro-m-xylene	A	5.000	4.58	1.269474E+07	1.163827E+07		-8.3	20
Decachlorobiphenyl	A	5.000	4.70	8363450	7862736		-6.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13632.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:57 pm
 Operator : TL1
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:32:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:30:51 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

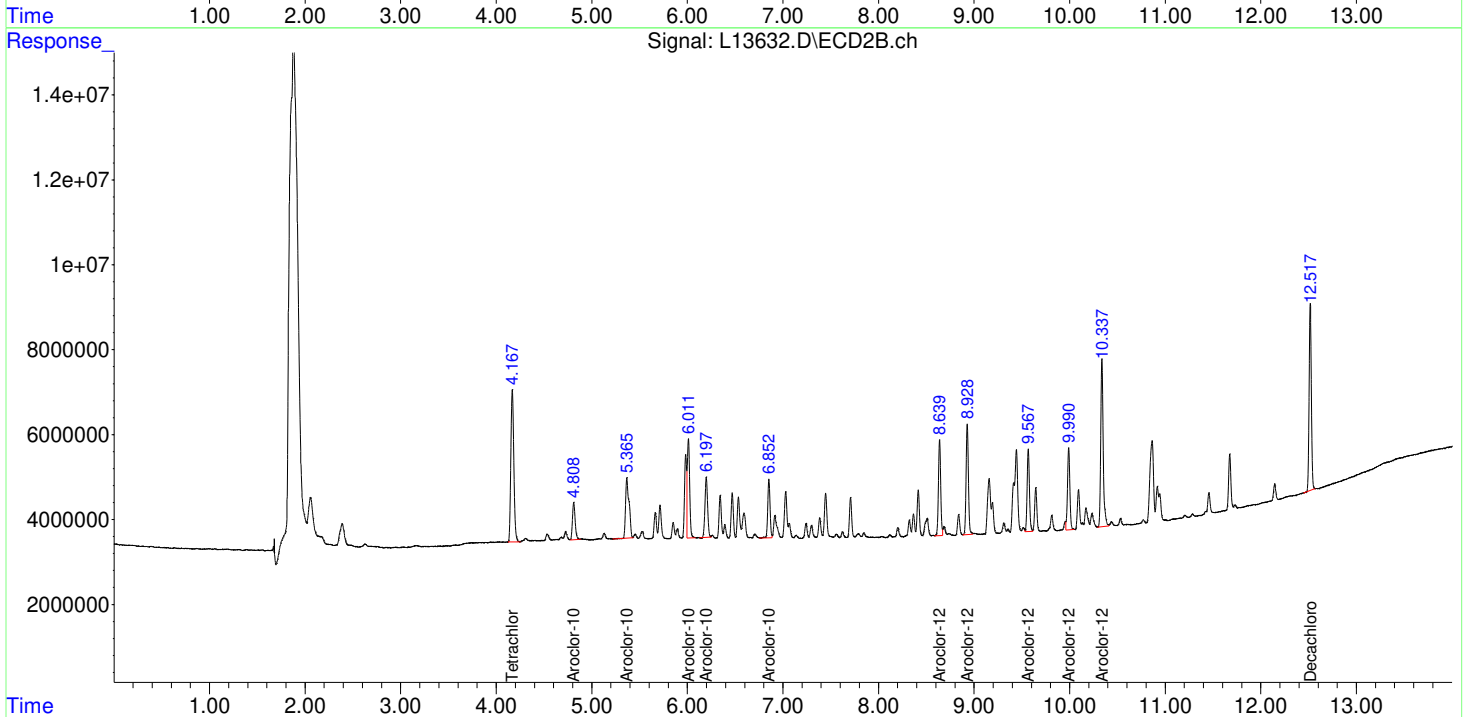
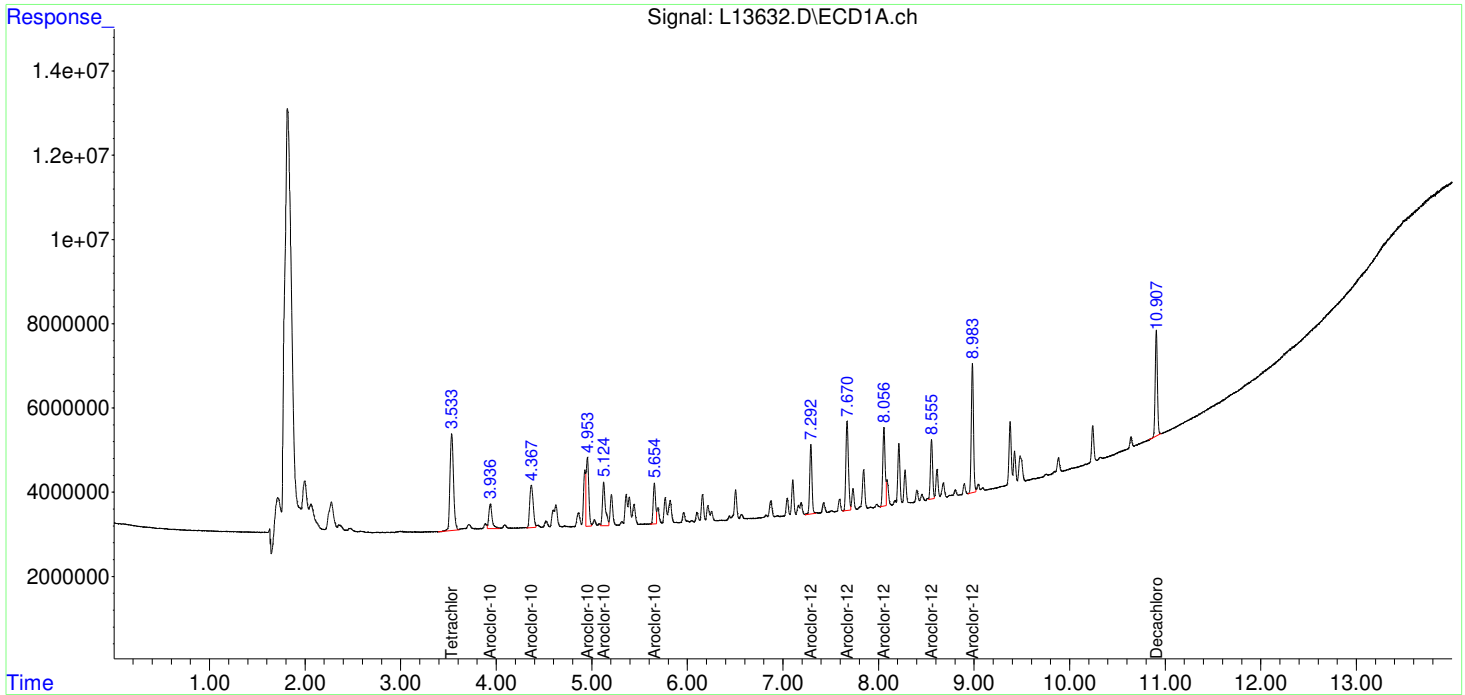
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.168	58191352	77519653	4.584	4.675
Spiked Amount	10.000 Range	60 - 120	Recovery =		45.84%#	46.75%#
2) SA Decachlor...	10.908	12.518	39313685	70549863	4.701	4.668
Spiked Amount	10.000 Range	60 - 120	Recovery =		47.01%#	46.68%#
Target Compounds						
3) L1 Aroclor-1...	3.937	4.810	13772637	17077786	51.123	48.325
4) L1 Aroclor-1...	4.367	5.366	25556144	35973778	47.479m	46.398
5) L1 Aroclor-1...	4.953	6.011	31568117	40580878	48.207	45.999
6) L1 Aroclor-1...	5.124	6.197	22084461	27101717	48.397m	45.887
7) L1 Aroclor-1...	5.654	6.853	16655911	23140638	48.266	47.772
Sum Aroclor-1016			109.6E6	143.9E6	243.472	234.382
Average Aroclor-1016					48.694	46.876
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.292	8.639	26594213	37127005	47.666	47.124m
44) L9 Aroclor-1...	7.671	8.928	39410325	43697290	46.995	47.557m
45) L9 Aroclor-1...	8.056	9.567	31971939	32314798	46.545m	49.010
46) L9 Aroclor-1...	8.555	9.990	22178282	32951533	47.019m	47.389m
47) L9 Aroclor-1...	8.983	10.337	48486988	70504027	47.239m	46.560m
Sum Aroclor-1260			168.6E6	216.6E6	235.464	237.640
Average Aroclor-1260					47.093	47.528

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13632.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:57 pm
 Operator : TL1
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:32:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:30:51 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory:	EMSL-CIN-01	Work Order:	AC15354
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Instrument ID:	GCECD-L	Calibration:	AA40009
Lab File ID:	L14366.D	Calibration Date:	01/16/24 00:00
Sequence:	SCE0475	Injection Date:	05/02/24
Lab Sample ID:	SCE0475-CCV1	Injection Time:	15:20

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	53.4	452782.9	479704	6.9	20
Aroclor-1260	A	50.00	52.3	716308	747488.2	4.6	20
Tetrachloro-m-xylene	A	5.000	5.07	1.269474E+07	1.288214E+07	1.4	20
Decachlorobiphenyl	A	5.000	5.04	8363450	8430578	0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

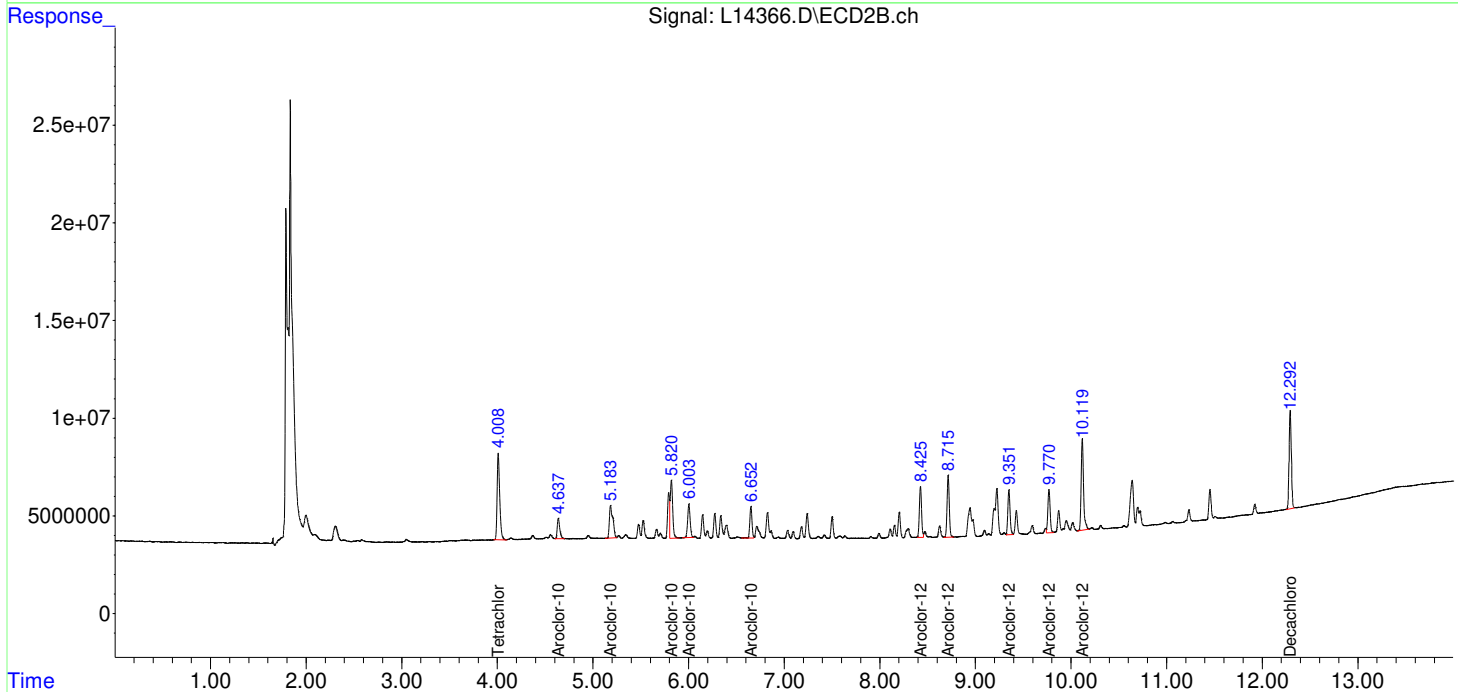
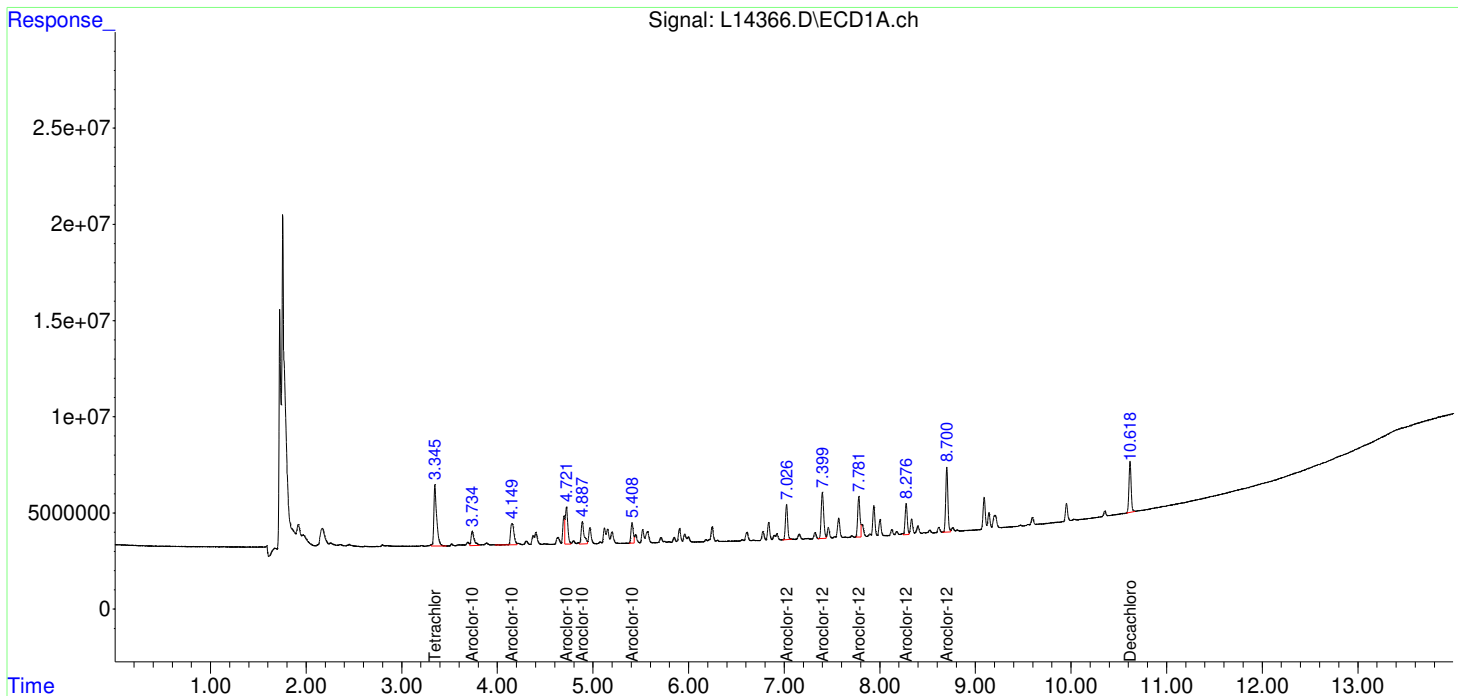
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.345f	4.008f	64410680	83319291	5.074	5.024
Spiked Amount	10.000 Range	60 - 120	Recovery =		50.74%#	50.24%#
2) SA Decachlor...	10.618f	12.292f	42152889	82605077	5.040m	5.466m
Spiked Amount	10.000 Range	60 - 120	Recovery =		50.40%#	54.66%#
Target Compounds						
3) L1 Aroclor-1...	3.735f	4.637f	15896515	18698588	59.007	52.912
4) L1 Aroclor-1...	4.150f	5.183f	27757602	40926399	51.569	52.786
5) L1 Aroclor-1...	4.722f	5.820	34622617	51617755	52.871	58.510
6) L1 Aroclor-1...	4.887f	6.003f	24061332	31275190	52.729	52.953
7) L1 Aroclor-1...	5.408f	6.652	17587940	25398881	50.967m	52.434
Sum Aroclor-1016			119.9E6	167.9E6	267.143	269.595
Average Aroclor-1016					53.429	53.919
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.425	28707878	41307378	51.454	52.431m
44) L9 Aroclor-1...	7.399	8.715	43730577	50365957	52.147	54.815
45) L9 Aroclor-1...	7.781	9.351	35303948	36766763	51.396m	55.762
46) L9 Aroclor-1...	8.276	9.770	25602339	37111230	54.278	53.371
47) L9 Aroclor-1...	8.701f	10.119	53527312	80564019	52.150	53.203
Sum Aroclor-1260			186.9E6	246.1E6	261.425	269.582
Average Aroclor-1260					52.285	53.916

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

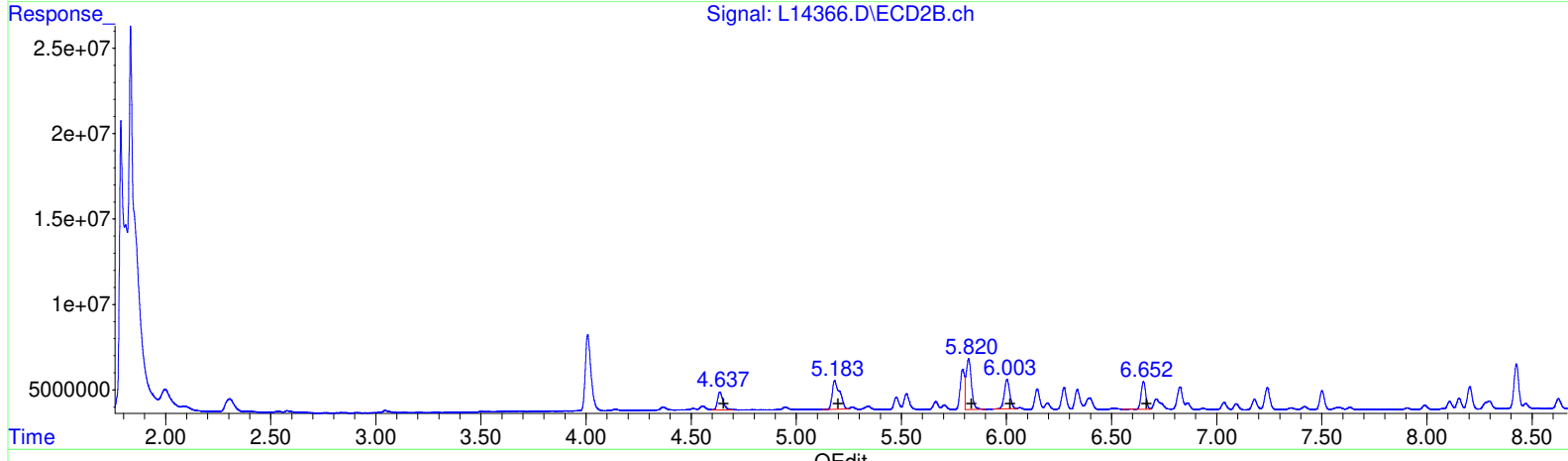
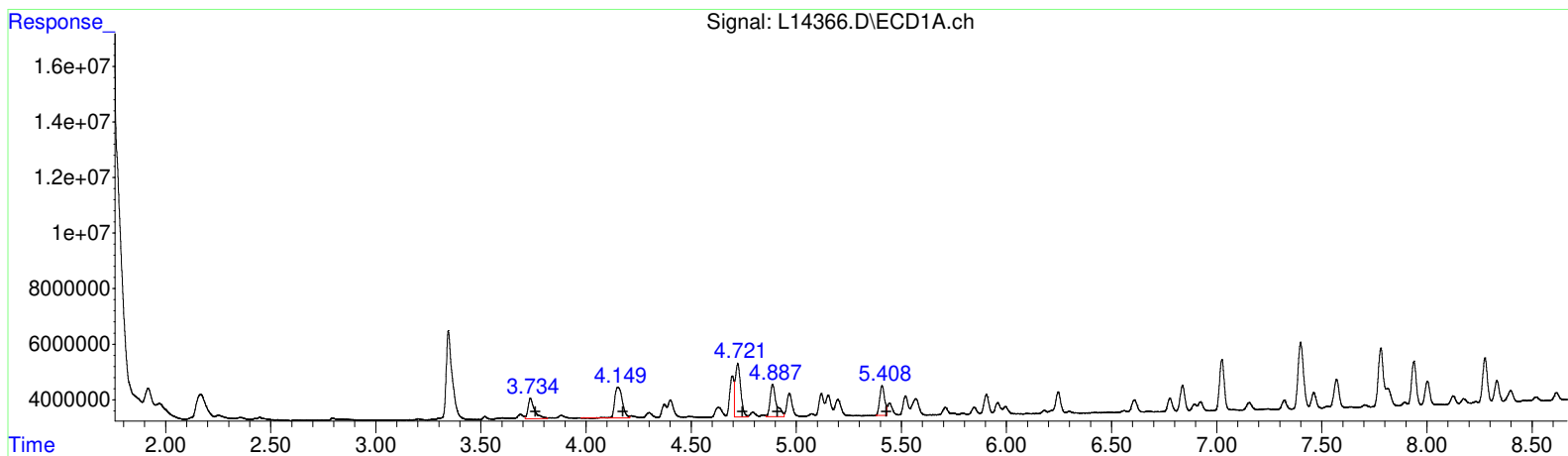
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



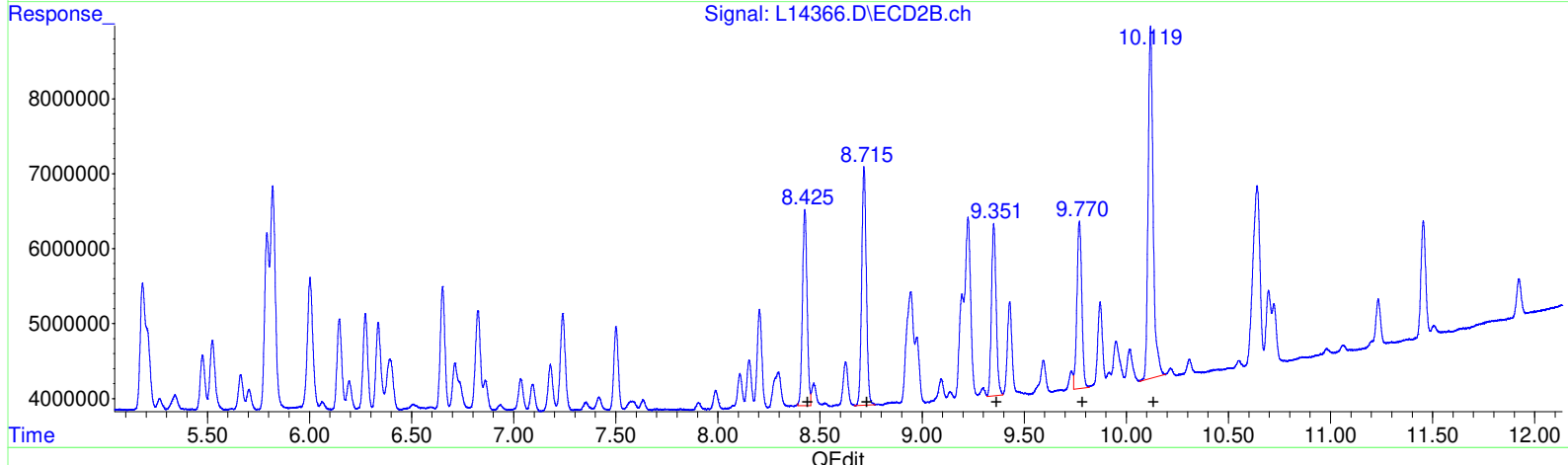
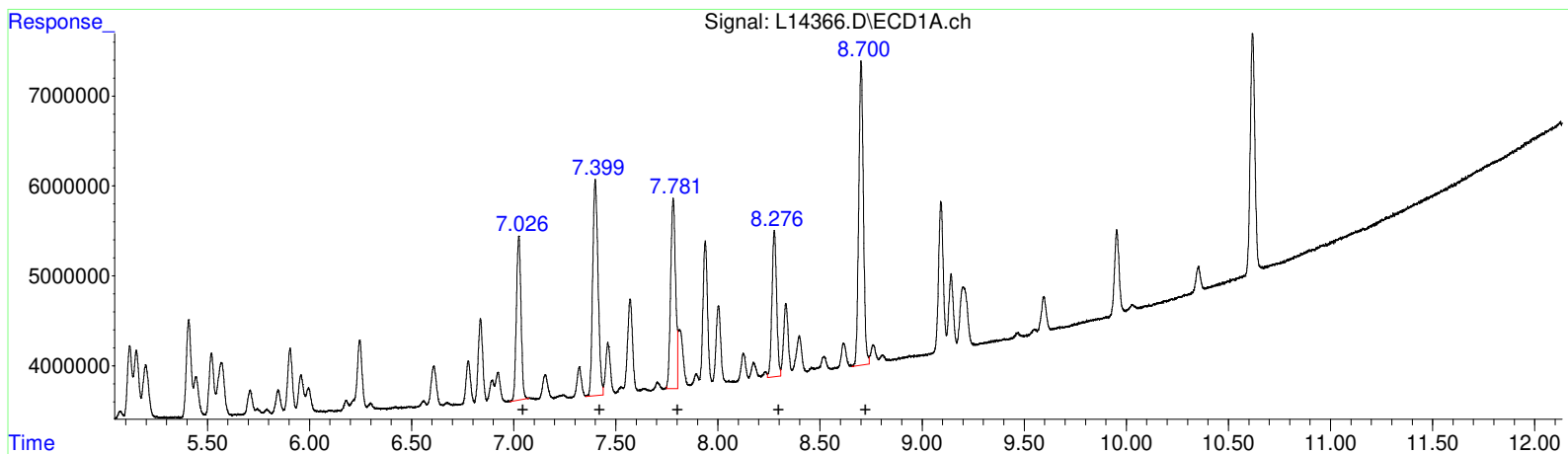
(3) Aroclor-1016{1} (L1)			
R.T.	Response	Conc	
3.73	15896515	59.01	
4.15	27757602	51.57	
4.72	34622617	52.87	
4.89	24061332	52.73	
5.41	17587940	50.97	
(3) Aroclor-1016{1} #2 (L1)			
R.T.	Response	Conc	
4.64	18698588	52.91	
5.18	40926399	52.79	
5.82	51617755	58.51	
6.00	31275190	52.95	
6.65	25398881	52.43	

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)		
R.T.	Response	Conc
7.03	28707878	51.45
7.40	43730577	52.15
7.78	35303948	51.40
8.28	25602339	54.28
8.70	53527312	52.15
(43) Aroclor-1260{1} #2 (L9)		
R.T.	Response	Conc
8.43	41307378	52.43
8.72	50365957	54.82
9.35	36766763	55.76
9.77	37111230	53.37
10.12	80564019	53.20

(+) = Expected Retention Time

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L14377.D	Calibration Date: 01/16/24 00:00
Sequence: SCE0475	Injection Date: 05/02/24
Lab Sample ID: SCE0475-CCV2	Injection Time: 19:41

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	51.8	452782.9	466667.4	3.6	20
Aroclor-1260	A	50.00	52.0	716308	741697.6	3.9	20
Tetrachloro-m-xylene	A	5.000	4.97	1.269474E+07	1.262479E+07	-0.6	20
Decachlorobiphenyl	A	5.000	4.92	8363450	8235140	-1.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

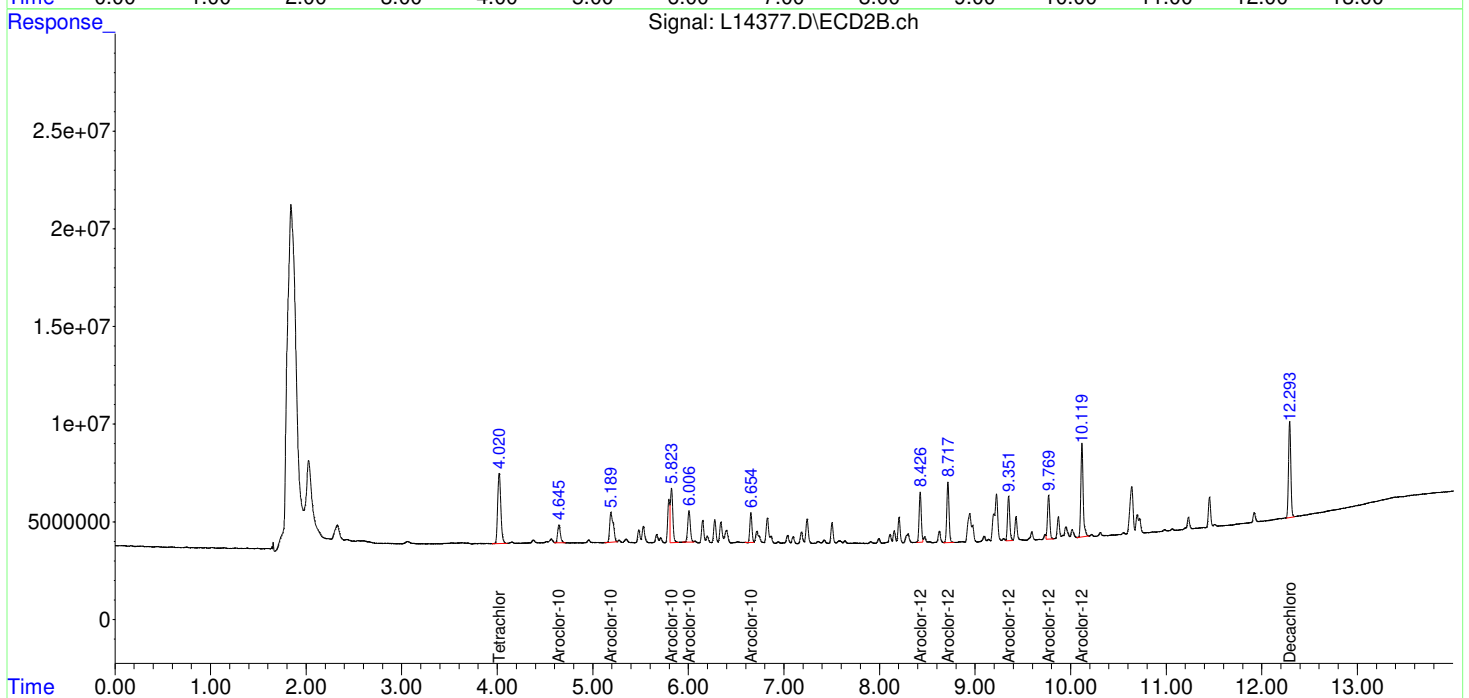
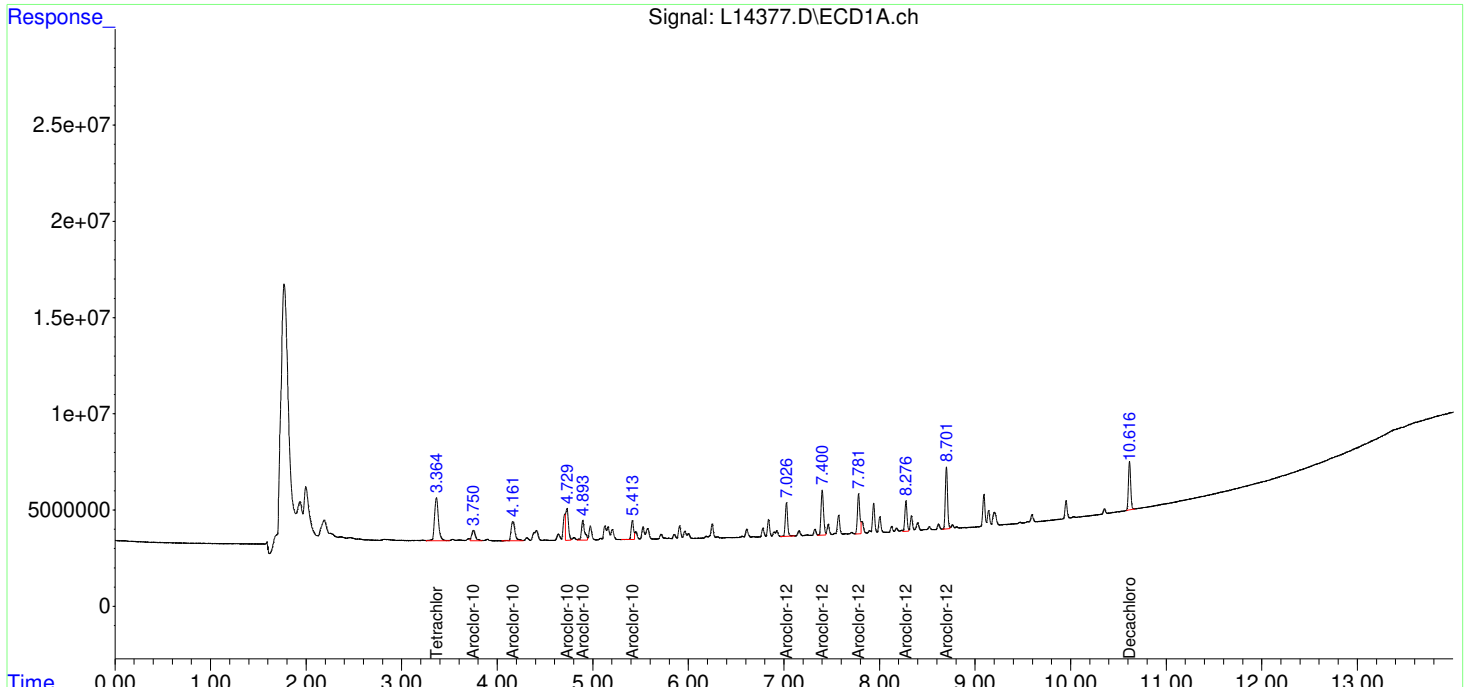
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.363	4.020	63123948	82508139	4.972	4.975
Spiked Amount	10.000 Range	60 - 120	Recovery	=	49.72%#	49.75%#
2) SA Decachlor...	10.616f	12.293f	41175700	81513494	4.923m	5.393m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	49.23%#	53.93%#
Target Compounds						
3) L1 Aroclor-1...	3.749	4.645	14599265	18565097	54.191	52.534
4) L1 Aroclor-1...	4.162	5.189	27941792	39310158	51.912	50.701
5) L1 Aroclor-1...	4.729	5.824	33072454	49401375	50.504m	55.997
6) L1 Aroclor-1...	4.894f	6.006	23560889	30329977	51.632	51.353
7) L1 Aroclor-1...	5.414f	6.654	17492432	23675623	50.690	48.877
Sum Aroclor-1016			116.7E6	161.3E6	258.929	259.462
Average Aroclor-1016					51.786	51.892
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.027	8.426	28880278	40336838	51.763	51.199m
44) L9 Aroclor-1...	7.401	8.716	42811212	50586973	51.050	55.056
45) L9 Aroclor-1...	7.781	9.351	36014306	36628737	52.430m	55.553
46) L9 Aroclor-1...	8.277	9.770	25176249	36514066	53.375	52.512
47) L9 Aroclor-1...	8.701f	10.119	52542339	80142071	51.190	52.925
Sum Aroclor-1260			185.4E6	244.2E6	259.809	267.244
Average Aroclor-1260					51.962	53.449

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

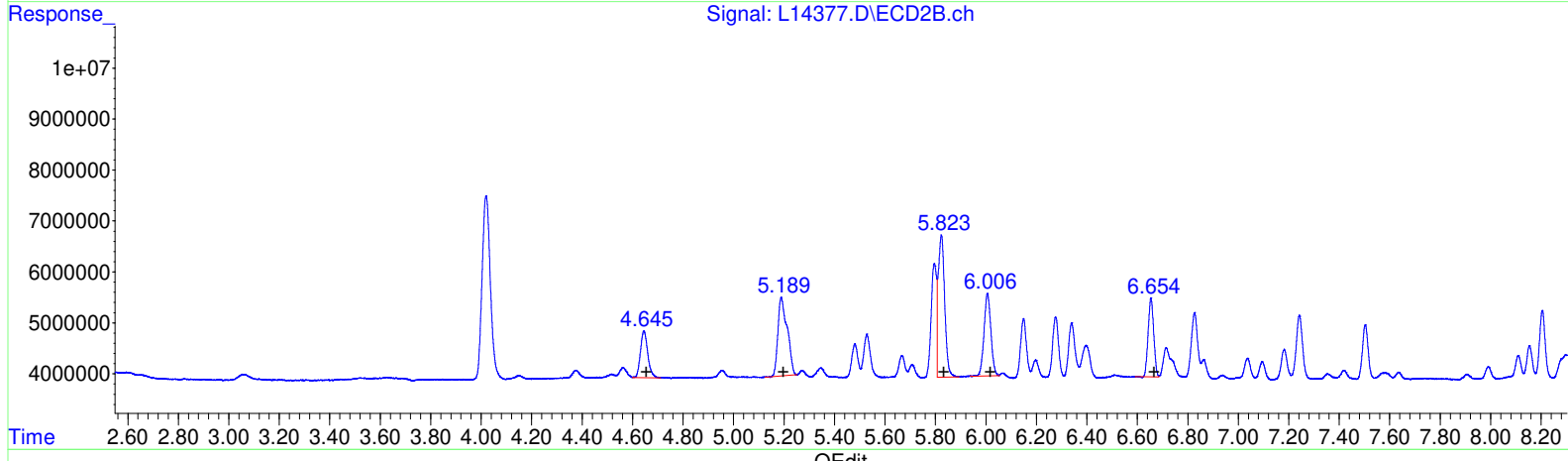
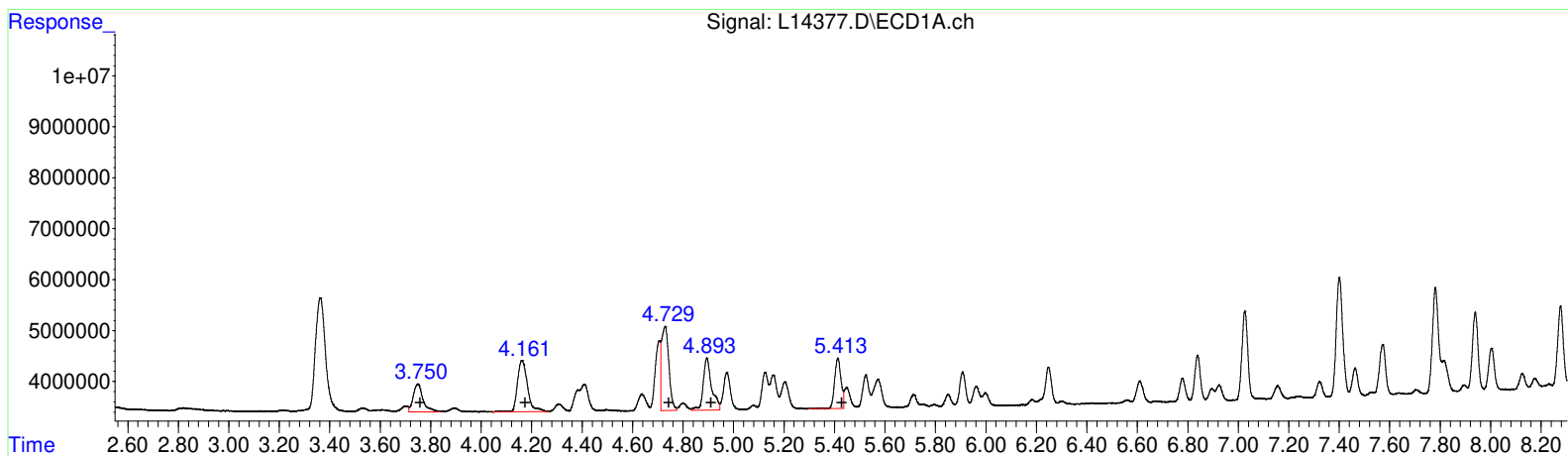
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



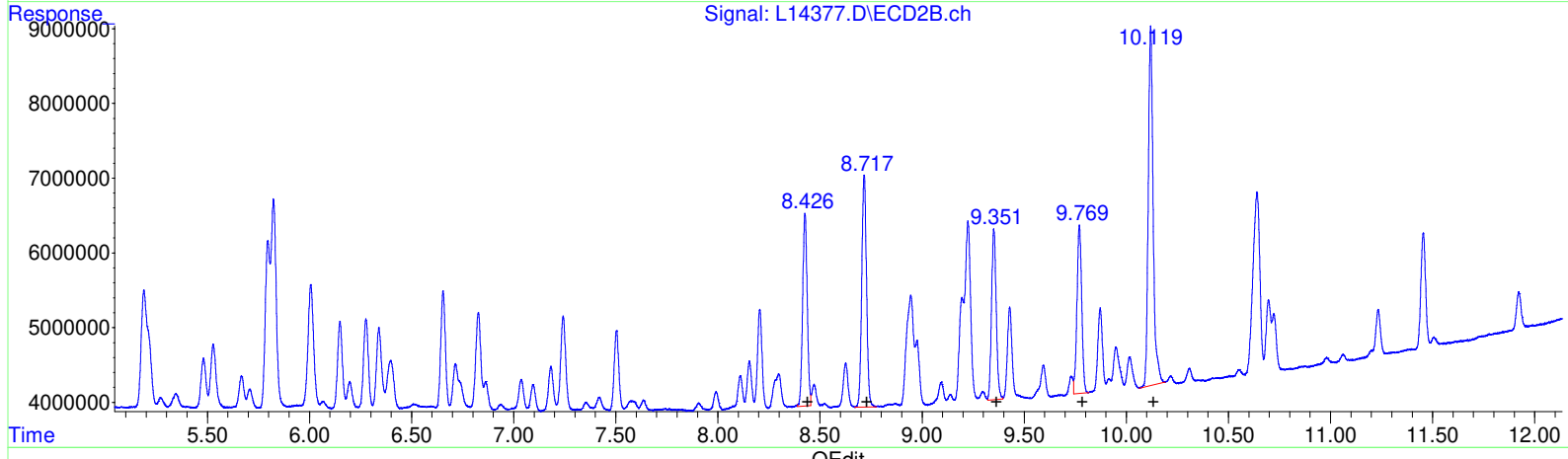
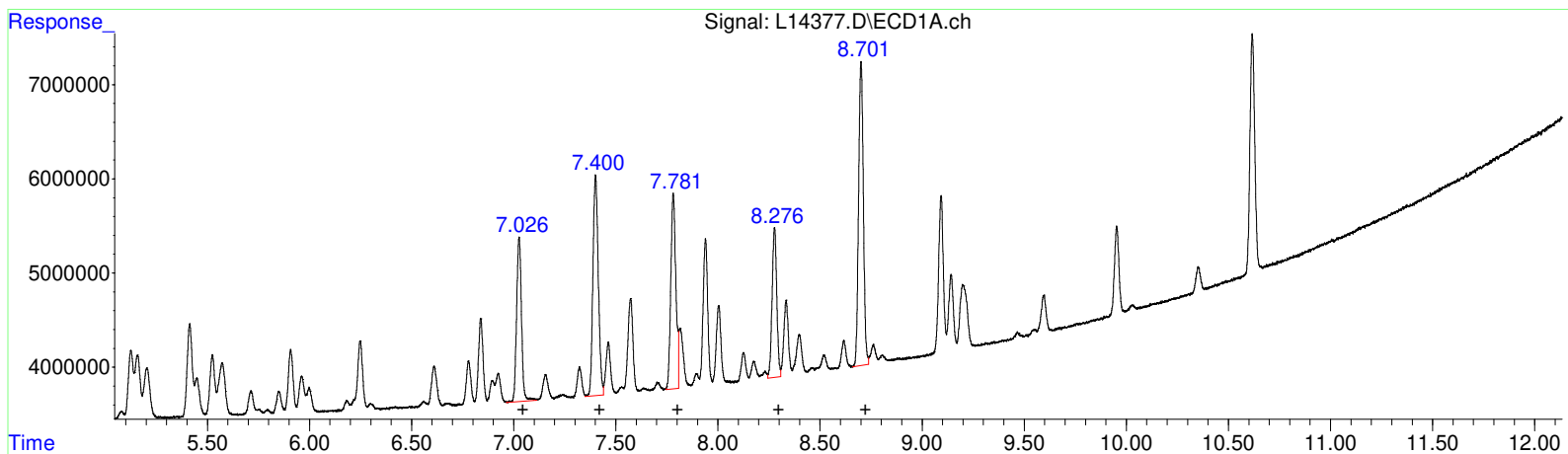
(3) Aroclor-1016{1} (L1)		
R.T.	Response	Conc
3.75	14599265	54.19
4.16	27941792	51.91
4.73	33072454	50.50
4.89	23560889	51.63
5.41	17492432	50.69
(3) Aroclor-1016{1} #2 (L1)		
R.T.	Response	Conc
4.65	18565097	52.53
5.19	39310158	50.70
5.82	49401375	56.00
6.01	30329977	51.35
6.65	23675623	48.88

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)			
R.T.	Response	Conc	
7.03	28880278	51.76	
7.40	42811212	51.05	
7.78	36014306	52.43	
8.28	25176249	53.37	
8.70	52542339	51.19	
(43) Aroclor-1260{1} #2 (L9)			
R.T.	Response	Conc	
8.43	40336838	51.20	
8.72	50586973	55.06	
9.35	36628737	55.55	
9.77	36514066	52.51	
10.12	80142071	52.92	

(+) = Expected Retention Time

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

EPA TO-10A

Laboratory:	EMSL-CIN-01	Work Order:	AC15354
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Instrument ID:	GCECD-L	Calibration:	AA40009
Lab File ID:	L14388.D	Calibration Date:	01/16/24 00:00
Sequence:	SCE0475	Injection Date:	05/02/24
Lab Sample ID:	SCE0475-CCV3	Injection Time:	22:38

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	50.0	452782.9	455670.6	0.05	20
Aroclor-1260	A	50.00	48.6	716308	692917.2	-2.9	20
Tetrachloro-m-xylene	A	5.000	4.83	1.269474E+07	1.227057E+07	-3.4	20
Decachlorobiphenyl	A	5.000	4.57	8363450	7646686	-8.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14388.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:38 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:11:56 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

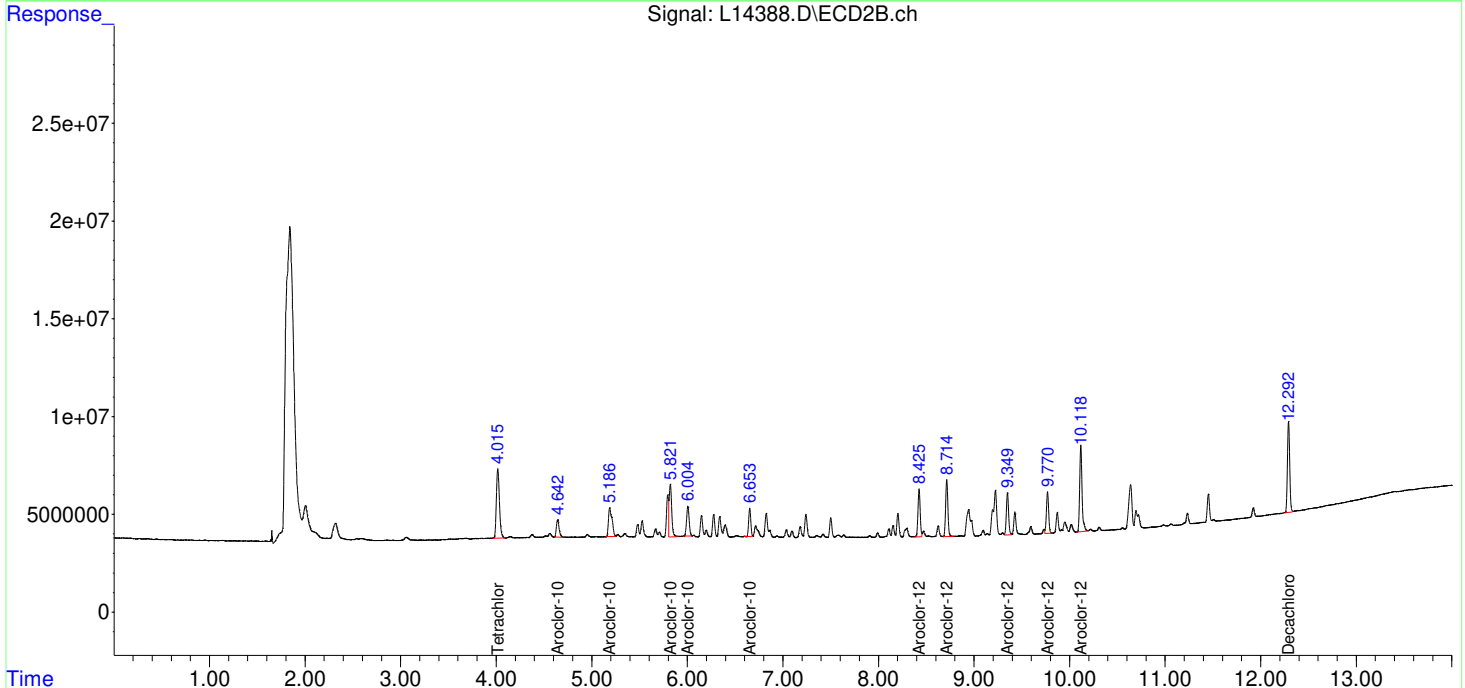
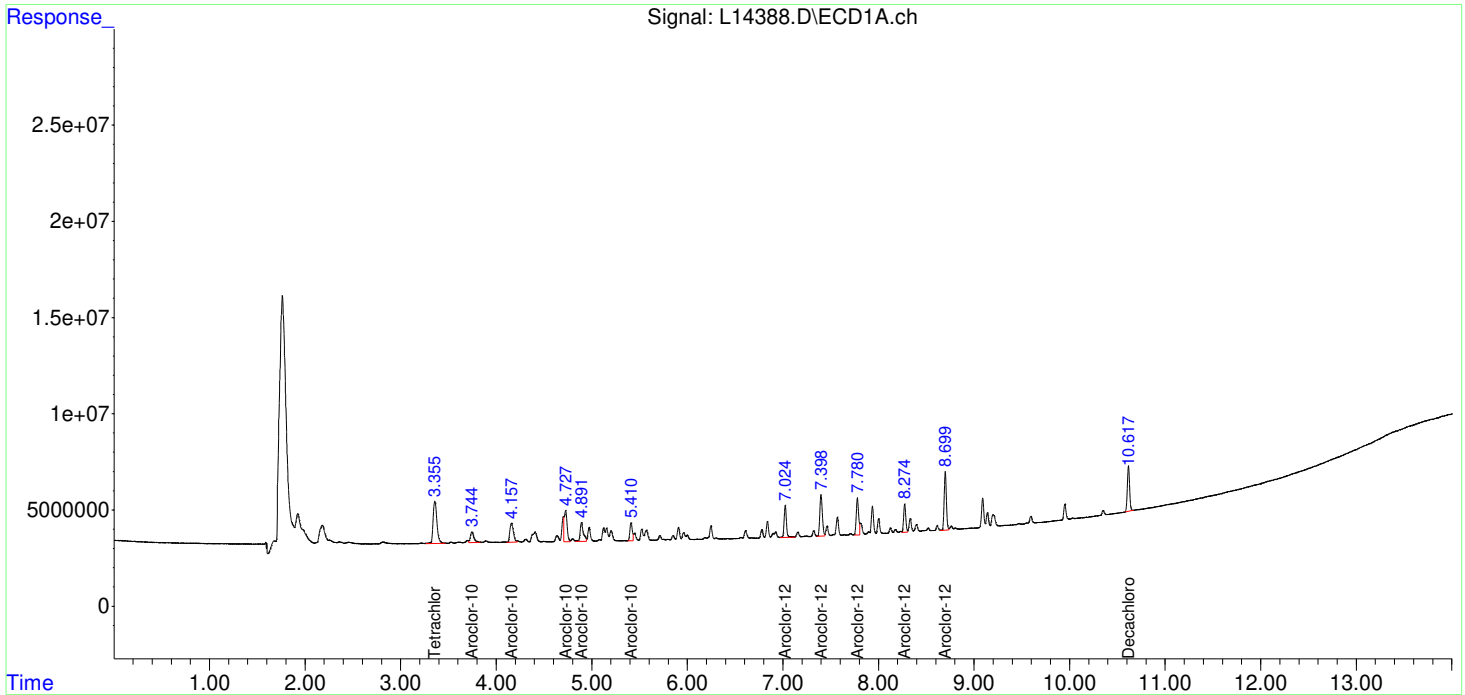
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.356	4.016	61352871	79140391	4.833	4.772
Spiked Amount	10.000 Range	60 - 120	Recovery	=	48.33%#	47.72%#
2) SA Decachlor...	10.617f	12.292f	38233427	76688476	4.571m	5.074m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	45.71%#	50.74%#
Target Compounds						
3) L1 Aroclor-1...	3.745	4.642	13585275	17588531	50.427	49.771
4) L1 Aroclor-1...	4.158f	5.187	25953703	38052821	48.218	49.079
5) L1 Aroclor-1...	4.726f	5.822	34932081	49241370	53.344m	55.816
6) L1 Aroclor-1...	4.892f	6.005	22907282	28710100	50.200	48.610
7) L1 Aroclor-1...	5.410f	6.653	16539320	22755385	47.928m	46.977
Sum Aroclor-1016			113.9E6	156.3E6	250.117	250.254
Average Aroclor-1016					50.023	50.051
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.425	27455564	39274381	49.210	49.850m
44) L9 Aroclor-1...	7.399	8.715	39934559	47175346	47.620	51.343
45) L9 Aroclor-1...	7.780	9.350	33713798	34595522	49.081m	52.469
46) L9 Aroclor-1...	8.275	9.770	23254220	34123596	49.300	49.074
47) L9 Aroclor-1...	8.700f	10.118f	48871156	75584222	47.613	49.915
Sum Aroclor-1260			173.2E6	230.8E6	242.824	252.651
Average Aroclor-1260					48.565	50.530

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14388.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:38 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:11:56 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L14393.D	Calibration Date: 01/16/24 00:00
Sequence: SCE0475	Injection Date: 05/02/24
Lab Sample ID: SCE0475-CCV4	Injection Time: 23:59

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	52.5	452782.9	467197.4	5.1	20
Aroclor-1260	A	50.00	52.0	716308	742328.2	4.0	20
Tetrachloro-m-xylene	A	5.000	5.13	1.269474E+07	1.302373E+07	2.6	20
Decachlorobiphenyl	A	5.000	5.00	8363450	8356972	0.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14393.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:59 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:12:31 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

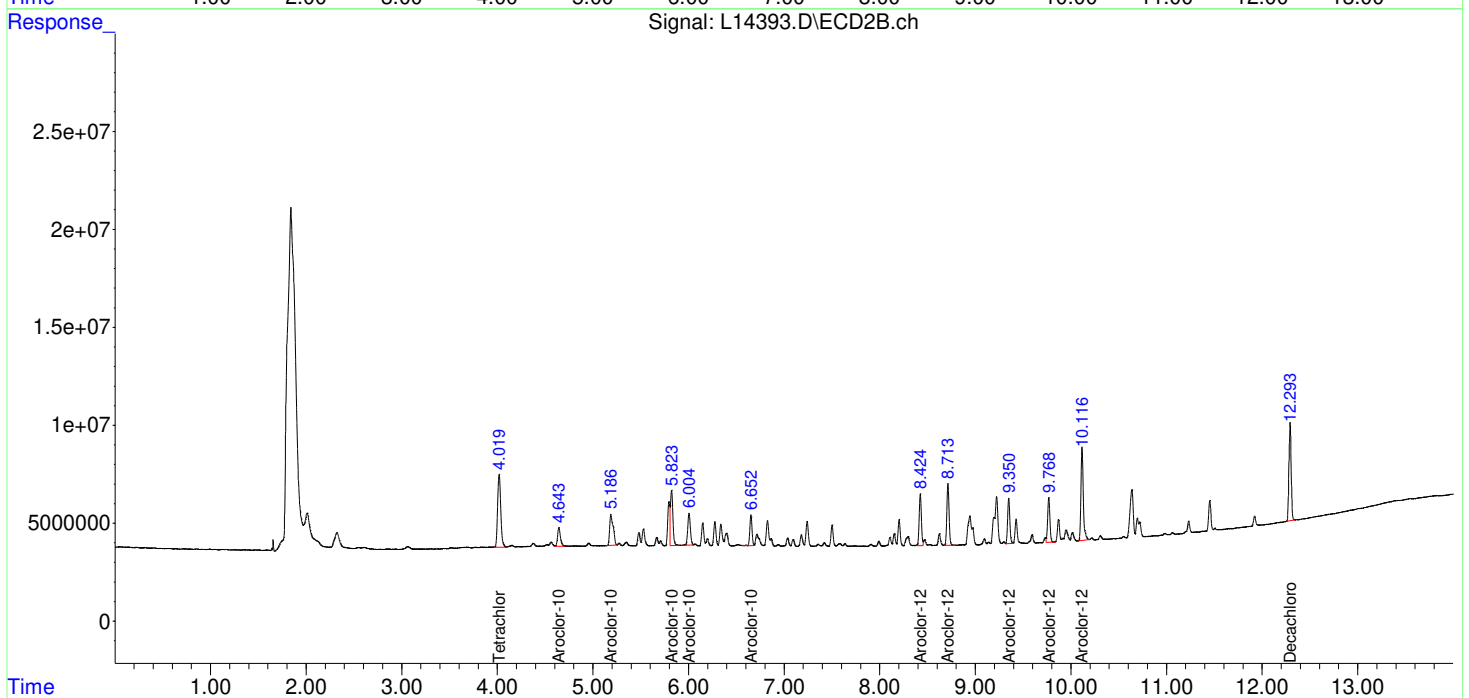
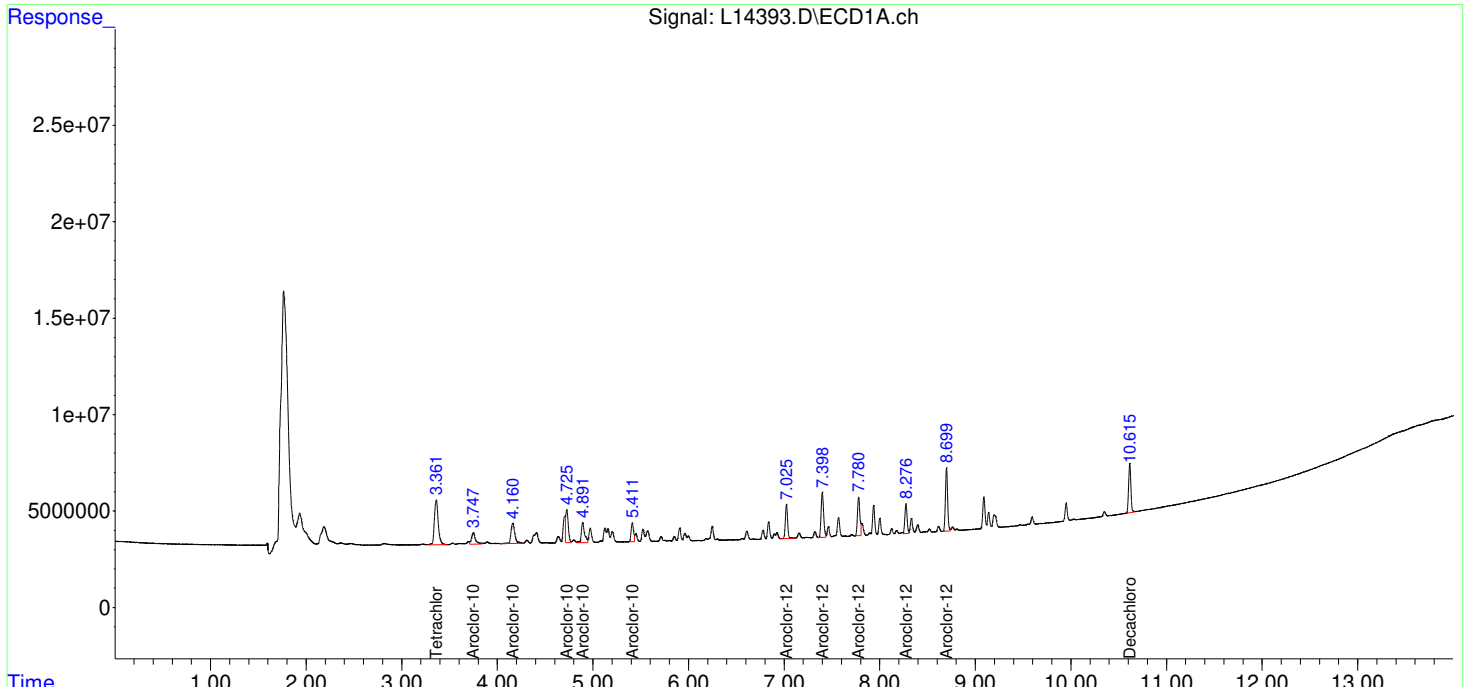
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.018	65118650	84539073	5.130	5.098
Spiked Amount	10.000 Range	60 - 120	Recovery =		51.30%#	50.98%#
2) SA Decachlor...	10.615f	12.293f	41784860	82111285	4.996m	5.433m
Spiked Amount	10.000 Range	60 - 120	Recovery =		49.96%#	54.33%#
Target Compounds						
3) L1 Aroclor-1...	3.747	4.644	16267292	19017760	60.383	53.815
4) L1 Aroclor-1...	4.160f	5.187	28196393	40375742	52.385	52.075
5) L1 Aroclor-1...	4.725f	5.823	31048519	50858697	47.413m	57.649
6) L1 Aroclor-1...	4.893f	6.005	24287037	31067537	53.224	52.602
7) L1 Aroclor-1...	5.411f	6.653	17000092	24618472	49.264m	50.823
Sum Aroclor-1016			116.8E6	165.9E6	262.668	266.965
Average Aroclor-1016					52.534	53.393
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.424	29371168	42291446	52.643	53.680m
44) L9 Aroclor-1...	7.399	8.714	43034791	51039813	51.317	55.549
45) L9 Aroclor-1...	7.780	9.350	35020751	37069474	50.984m	56.221
46) L9 Aroclor-1...	8.275	9.769	25318157	37103085	53.675	53.359
47) L9 Aroclor-1...	8.700f	10.117f	52837175	81659194	51.477	53.927
Sum Aroclor-1260			185.6E6	249.2E6	260.097	272.735
Average Aroclor-1260					52.019	54.547

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14393.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:59 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:12:31 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



QC DATA

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-10-400-042424

EPA TO-10A

Lab Sample ID: AC15354-01 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.026	0.000	0.000	0.119	
	2	8.426	0.000	0.000	0.123	2.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-07-510E-042424

EPA TO-10A

Lab Sample ID: AC15354-02 Date(s) Analyzed: 05/02/2024 05/02/2024
Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.0981	
	2	8.426	0.000	0.000	0.101	3.0

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-08-526-042424

EPA TO-10A

Lab Sample ID: AC15354-03

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.0972	
	2	8.425	0.000	0.000	0.0983	1.3

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-05-608J-042424

EPA TO-10A

Lab Sample ID: AC15354-04 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.133	
	2	8.427	0.000	0.000	0.137	5.2

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-06-635-042424

EPA TO-10A

Lab Sample ID: AC15354-05

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.026	0.000	0.000	0.132	
	2	8.426	0.000	0.000	0.137	5.2

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-04-714B-042424

EPA TO-10A

Lab Sample ID: AC15354-06 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.153	
	2	8.426	0.000	0.000	0.161	7.1

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

DUP-03-742-042424

EPA TO-10A

Lab Sample ID: AC15354-07 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.024	0.000	0.000	0.0798	
	2	8.426	0.000	0.000	0.0804	0.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-03-742-042424

EPA TO-10A

Lab Sample ID: AC15354-08 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.0879	
	2	8.426	0.000	0.000	0.0913	3.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

EPA TO-10A

LCS

Lab Sample ID: BCD2253-BS1 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	3.750	0.000	0.000	941	
Aroclor-1260	1	7.027	0.000	0.000	955	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

EPA TO-10A

LCS Dup

Lab Sample ID: BCD2253-BSD1 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	3.742	0.000	0.000	856	
Aroclor-1260	1	7.025	0.000	0.000	872	

1 - FORM I ANALYSIS DATA SHEET

Blank

Laboratory:	EMSL-CIN-01	Work Order:	AC15354
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Laboratory ID:	BCD2253-BLK1
		File ID:	L14367.D
Sampled:		Prepared:	04/30/24 15:23
		Analyzed:	05/02/24 16:42
Solids:		Preparation:	EPA TO-10A
		Dilution:	
Batch:	BCD2253	Sequence:	SCE0475
		Calibration:	AA40009
		Instrument:	GCECD-L
Column:	1		

CAS NO.	COMPOUND	CONC. (µg/m³)	MDL	RL	Q
12674-11-2	Aroclor-1016		36.2	50.0	
11104-28-2	Aroclor-1221		36.2	50.0	
11141-16-5	Aroclor-1232		36.2	50.0	
53469-21-9	Aroclor-1242		36.2	50.0	
12672-29-6	Aroclor-1248		9.53	50.0	
11097-69-1	Aroclor-1254		9.53	50.0	
11096-82-5	Aroclor-1260		9.53	50.0	
37324-23-5	Aroclor-1262		9.53	50.0	
11100-14-4	Aroclor-1268		9.53	50.0	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14367.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 4:42 pm
 Operator : AxJ/KC
 Sample : BCD2253-BLK1
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:20 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

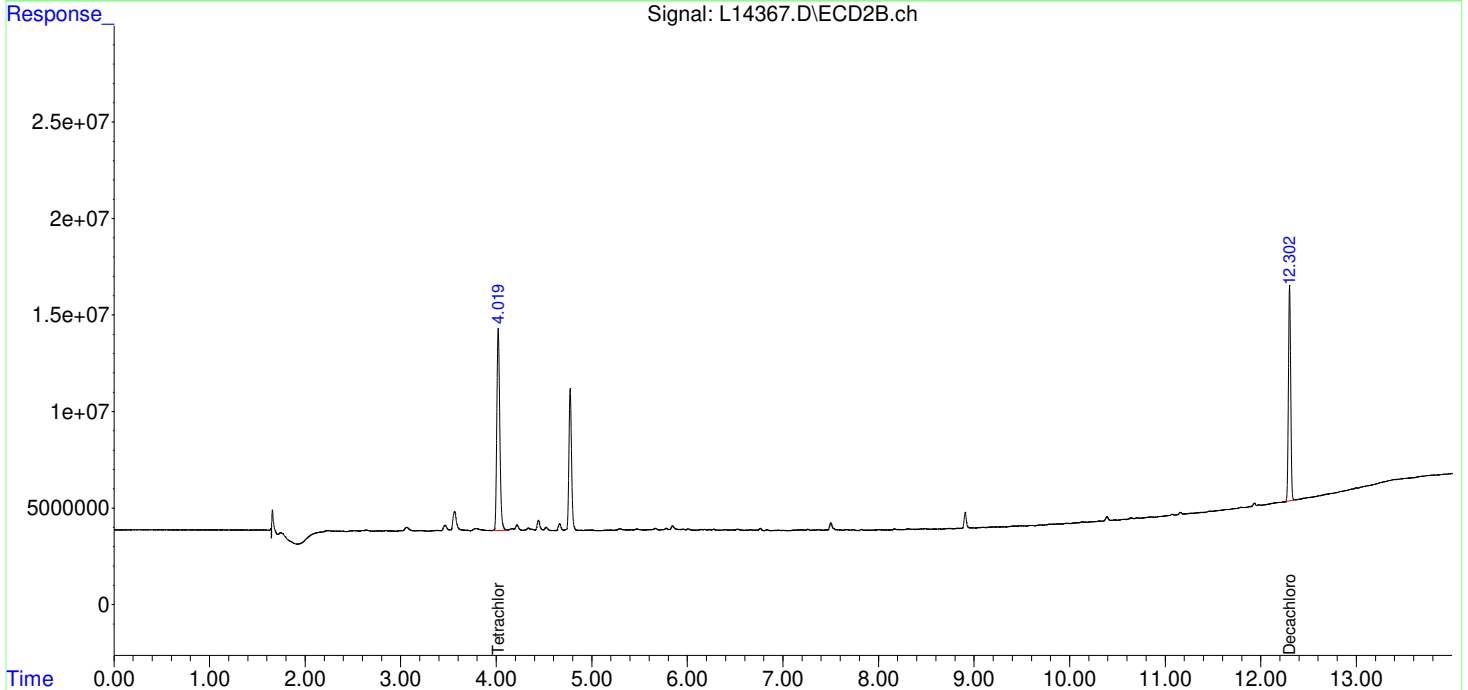
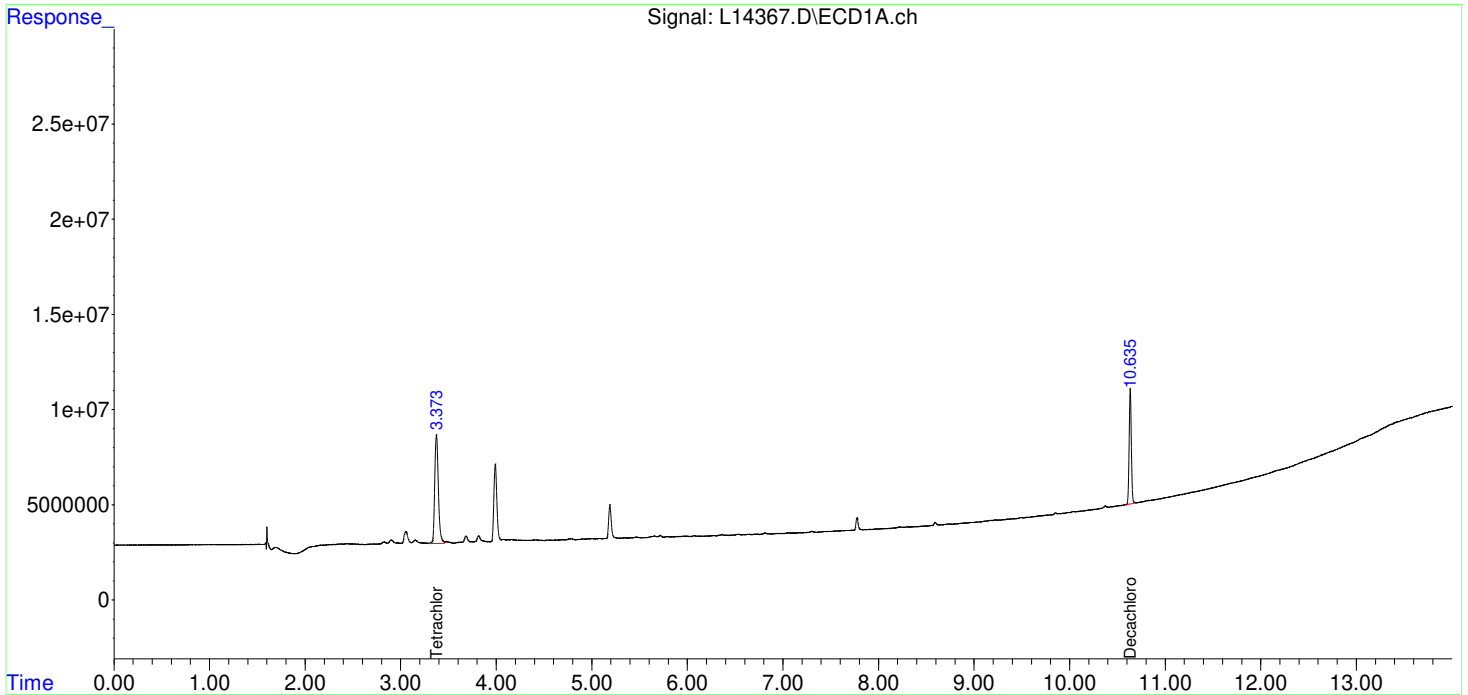
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.373	4.020	151.7E6	225.2E6	11.952	13.582
Spiked Amount	10.000 Range	60 - 120	Recovery	=	119.52%	135.82%#
2) SA Decachlor...	10.635	12.302	95610953	183.0E6	11.432m	12.109m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	114.32%	121.09%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14367.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 4:42 pm
 Operator : AxJ/KC
 Sample : BCD2253-BLK1
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:20 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

Blank

Laboratory:	EMSL-CIN-01	Work Order:	AC15354
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Laboratory ID:	BCD2253-BLK2
		File ID:	L14368.D
Sampled:		Prepared:	04/30/24 15:23
		Analyzed:	05/02/24 17:16
Solids:		Preparation:	EPA TO-10A
		Dilution:	
Batch:	BCD2253	Sequence:	SCE0475
		Calibration:	AA40009
		Instrument:	GCECD-L
Column:	1		

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		36.2	50.0	
11104-28-2	Aroclor-1221		36.2	50.0	
11141-16-5	Aroclor-1232		36.2	50.0	
53469-21-9	Aroclor-1242		36.2	50.0	
12672-29-6	Aroclor-1248		9.53	50.0	
11097-69-1	Aroclor-1254		9.53	50.0	
11096-82-5	Aroclor-1260		9.53	50.0	
37324-23-5	Aroclor-1262		9.53	50.0	
11100-14-4	Aroclor-1268		9.53	50.0	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14368.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:16 pm
 Operator : AxJ/KC
 Sample : BCD2253-BLK2
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:27 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

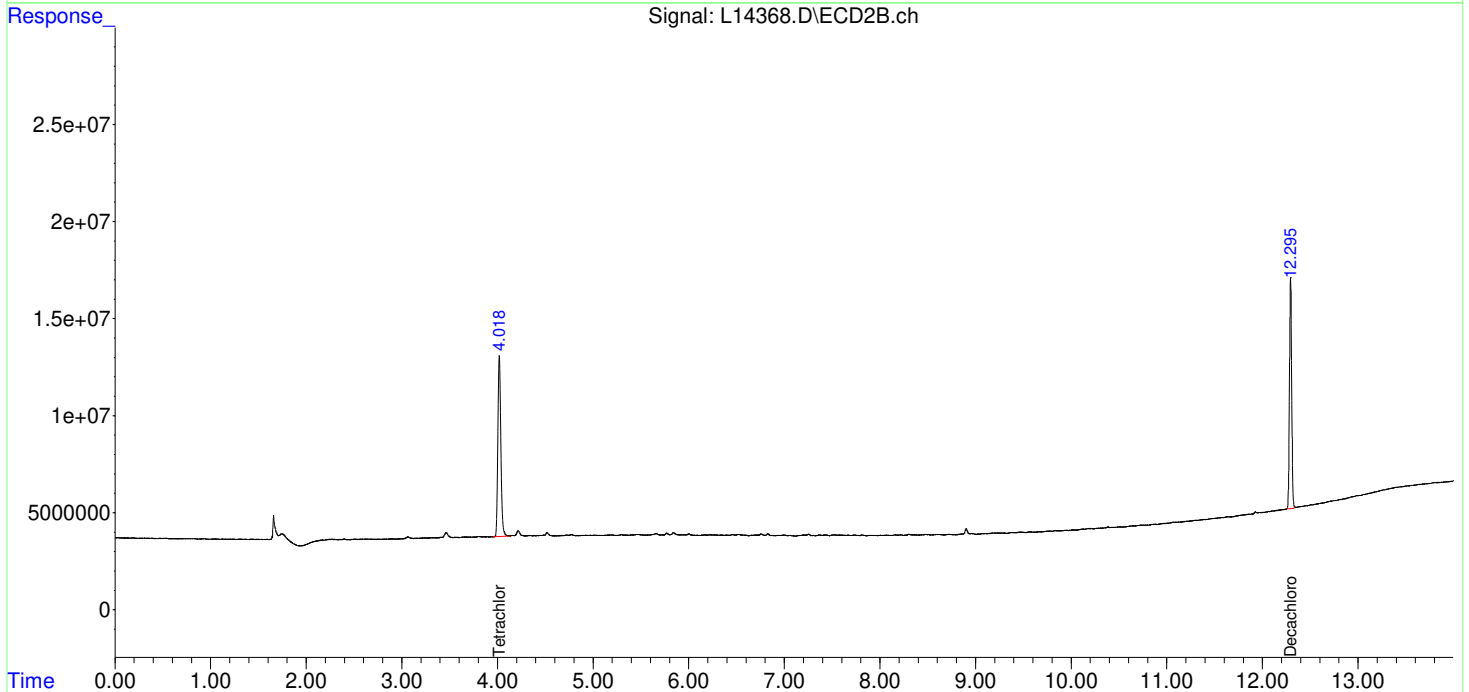
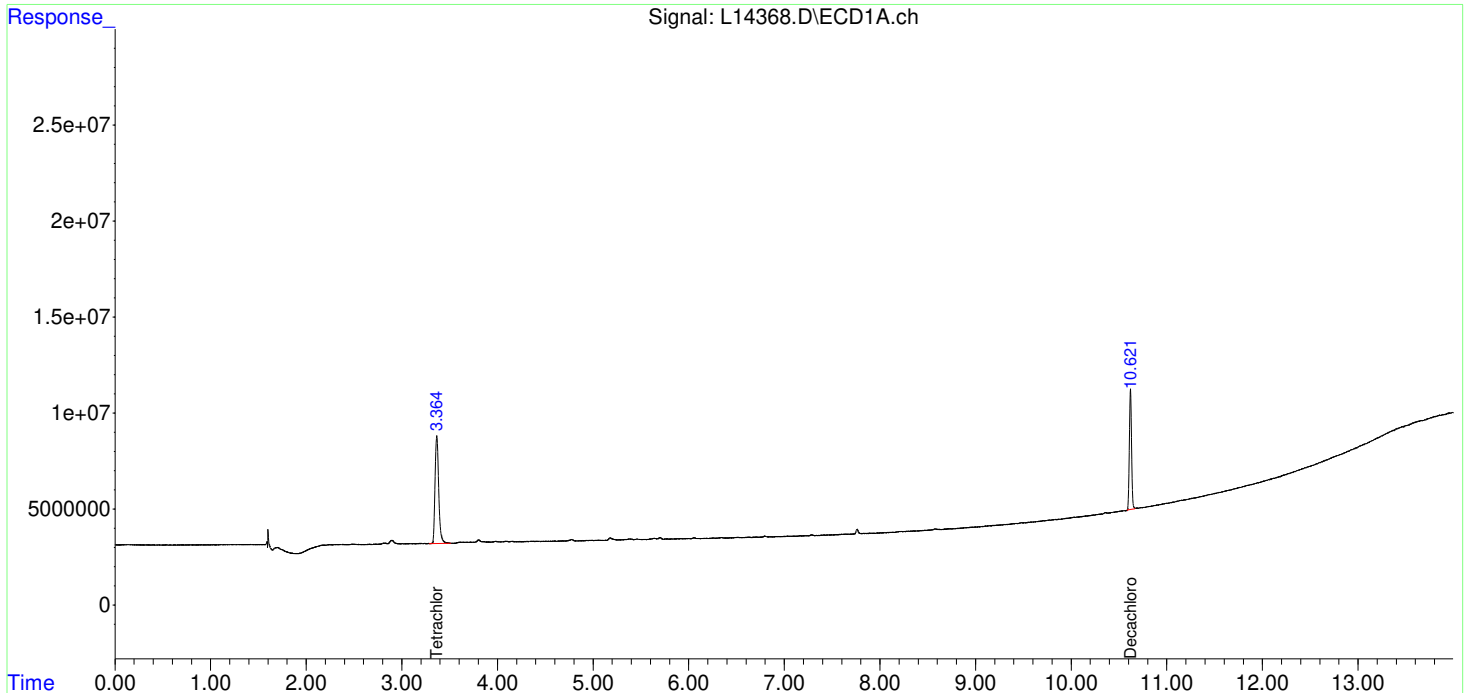
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.365	4.018	149.2E6	201.7E6	11.755	12.164
Spiked Amount	10.000 Range	60 - 120	Recovery	=	117.55%	121.64%#
2) SA Decachlor...	10.621f	12.295	98963032	191.9E6	11.833m	12.699m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	118.33%	126.99%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
Data File : L14368.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 2 May 2024 5:16 pm
Operator : AxJ/KC
Sample : BCD2253-BLK2
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 06 10:09:27 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Apr 24 13:46:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

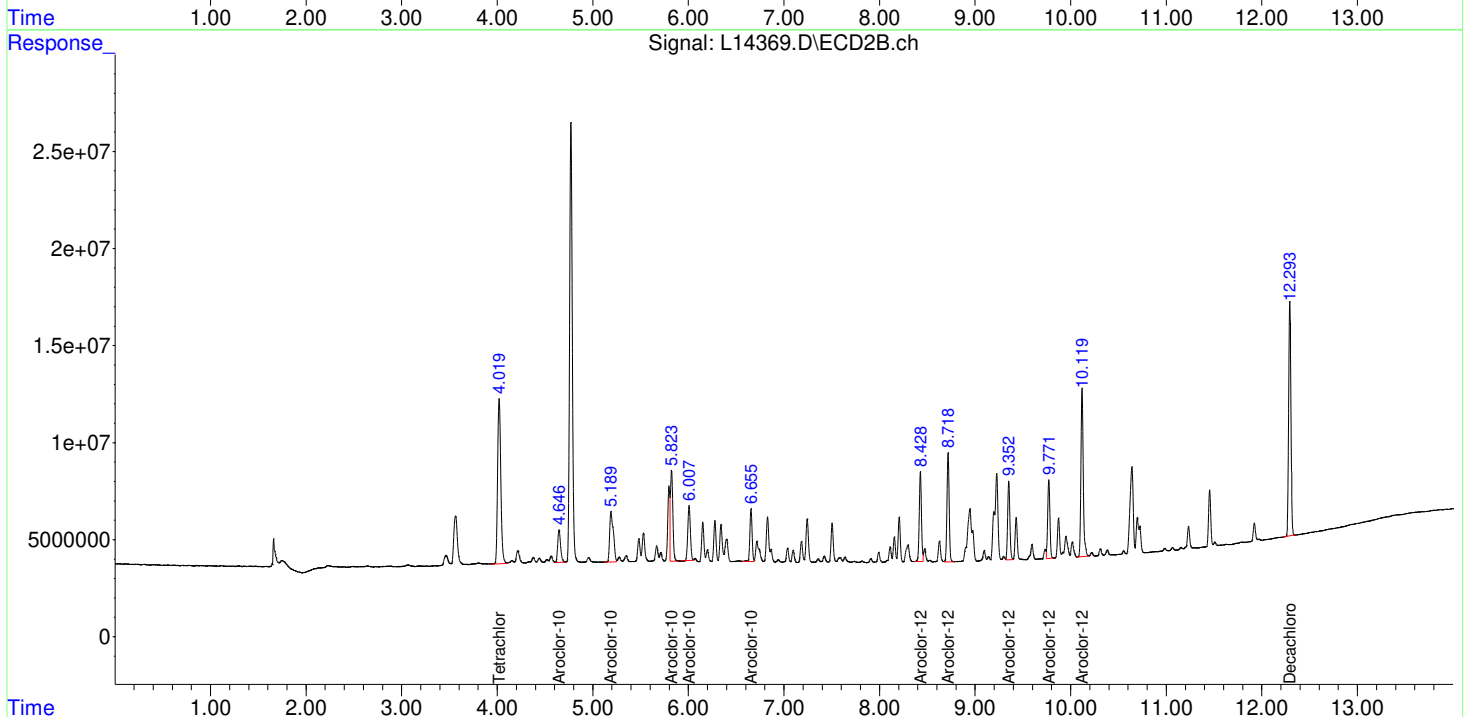
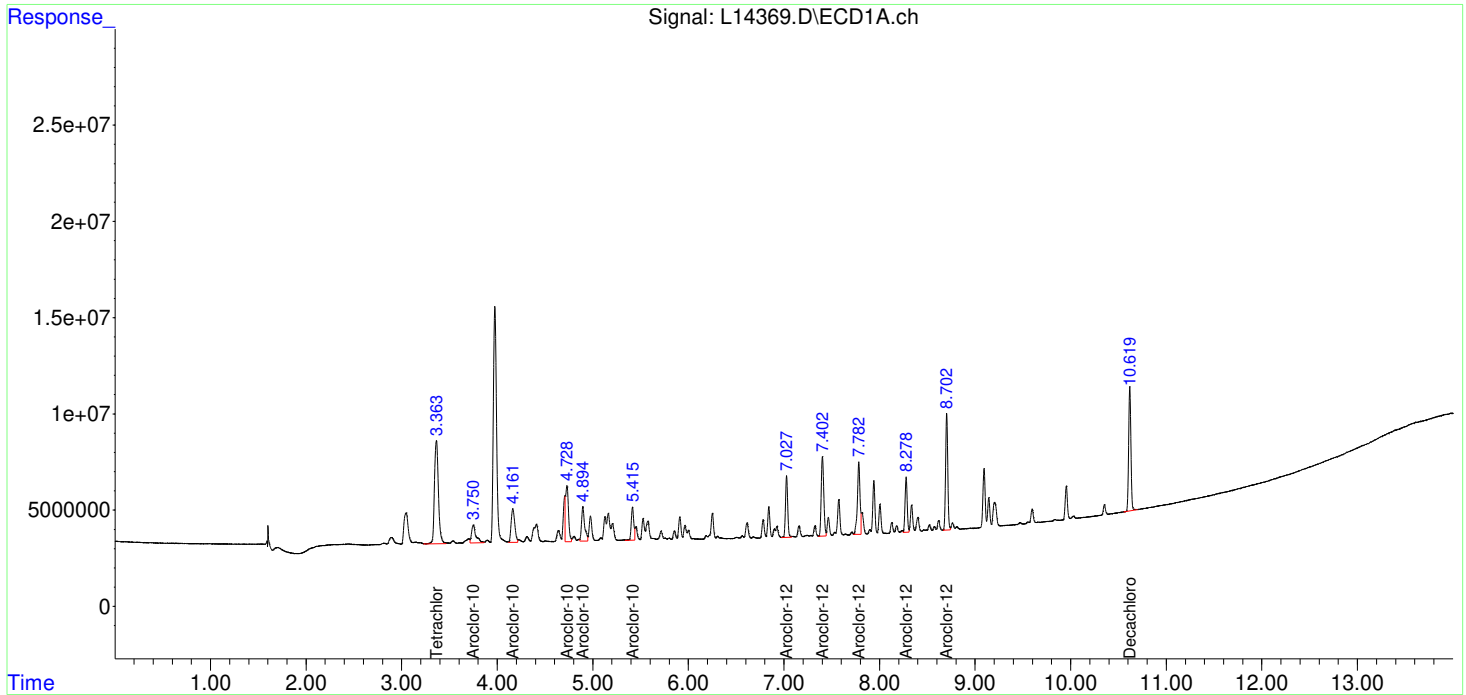
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.363	4.019	154.8E6	197.7E6	12.195	11.923
Spiked Amount	10.000 Range	60 - 120	Recovery	=	121.95%#	119.23%
2) SA Decachlor...	10.619f	12.294f	105.4E6	200.8E6	12.606	13.284
Spiked Amount	10.000 Range	60 - 120	Recovery	=	126.06%#	132.84%#
Target Compounds						
3) L1 Aroclor-1...	3.750	4.646	29726475	35069466	110.342	99.237
4) L1 Aroclor-1...	4.161	5.189	46664119	69405359	86.695m	89.517
5) L1 Aroclor-1...	4.728f	5.824	62600795	82184210	95.596m	93.157
6) L1 Aroclor-1...	4.894f	6.007	40296046	53744693	88.306m	90.998
7) L1 Aroclor-1...	5.415f	6.655	30914400	44181971	89.585	91.211
Sum Aroclor-1016			210.2E6	284.6E6	470.524	464.120
Average Aroclor-1016					94.105	92.824
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.027	8.428	50858648	73788988	91.156	93.659
44) L9 Aroclor-1...	7.402	8.718	76660054	89916992	91.414	97.860
45) L9 Aroclor-1...	7.782	9.353	72251941	66021324	105.186m	100.130
46) L9 Aroclor-1...	8.279	9.772	45393871	65615320	96.237	94.364
47) L9 Aroclor-1...	8.703f	10.119	95781624	146.7E6	93.317	96.901
Sum Aroclor-1260			340.9E6	442.1E6	477.309	482.914
Average Aroclor-1260					95.462	96.583

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

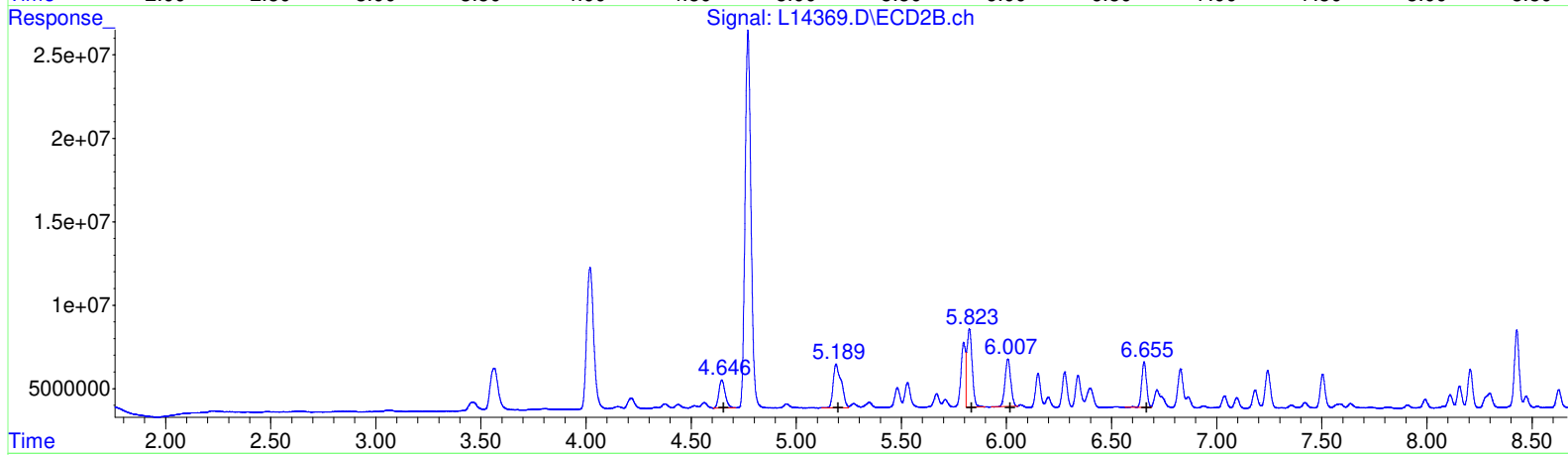
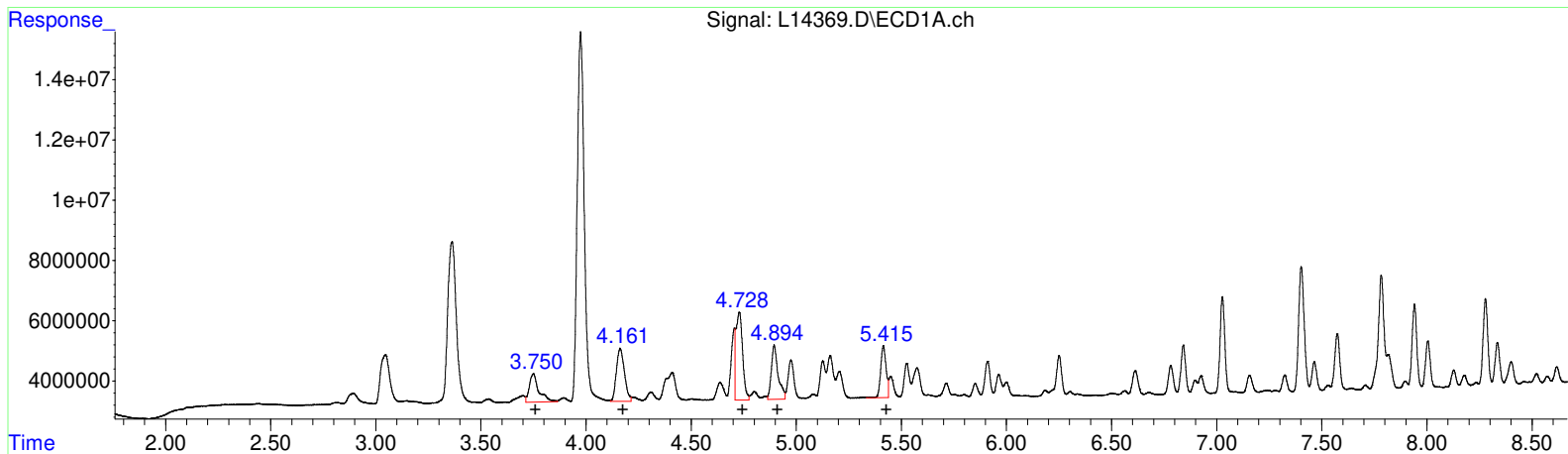
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(3) Aroclor-1016{1} (L1)

R.T.	Response	Conc
3.75	29726475	110.34
4.16	46664119	86.69
4.73	62600795	95.60
4.89	40296046	88.31
5.41	30914400	89.59

(3) Aroclor-1016{1} #2 (L1)

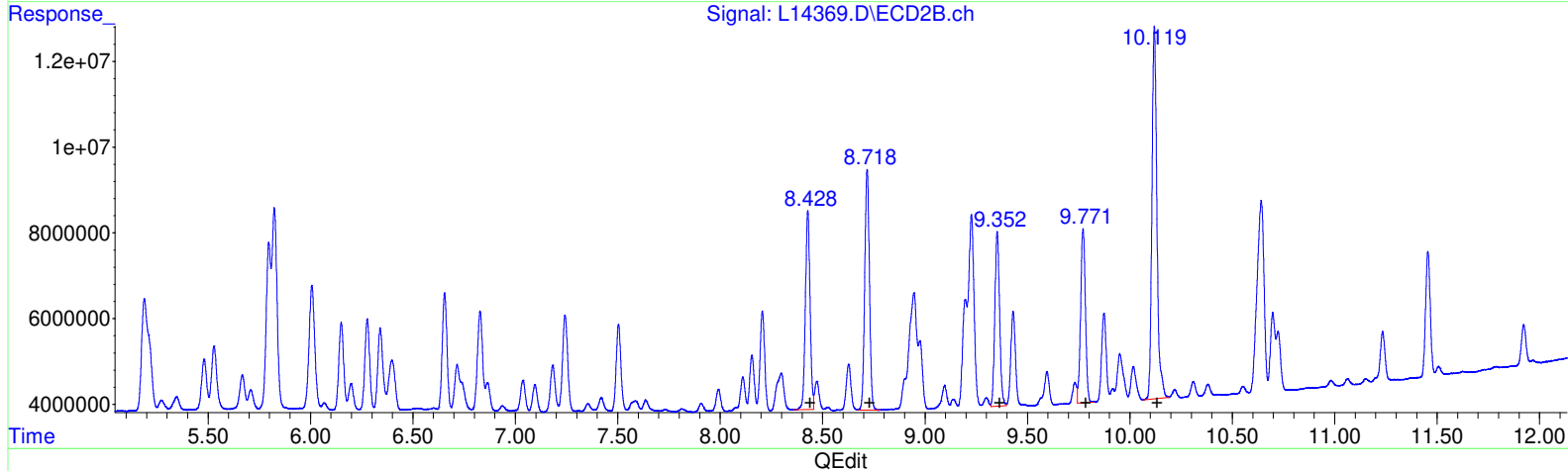
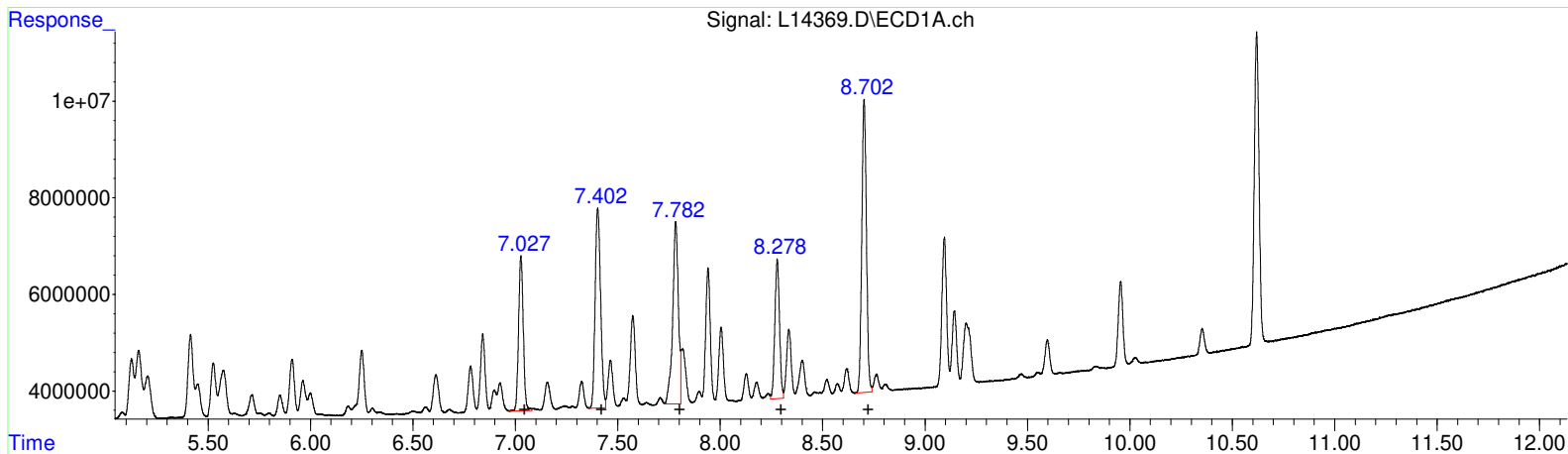
R.T.	Response	Conc
4.65	35069466	99.24
5.19	69405359	89.52
5.82	82184210	93.16
6.01	53744693	91.00
6.66	44181971	91.21

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase : CLPest II
 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)			
R.T.	Response	Conc	
7.03	50858648	91.16	
7.40	76660054	91.41	
7.78	72251941	105.19	
8.28	45393871	96.24	
8.70	95781624	93.32	
(43) Aroclor-1260{1} #2 (L9)			
R.T.	Response	Conc	
8.43	73788988	93.66	
8.72	89916992	97.86	
9.35	66021324	100.13	
9.77	65615320	94.36	
10.12	146733960	96.90	

(+) = Expected Retention Time

1 - FORM I ANALYSIS DATA SHEET

LCS Dup

Laboratory: EMSL-CIN-01 Work Order: AC15354
Client: Geosyntec Consultants of NC [GSCH75] Project: NCSUPH
Matrix: Tubes Laboratory ID: BCD2253-BSD1 File ID: L14370.D
Sampled: Prepared: 04/30/24 15:23 Analyzed: 05/02/24 17:48
Solids: Preparation: EPA TO-10A Dilution:
Batch: BCD2253 Sequence: SCE0475 Calibration: AA40009 Instrument: GCECD-L
Column: 1

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016	856	36.2	50.0	
11096-82-5	Aroclor-1260	872	9.53	50.0	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
----------	------	------	--------	--------	------	------

System Monitoring Compounds

1) SA Tetrachlo...	3.350f	4.013	121.1E6	150.0E6	9.536	9.046
Spiked Amount	10.000 Range	60 - 120	Recovery	=	95.36%	90.46%
2) SA Decachlor...	10.618f	12.294f	86854723	166.1E6	10.385m	10.993
Spiked Amount	10.000 Range	60 - 120	Recovery	=	103.85%	109.93%

Target Compounds

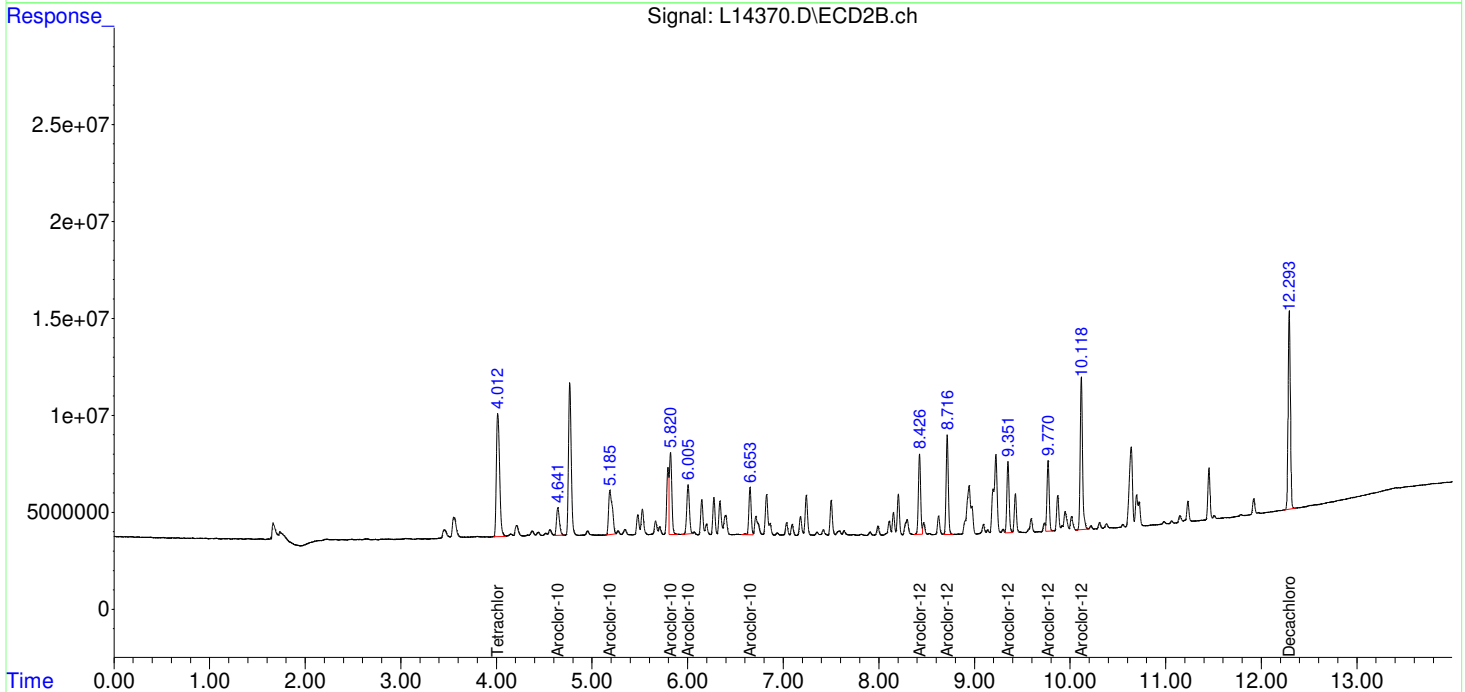
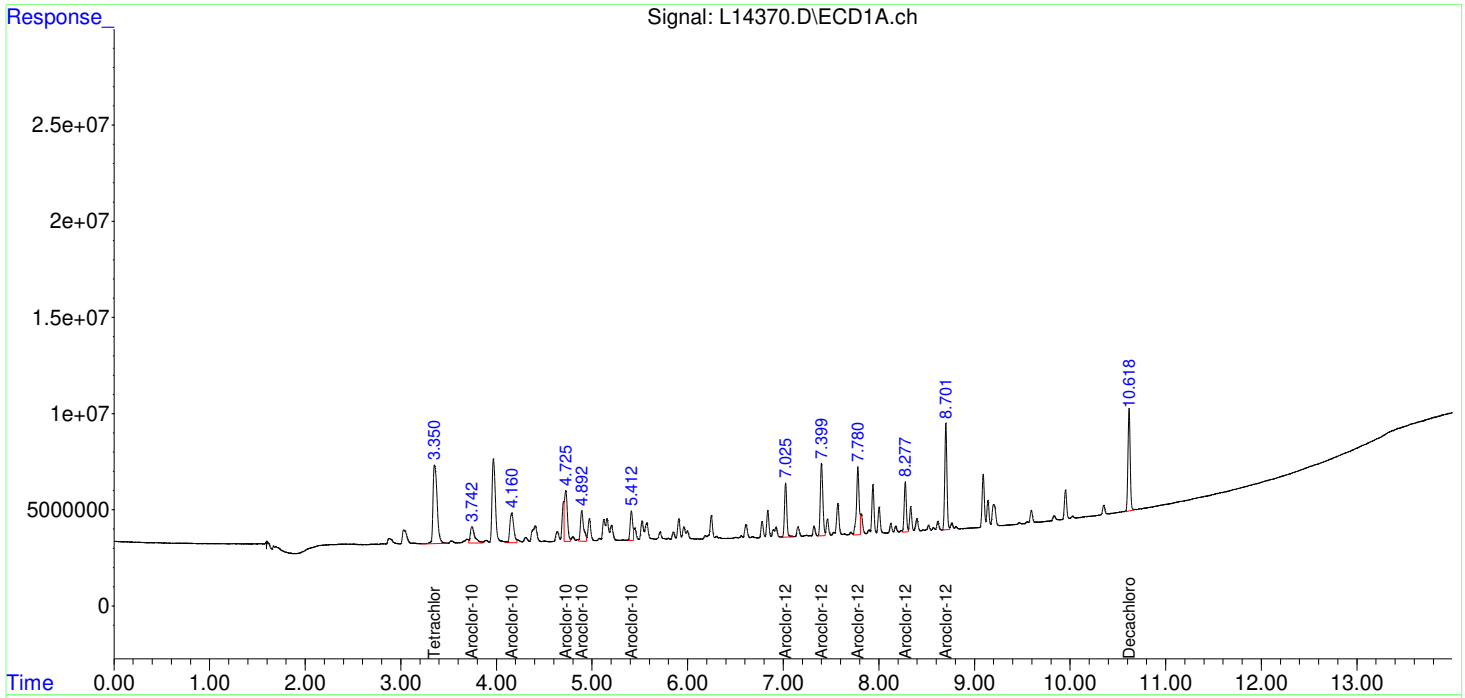
3) L1 Aroclor-1...	3.742f	4.642	26560543	30008405	98.591	84.915
4) L1 Aroclor-1...	4.160f	5.187	43427764	61135915	80.682m	78.851
5) L1 Aroclor-1...	4.725f	5.821	57068883	74662152	87.148m	84.631
6) L1 Aroclor-1...	4.892f	6.005	36505741	48798837	80.000m	82.623
7) L1 Aroclor-1...	5.412f	6.653	28086002	40340544	81.389m	83.281
Sum Aroclor-1016			191.6E6	254.9E6	427.810	414.302
Average Aroclor-1016					85.562	82.860
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.426	46680777	66886699	83.668	84.898
44) L9 Aroclor-1...	7.400	8.716	69529362	81219754	82.911	88.395
45) L9 Aroclor-1...	7.780	9.351	67244147	59712319	97.896m	90.562
46) L9 Aroclor-1...	8.277	9.771	41037952	59304372	87.002	85.288
47) L9 Aroclor-1...	8.702f	10.119	86563524	132.3E6	84.336	87.352
Sum Aroclor-1260			311.1E6	399.4E6	435.811	436.494
Average Aroclor-1260					87.162	87.299

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

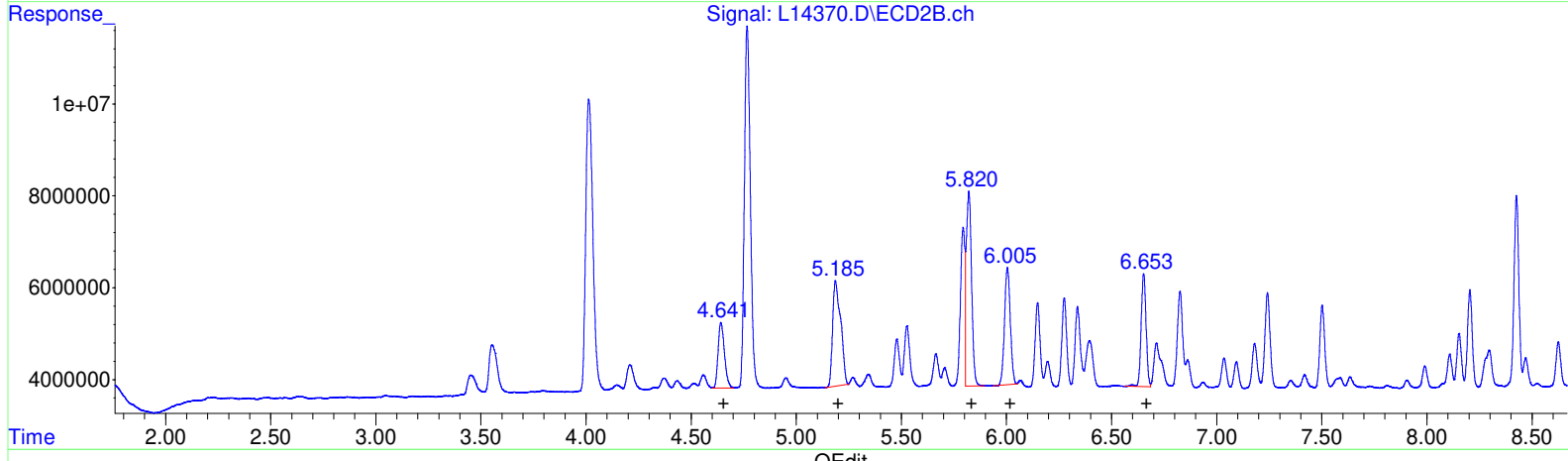
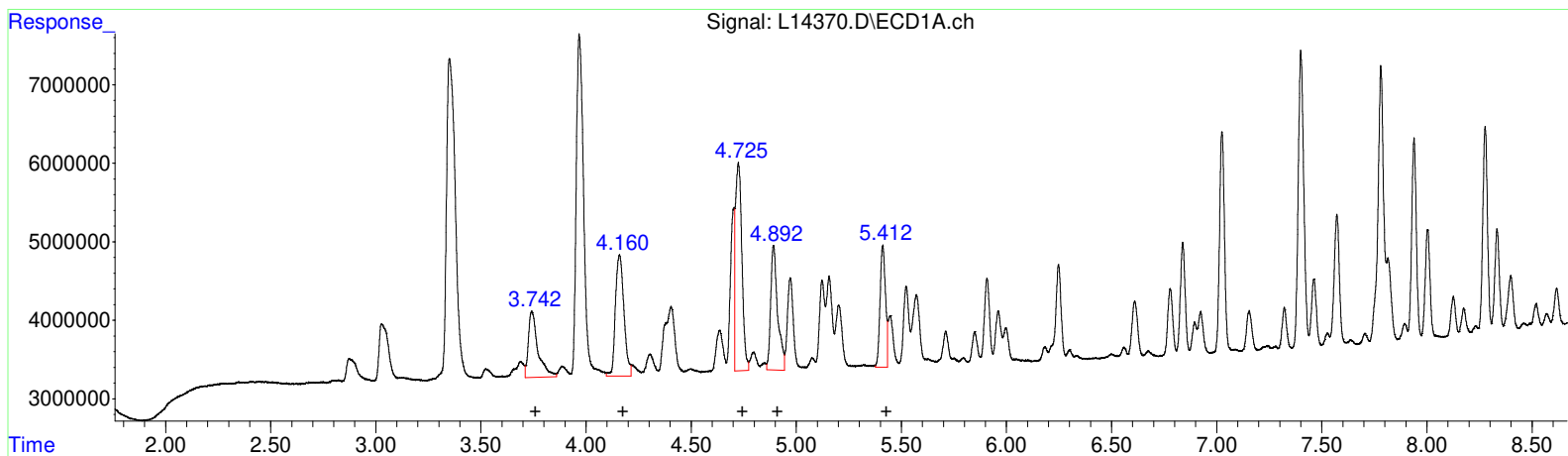
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(3) Aroclor-1016{1} (L1)

R.T.	Response	Conc
3.74	26560543	98.59
4.16	43427764	80.68
4.72	57068883	87.15
4.89	36505741	80.00
5.41	28086002	81.39

(3) Aroclor-1016{1} #2 (L1)

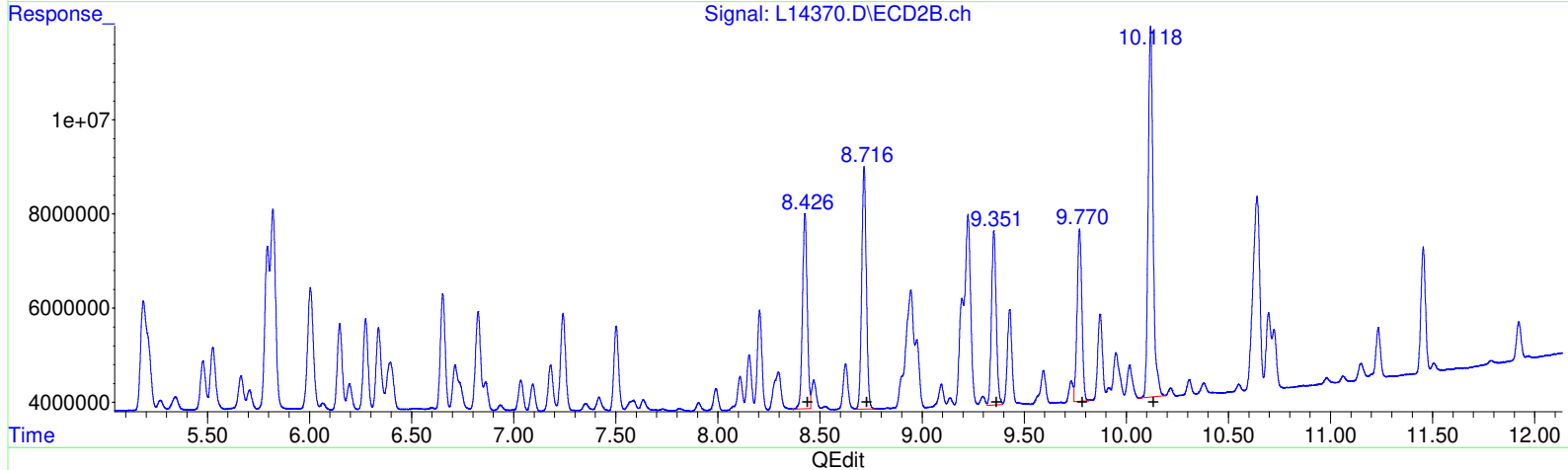
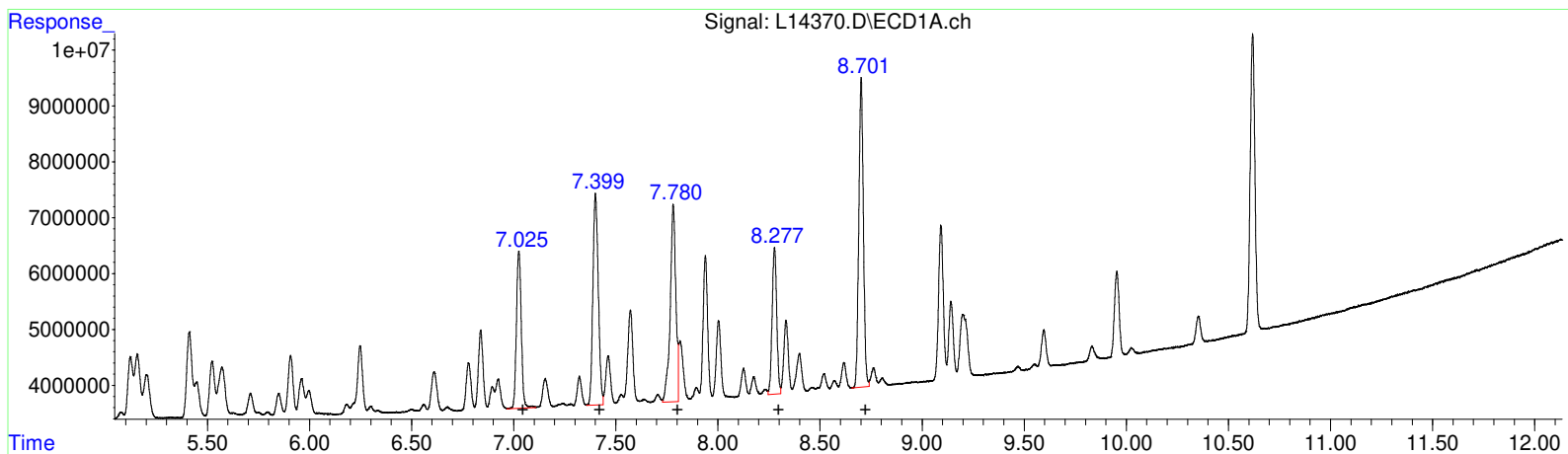
R.T.	Response	Conc
4.64	30008405	84.92
5.19	61135915	78.85
5.82	74662152	84.63
6.00	48798837	82.62
6.65	40340544	83.28

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)

R.T.	Response	Conc
7.03	46680777	83.67
7.40	69529362	82.91
7.78	67244147	97.90
8.28	41037952	87.00
8.70	86563524	84.34

(43) Aroclor-1260{1} #2 (L9)

R.T.	Response	Conc
8.43	66886699	84.90
8.72	81219754	88.39
9.35	59712319	90.56
9.77	59304372	85.29
10.12	132273858	87.35

(+) = Expected Retention Time

PREPARATION BENCH SHEET

Organics

Print Date/Time: 05/14/2024 4:44 pm

BCD2253

Matrix: Tubes

Prepared using: GC-SVOA - EPA TO-10A

Analyses		Spiking Solution(s)			Surrogate Solution(s)				
01-PCB-TO-10A		24A1093	608 Spike	24A1129	PCB/ Pest Surrogate				
Lab Number	Sample and Source ID	Date Due	Extract by	Prepared	Initial (L)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
AC15369-04	A-11-209-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7344	10		100	
AC15354-02	A-07-510E-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7488	10		100	
AC15354-03	A-08-526-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7502.4	10		100	
AC15354-04	A-05-608J-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7394.4	10		100	
AC15354-05	A-06-635-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7358.4	10		100	
AC15354-06	A-04-714B-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7416	10		100	
AC15354-07	DUP-03-742-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7387.2	10		100	
AC15354-08	A-03-742-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7516.8	10		100	
AC15354-09	A-14-ROOF-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7567.2	10		100	
AC15369-01	A-13-106-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7142.4	10		100	
AC15354-01	A-10-400-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7466.4	10		100	
AC15369-03	A-15-117-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7480.8	10		100	
BCD2253-BSD1	LCS Dup			4/30/2024 3:23:00PM	1	10	1000	100	
AC15369-05	A-12-228-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7473.6	10		100	
AC15369-06	A-01-216-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7473.6	10		100	
AC15369-07	A-02-317F-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7588.8	10		100	
AC15369-08	A-09-402G-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7387.2	10		100	
AC15369-09	DUP-02-402G-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7516.8	10		100	
AC15369-10	Blank-01-117-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	1	10		100	
BCD2253-BLK1	Blank			4/30/2024 3:23:00PM	1	10		100	
BCD2253-BLK2	Blank			4/30/2024 3:23:00PM	1	10		100	srb
BCD2253-BS1	LCS			4/30/2024 3:23:00PM	1	10	1000	100	

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

Organics

Print Date/Time: 05/14/2024 4:44 pm

BCD2253

(Continued)

Matrix: Tubes

Prepared using: GC-SVOA - EPA TO-10A

Analyses	DUP-01-106-042424	05/14/2024	Spiking Solution(s)	608 Spike	4/30/2024 3:23:00PM	7358.4	10	Surrogate Solution(s)	PCB/ Pest Surrogate	100
01-PCB-TO-10A			24A1093					24A1129		

Start Date/Time _____

Stop Date/Time _____

Standard	Description	LotNum
24B0920	Sulfuric Acid	20230818557
24C0733	Baked Sodium Sulfate	218622
24D0523	Hexane	224102
24D0525	PUF Cartridge, TO-10A	14223

Spiking Witnessed By _____ Date _____

Preparation Reviewed By _____ Date _____

Extracts Received By _____ Date _____

Analysis Sequence

SCA0465

Printed: 05/14/2024 5:39 pm

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 01/16/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
SCA0465-CAL1	Cal Standard	1		24A0635		
SCA0465-CAL2	Cal Standard	2		24A0634		
SCA0465-CAL3	Cal Standard	3		24A0633		
SCA0465-CAL4	Cal Standard	4		24A0056		
SCA0465-CAL5	Cal Standard	5		24A0055		
SCA0465-CAL6	Cal Standard	6		24A0054		
SCA0465-ICV1	Initial Cal Check	7		24A0636		
SCA0465-CAL7	Cal Standard	8		23I0241		
SCA0465-CAL8	Cal Standard	9		23I0242		
SCA0465-CAL9	Cal Standard	10		23I0243		
SCA0465-CALA	Cal Standard	11		23I0244		
SCA0465-CALB	Cal Standard	12		23I0245		
SCA0465-CALC	Cal Standard	13		23I0246		
SCA0465-CCV1	23F0359	14		23J0124		
BCA0475-BLK1	Blank	15				
BCA0475-BLK2	Blank	16				
BCA0475-BS1	LCS	17				
BCA0475-BSD1	LCS Dup	18				
AC05562-01	SH-PCBA01-01	19				
AC05562-02	SH-PCBA02-01	20				
AC05562-03	SH-PCBA03-01	21				

Analysis Sequence

SCA0465

(Continued)

Department: GC-SVOA
 Instrument: GCECD-L
 Calibration ID: AA40009

Sequence Date: 01/16/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
AC05562-04	SH-PCBA04-01	22				
AC05562-05	SH-PCBA05-01	23				
AC05562-06	SH-PCBA06-01	24				
SCA0465-CCV2	Calibration Check	25		23J0124		
AC05562-07	SH-PCBA07-01	26				
AC05562-08	SH-PCBA08-01	27				
AC05562-09	SH-PCBA09-01	28				
AC05562-10	SH-PCBA10-01	29				
AC05562-11	SH-PCBA11-01	30				
AC05562-12	SH-PCBA12-01	31				
AC05562-13	SH-PCBA13-01	32				
AC05562-14	SH-PCBA14-01	33				
BCA0476-MRL1	MRL Check	34				
SCA0465-CCV3	500	35		23J0124		

Analysis Sequence

SCE0475

Printed: 05/14/2024 5:37 pm

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 05/02/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
SCE0475-CCV1	Calibration Check	1		24B1163		
BCD2253-BLK1	Blank	2				
BCD2253-BLK2	Blank	3				
BCD2253-BS1	LCS	4				
BCD2253-BSD1	LCS Dup	5				
BCD2254-MRL1	MRL Check	6				
AC15354-01	A-10-400-042424	7				
AC15354-02	A-07-510E-042424	8				
AC15354-03	A-08-526-042424	9				
AC15354-04	A-05-608J-042424	10				
AC15354-05	A-06-635-042424	11				
SCE0475-CCV2	Calibration Check	12		24B1163		
AC15354-06	A-04-714B-042424	13				
AC15354-07	DUP-03-742-042424	14				
AC15354-08	A-03-742-042424	15				
AC15354-09	A-14-ROOF-042424	16				
AC15369-01	A-13-106-042424	17				
AC15369-02	DUP-01-106-042424	18				
AC15369-03	A-15-117-042424	19				
AC15369-04	A-11-209-042424	20				
AC15369-05	A-12-228-042424	21				

Analysis Sequence

SCE0475

(Continued)

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 05/02/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
AC15369-06	A-01-216-042424	22				
SCE0475-CCV3	500	23		24B1163		
AC15369-07	A-02-317F-042424	24				
AC15369-08	A-09-402G-042424	25				
AC15369-09	DUP-02-402G-042424	26				
AC15369-10	Blank-01-117-042424	27				
SCE0475-CCV4	Calibration Check	28		24B1163		

Standard Traceability

LABORATORY STANDARD SUMMARY

Standard ID: 23G0224
Description: PCB 608 Spike
Solvent: acetone 23F0418 C
Lot Number: na

Date Prepared: 07/13/2023
Date Expires: 01/13/2024
Prepared by: Roseann Giordano
Vendor: In House
Final Volume (mL:s): 200.0000

Comments: test element 22g0357
~~1016/1260 23D0297 A~~

23G0224 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23D0297	A0191718	0.2000

Analyte	Concentration	Units
Aroclor-1016	1.0000	ug/mL
Aroclor-1016 [2C]	1.0000	ug/mL
Aroclor-1260	1.0000	ug/mL
Aroclor-1260 [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0241
Description: Aroclor 2154 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0755B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0241 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0755	na	2.5000

Analyte	Concentration	Units
Aroclor-1221	0.0500	ug/g
Aroclor-1221 [2C]	0.0500	ug/g
Aroclor-1221{1}	0.0500	ug/g
Aroclor-1221{1} [2C]	0.0500	ug/g
Aroclor-1221{2}	0.0500	ug/g
Aroclor-1221{2} [2C]	0.0500	ug/g
Aroclor-1221{3}	0.0500	ug/g
Aroclor-1221{3} [2C]	0.0500	ug/g
Aroclor-1221{4}	0.0500	ug/g
Aroclor-1221{4} [2C]	0.0500	ug/g
Aroclor-1221{5}	0.0500	ug/g
Aroclor-1221{5} [2C]	0.0500	ug/g
Aroclor-1254	0.0500	ug/g
Aroclor-1254 [2C]	0.0500	ug/g
Aroclor-1254{1}	0.0500	ug/g
Aroclor-1254{1} [2C]	0.0500	ug/g
Aroclor-1254{2}	0.0500	ug/g
Aroclor-1254{2} [2C]	0.0500	ug/g
Aroclor-1254{3}	0.0500	ug/g
Aroclor-1254{3} [2C]	0.0500	ug/g
Aroclor-1254{4}	0.0500	ug/g
Aroclor-1254{4} [2C]	0.0500	ug/g
Aroclor-1254{5}	0.0500	ug/g
Aroclor-1254{5} [2C]	0.0500	ug/g
Aroclor-1254{6}	0.0500	ug/g
Aroclor-1254{6} [2C]	0.0500	ug/g
Decachlorobiphenyl	0.0050	ug/g
Decachlorobiphenyl [2C]	0.0050	ug/g
Tetrachloro-m-xylene	0.0050	ug/g
Tetrachloro-m-xylene [2C]	0.0050	ug/g

LABORATORY STANDARD SUMMARY

Standard ID: 23I0242
Description: Aroclor 1232 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0757B

Date Prepared: 09/13/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0242 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0757	na	2.5000

Analyte	Concentration	Units
Aroclor-1232	0.0500	ug/mL
Aroclor-1232 [2C]	0.0500	ug/mL
Aroclor-1232{1}	0.0500	ug/mL
Aroclor-1232{1} [2C]	0.0500	ug/mL
Aroclor-1232{2}	0.0500	ug/mL
Aroclor-1232{2} [2C]	0.0500	ug/mL
Aroclor-1232{3}	0.0500	ug/mL
Aroclor-1232{3} [2C]	0.0500	ug/mL
Aroclor-1232{4}	0.0500	ug/mL
Aroclor-1232{4} [2C]	0.0500	ug/mL
Aroclor-1232{5}	0.0500	ug/mL
Aroclor-1232{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0243
Description: Aroclor 1242 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0758B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0243 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0758	na	2.5000

Analyte	Concentration	Units
Aroclor-1242	0.0500	ug/mL
Aroclor-1242 [2C]	0.0500	ug/mL
Aroclor-1242{1}	0.0500	ug/mL
Aroclor-1242{1} [2C]	0.0500	ug/mL
Aroclor-1242{2}	0.0500	ug/mL
Aroclor-1242{2} [2C]	0.0500	ug/mL
Aroclor-1242{3}	0.0500	ug/mL
Aroclor-1242{3} [2C]	0.0500	ug/mL
Aroclor-1242{4}	0.0500	ug/mL
Aroclor-1242{4} [2C]	0.0500	ug/mL
Aroclor-1242{5}	0.0500	ug/mL
Aroclor-1242{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0244
Description: Aroclor 1248 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0759B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0244 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0759	na	2.5000

Analyte	Concentration	Units
Aroclor-1248	0.0500	ug/mL
Aroclor-1248 [2C]	0.0500	ug/mL
Aroclor-1248{1}	0.0500	ug/mL
Aroclor-1248{1} [2C]	0.0500	ug/mL
Aroclor-1248{2}	0.0500	ug/mL
Aroclor-1248{2} [2C]	0.0500	ug/mL
Aroclor-1248{3}	0.0500	ug/mL
Aroclor-1248{3} [2C]	0.0500	ug/mL
Aroclor-1248{4}	0.0500	ug/mL
Aroclor-1248{4} [2C]	0.0500	ug/mL
Aroclor-1248{5}	0.0500	ug/mL
Aroclor-1248{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0245
Description: Aroclor 1262 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0761B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0245 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0761	na	2.5000

Analyte	Concentration	Units
Aroclor-1262	0.0500	ug/mL
Aroclor-1262 [2C]	0.0500	ug/mL
Aroclor-1262{1}	0.0500	ug/mL
Aroclor-1262{1} [2C]	0.0500	ug/mL
Aroclor-1262{2}	0.0500	ug/mL
Aroclor-1262{2} [2C]	0.0500	ug/mL
Aroclor-1262{3}	0.0500	ug/mL
Aroclor-1262{3} [2C]	0.0500	ug/mL
Aroclor-1262{4}	0.0500	ug/mL
Aroclor-1262{4} [2C]	0.0500	ug/mL
Aroclor-1262{5}	0.0500	ug/mL
Aroclor-1262{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0246
Description: Aroclor 1268 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

Comments: 23H0762B
 2.5ml of 1268 500ug/l standard into a 25ml flask.

23I0246 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0762	na	2.5000

Analyte	Concentration	Units
Aroclor-1268	0.0500	ug/mL
Aroclor-1268 [2C]	0.0500	ug/mL
Aroclor-1268{1}	0.0500	ug/mL
Aroclor-1268{1} [2C]	0.0500	ug/mL
Aroclor-1268{2}	0.0500	ug/mL
Aroclor-1268{2} [2C]	0.0500	ug/mL
Aroclor-1268{3}	0.0500	ug/mL
Aroclor-1268{3} [2C]	0.0500	ug/mL
Aroclor-1268{4}	0.0500	ug/mL
Aroclor-1268{4} [2C]	0.0500	ug/mL
Aroclor-1268{5}	0.0500	ug/mL
Aroclor-1268{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23J0124
Description: 1660 CCV 50
Solvent: Hexane 23H0198N
Lot Number: 231763
Comments: 2 and the half ml of 1660 CCV 500 standard in 25ml flask of Hexane.

Date Prepared: 10/05/2023
Date Expires: 02/29/2024
Prepared by: Thomas Lindsay
Vendor: Fisher
Final Volume (mL:s): 25.0000

23J0124 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23I0544	NA	2.5000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0054
Description: 1660 Cal Std 250ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 11/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0054 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0053	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.2500	ug/mL
Aroclor-1016 [2C]	0.2500	ug/mL
Aroclor-1016{1}	0.2500	ug/mL
Aroclor-1016{1} [2C]	0.2500	ug/mL
Aroclor-1016{2}	0.2500	ug/mL
Aroclor-1016{2} [2C]	0.2500	ug/mL
Aroclor-1016{3}	0.2500	ug/mL
Aroclor-1016{3} [2C]	0.2500	ug/mL
Aroclor-1016{4}	0.2500	ug/mL
Aroclor-1016{4} [2C]	0.2500	ug/mL
Aroclor-1016{5}	0.2500	ug/mL
Aroclor-1016{5} [2C]	0.2500	ug/mL
Aroclor-1260	0.2500	ug/mL
Aroclor-1260 [2C]	0.2500	ug/mL
Aroclor-1260{1}	0.2500	ug/mL
Aroclor-1260{1} [2C]	0.2500	ug/mL
Aroclor-1260{2}	0.2500	ug/mL
Aroclor-1260{2} [2C]	0.2500	ug/mL
Aroclor-1260{3}	0.2500	ug/mL
Aroclor-1260{3} [2C]	0.2500	ug/mL
Aroclor-1260{4}	0.2500	ug/mL
Aroclor-1260{4} [2C]	0.2500	ug/mL
Aroclor-1260{5}	0.2500	ug/mL
Aroclor-1260{5} [2C]	0.2500	ug/mL
Decachlorobiphenyl	0.0250	ug/mL
Decachlorobiphenyl [2C]	0.0250	ug/mL
Tetrachloro-m-xylene	0.0250	ug/mL
Tetrachloro-m-xylene [2C]	0.0250	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0055
Description: 1660 Cal Std 100ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 12/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0055 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0054	na	40.0000

Analyte	Concentration	Units
Aroclor-1016	0.1000	ug/mL
Aroclor-1016 [2C]	0.1000	ug/mL
Aroclor-1016{1}	0.1000	ug/mL
Aroclor-1016{1} [2C]	0.1000	ug/mL
Aroclor-1016{2}	0.1000	ug/mL
Aroclor-1016{2} [2C]	0.1000	ug/mL
Aroclor-1016{3}	0.1000	ug/mL
Aroclor-1016{3} [2C]	0.1000	ug/mL
Aroclor-1016{4}	0.1000	ug/mL
Aroclor-1016{4} [2C]	0.1000	ug/mL
Aroclor-1016{5}	0.1000	ug/mL
Aroclor-1016{5} [2C]	0.1000	ug/mL
Aroclor-1260	0.1000	ug/mL
Aroclor-1260 [2C]	0.1000	ug/mL
Aroclor-1260{1}	0.1000	ug/mL
Aroclor-1260{1} [2C]	0.1000	ug/mL
Aroclor-1260{2}	0.1000	ug/mL
Aroclor-1260{2} [2C]	0.1000	ug/mL
Aroclor-1260{3}	0.1000	ug/mL
Aroclor-1260{3} [2C]	0.1000	ug/mL
Aroclor-1260{4}	0.1000	ug/mL
Aroclor-1260{4} [2C]	0.1000	ug/mL
Aroclor-1260{5}	0.1000	ug/mL
Aroclor-1260{5} [2C]	0.1000	ug/mL
Decachlorobiphenyl	0.0100	ug/mL
Decachlorobiphenyl [2C]	0.0100	ug/mL
Tetrachloro-m-xylene	0.0100	ug/mL
Tetrachloro-m-xylene [2C]	0.0100	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0056
Description: 1660 Cal Std 50ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 12/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0056 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0055	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0633
Description: 1660 Cal Std 25ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0633 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0056	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0250	ug/mL
Aroclor-1016 [2C]	0.0250	ug/mL
Aroclor-1016{1}	0.0250	ug/mL
Aroclor-1016{1} [2C]	0.0250	ug/mL
Aroclor-1016{2}	0.0250	ug/mL
Aroclor-1016{2} [2C]	0.0250	ug/mL
Aroclor-1016{3}	0.0250	ug/mL
Aroclor-1016{3} [2C]	0.0250	ug/mL
Aroclor-1016{4}	0.0250	ug/mL
Aroclor-1016{4} [2C]	0.0250	ug/mL
Aroclor-1016{5}	0.0250	ug/mL
Aroclor-1016{5} [2C]	0.0250	ug/mL
Aroclor-1260	0.0250	ug/mL
Aroclor-1260 [2C]	0.0250	ug/mL
Aroclor-1260{1}	0.0250	ug/mL
Aroclor-1260{1} [2C]	0.0250	ug/mL
Aroclor-1260{2}	0.0250	ug/mL
Aroclor-1260{2} [2C]	0.0250	ug/mL
Aroclor-1260{3}	0.0250	ug/mL
Aroclor-1260{3} [2C]	0.0250	ug/mL
Aroclor-1260{4}	0.0250	ug/mL
Aroclor-1260{4} [2C]	0.0250	ug/mL
Aroclor-1260{5}	0.0250	ug/mL
Aroclor-1260{5} [2C]	0.0250	ug/mL
Decachlorobiphenyl	0.0025	ug/mL
Decachlorobiphenyl [2C]	0.0025	ug/mL
Tetrachloro-m-xylene	0.0025	ug/mL
Tetrachloro-m-xylene [2C]	0.0025	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0634
Description: 1660 Cal Std 10ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0634 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0633	na	40.0000

Analyte	Concentration	Units
Aroclor-1016	0.0100	ug/mL
Aroclor-1016 [2C]	0.0100	ug/mL
Aroclor-1016{1}	0.0100	ug/mL
Aroclor-1016{1} [2C]	0.0100	ug/mL
Aroclor-1016{2}	0.0100	ug/mL
Aroclor-1016{2} [2C]	0.0100	ug/mL
Aroclor-1016{3}	0.0100	ug/mL
Aroclor-1016{3} [2C]	0.0100	ug/mL
Aroclor-1016{4}	0.0100	ug/mL
Aroclor-1016{4} [2C]	0.0100	ug/mL
Aroclor-1016{5}	0.0100	ug/mL
Aroclor-1016{5} [2C]	0.0100	ug/mL
Aroclor-1260	0.0100	ug/mL
Aroclor-1260 [2C]	0.0100	ug/mL
Aroclor-1260{1}	0.0100	ug/mL
Aroclor-1260{1} [2C]	0.0100	ug/mL
Aroclor-1260{2}	0.0100	ug/mL
Aroclor-1260{2} [2C]	0.0100	ug/mL
Aroclor-1260{3}	0.0100	ug/mL
Aroclor-1260{3} [2C]	0.0100	ug/mL
Aroclor-1260{4}	0.0100	ug/mL
Aroclor-1260{4} [2C]	0.0100	ug/mL
Aroclor-1260{5}	0.0100	ug/mL
Aroclor-1260{5} [2C]	0.0100	ug/mL
Decachlorobiphenyl	0.0010	ug/mL
Decachlorobiphenyl [2C]	0.0010	ug/mL
Tetrachloro-m-xylene	0.0010	ug/mL
Tetrachloro-m-xylene [2C]	0.0010	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0635
Description: 1660 Cal Std 5ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0635 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0634	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0050	ug/mL
Aroclor-1016 [2C]	0.0050	ug/mL
Aroclor-1016{1}	0.0050	ug/mL
Aroclor-1016{1} [2C]	0.0050	ug/mL
Aroclor-1016{2}	0.0050	ug/mL
Aroclor-1016{2} [2C]	0.0050	ug/mL
Aroclor-1016{3}	0.0050	ug/mL
Aroclor-1016{3} [2C]	0.0050	ug/mL
Aroclor-1016{4}	0.0050	ug/mL
Aroclor-1016{4} [2C]	0.0050	ug/mL
Aroclor-1016{5}	0.0050	ug/mL
Aroclor-1016{5} [2C]	0.0050	ug/mL
Aroclor-1260	0.0050	ug/mL
Aroclor-1260 [2C]	0.0050	ug/mL
Aroclor-1260{1}	0.0050	ug/mL
Aroclor-1260{1} [2C]	0.0050	ug/mL
Aroclor-1260{2}	0.0050	ug/mL
Aroclor-1260{2} [2C]	0.0050	ug/mL
Aroclor-1260{3}	0.0050	ug/mL
Aroclor-1260{3} [2C]	0.0050	ug/mL
Aroclor-1260{4}	0.0050	ug/mL
Aroclor-1260{4} [2C]	0.0050	ug/mL
Aroclor-1260{5}	0.0050	ug/mL
Aroclor-1260{5} [2C]	0.0050	ug/mL
Decachlorobiphenyl	0.0005	ug/mL
Decachlorobiphenyl [2C]	0.0005	ug/mL
Tetrachloro-m-xylene	0.0005	ug/mL
Tetrachloro-m-xylene [2C]	0.0005	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0636
Description: 1660 ICV 50ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 05/02/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 50.0000

Comments: Used vial A Created vails a and B

24A0636 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23K0081	na	5.0000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A1093
Description: 608 Spike
Solvent: Acetone 23I0253
Lot Number: A0198397

Date Prepared: 01/30/2024
Date Expires: 07/28/2024
Prepared by: Maxwell Baier
Vendor: In-House
Final Volume (mL:s): 200.0000

Comments: 100 mL Acetone
~~Aroclor 1016/1260 24A0123A~~

24A1093 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0123	A0198397	0.2000

Analyte	Concentration	Units
Aroclor-1016	1.0000	ug/mL
Aroclor-1016 [2C]	1.0000	ug/mL
Aroclor-1260	1.0000	ug/mL
Aroclor-1260 [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A1129
Description: PCB/ Pest Surrogate
Solvent: Acetone 23I0253
Lot Number: N/A

Date Prepared: 01/31/2024
Date Expires: 07/29/2024
Prepared by: Maxwell Baier
Vendor: In-House
Final Volume (mL:s): 200.0000

Comments: Pest Surrogate Mix: 24A0112 C
Lot # A0203741

24A1129 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
22H0064	A0185124	1.0000

Analyte	Concentration	Units
Decachlorobiphenyl	1.0000	ug/mL
Decachlorobiphenyl [2C]	1.0000	ug/mL
Tetrachloro-m-xylene	1.0000	ug/mL
Tetrachloro-m-xylene [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24B1163
Description: 1660 CCV 50
Solvent: Hexane 24B0290
Lot Number: 23L1861094

Date Prepared: 02/29/2024
Date Expires: 06/12/2024
Prepared by: Thomas Lindsay
Vendor: VWR
Final Volume (mL:s): 25.0000

Comments: 2 and the half ml of 1660 CCV 500 standard in 25ml flask of Hexane.

24B1163 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24B0367	NA	2.5000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL



110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: 1-814-353-1300
 Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis
chromatographic plus

23GC0148 A-L
 TR 7/10/23



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0197094
Description : Pesticide Surrogate Mix
Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : July 31, 2029 **Storage:** 10°C or colder
Handling: Contains PCBs - sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty* (95% C.L.; K=2)
1	2,4,5,6-Tetrachloro-m-xylene	877-09-8	RP220407	99%	201.2 µg/mL	+/- 11.1631
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30638	99%	201.7 µg/mL	+/- 11.1898

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Quality Confirmation Test

Column:

30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

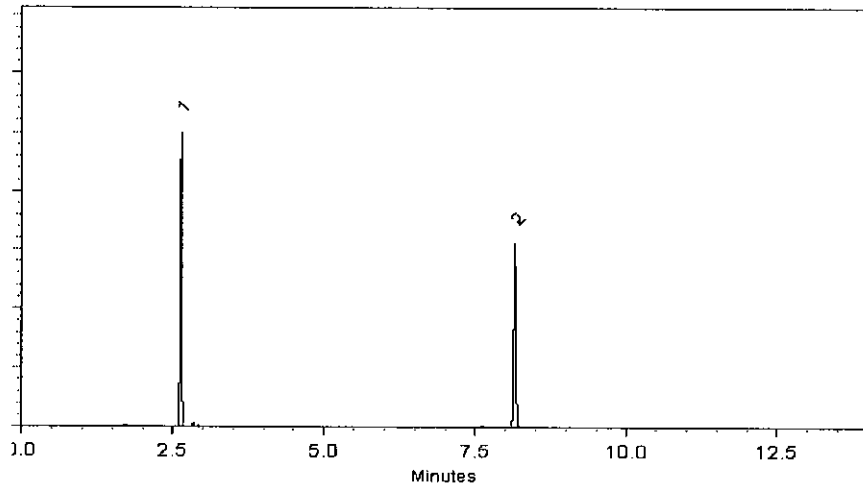
ECD

Split Vent:

10 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 17-Apr-2023

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: (800)356-1688
 Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

23G0149 A-F
 7/10/23



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 Lot No.: A0191718
 Description : Aroclor® 1016/1260 Mix
Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul
 Container Size : 2 mL Pkg Amt: > 1 mL
 Expiration Date : February 28, 2029 Storage: 25°C nominal
 Handling: This product contains PCBs. Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Aroclor 1016	1,001.0 µg/mL	+/-	5.8332	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 4)		+/-	31.7173	µg/mL	Unstressed
	Purity ----%		+/-	41.4374	µg/mL	Stressed
2	Aroclor 1260	1,001.1 µg/mL	+/-	5.8336	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 1294610)		+/-	31.7197	µg/mL	Unstressed
	Purity ----%		+/-	41.4405	µg/mL	Stressed

Solvent: Hexane
 CAS # 110-54-3
 Purity 99%

Column:

30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

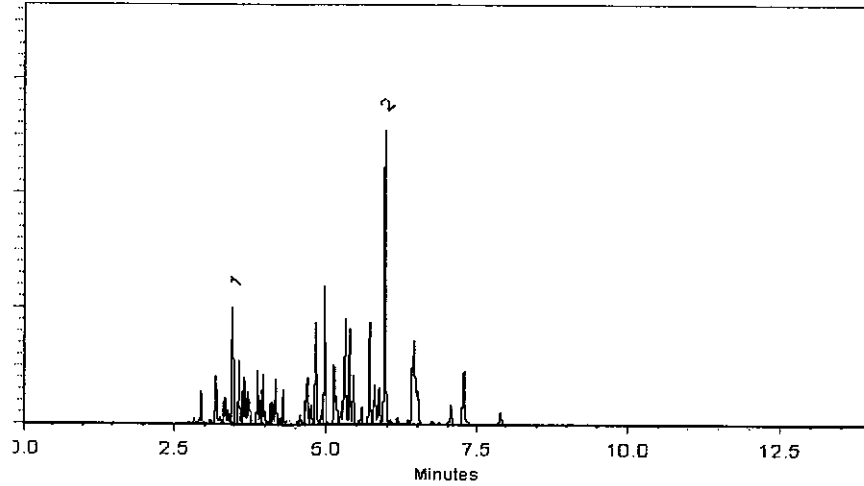
250°C

Det. Temp:

300°C

Det. Type:

ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 15-Nov-2022 Balance: 1128360905

Marlina Cowan - Operations Tech II ARM QC

Date Passed: 17-Nov-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

2360152 A, B
✓ 7/10/23



ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Calibration Standard

Lot Number: 0006740524

Product Number: PPM-8082-1

Lot Issue Date: 17-Apr-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 30-Nov-2029

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
Aroclor 1016	1004 ±	5 µg/mL	012674-11-2	NT01016
Aroclor 1260	1004 ±	5 µg/mL	011096-82-5	NT01023

Matrix: isooctane (2,2,4-trimethylpentane)

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:

This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.



Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.



Sample lot approver:

Monica Bourgeois
QMS Representative



ISO 17034
Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

www.agilent.com/quality/
CSD-QA-015.2

ISO 17025
Cert No. AT-1937

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

24A0123
 1/3/24

Catalog No.: 32039 **Lot No.:** A0198397
Description: Aroclor® 1016/1260 Mix
 Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: August 31, 2029 **Storage:** 25°C nominal
Handling: This product contains PCBs. **Ship:** Ambient

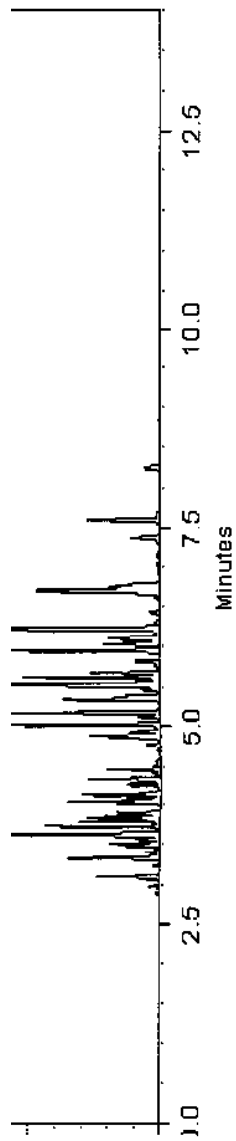
CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty* (95% C.L.; K=2)
1	Aroclor 1016	12674-11-2	07	----%	1,001.0 µg/mL	+/- 55.5375
2	Aroclor 1260	11096-82-5	1348808	----%	1,005.4 µg/mL	+/- 55.7789

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Det. type:
ECD
Split Vent:
10 ml/min.
Inj. Vol
0.2µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope S. Rigin

Penelope Rigin - Operations Tech I

Date Mixed: 23-May-2023 **Balance Serial #** B442140311

Jennifer Pollino

Jennifer Pollino - Operations Tech III - ARM-QC

Date Passed: 01-Jun-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012415369

LIMS Reference ID: AC15369

EMSL Customer ID: GSCH75

May 23, 2024

Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/30/2024. The results are tabulated on the attached pages for the following client designated project:

NCSUPH

The reference number for these samples is EMSL Order #: AC15369 . Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact the lab at 856-858-4800.

Owen McKenna Laboratory Manager or other approved signatory

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EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

Attention: Jeff Ahrens
Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

EMSL Order ID: 012415369
LIMS Reference ID: AC15369
EMSL Customer ID: GSCH75

Project Number: NCSUPH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 04/30/2024 09:30
Reported: 05/23/2024 10:48

Work Order Case Narrative

Project: NCSUPH
Workorder: AC15369

This report contains the analytical data for the analysis of 10 samples, and are listed below.

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Sample Date</u>
A-01-216-042424	AC15369-06	04/25/24 18:58
A-02-317F-042424	AC15369-07	04/25/24 19:08
A-09-402G-042424	AC15369-08	04/26/24 16:42
A-11-209-042424	AC15369-04	04/25/24 18:53
A-12-228-042424	AC15369-05	04/25/24 19:02
A-13-106-042424	AC15369-01	04/25/24 18:42
A-15-117-042424	AC15369-03	04/25/24 18:48
Blank-01-117-042424	AC15369-10	04/25/24 18:48
DUP-01-106-042424	AC15369-02	04/25/24 18:42
DUP-02-402G-042424	AC15369-09	04/26/24 16:43

Sample Receipt

The samples were received 04/30/24 09:30 and in good condition unless listed below. The temperature of the cooler at reception was

<u>Cooler</u>	<u>Temp C°</u>
Default Cooler	10.0

Report Revision 1

Replaces report from 05/14/2024

Report amended. Reported aroclors have been revised.

**EMSL Analytical, Inc.**

200 Route 130, Cinnaminson, NJ, 08077
 Telephone: 856-858-4800 Fax:856-786-5974
 EMSL-CIN-01

Attention: Jeff Ahrens
 Geosyntec Consultants of NC [GSCH75]
 1300 S Mint Street, Suite 300
 Charlotte, NC 28203-4168
 (704) 227-0850
 jahrens@geosyntec.com

EMSL Order ID: 012415369
LIMS Reference ID: AC15369
EMSL Customer ID: GSCH75

Project Number: NCSUPH
Customer PO:
EMSL Sales Rep: Emily Stressman
Received: 04/30/2024 09:30
Reported: 05/23/2024 10:48

Analysis Case Narrative**Analysis list:**

<u>Sample</u>	<u>Method List</u>
AC15369-01	EPA TO-10A
AC15369-02	EPA TO-10A
AC15369-03	EPA TO-10A
AC15369-04	EPA TO-10A
AC15369-05	EPA TO-10A
AC15369-06	EPA TO-10A
AC15369-07	EPA TO-10A
AC15369-08	EPA TO-10A
AC15369-09	EPA TO-10A
AC15369-10	EPA TO-10A

Method Reference

USEPA: Compendium TO-10A, Determination Of Pesticides And Polychlorinated Biphenyls In Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed By Gas Chromatographic/Multi-Detector Detection (GC/MD), January 1999, (EPA/625/R-96/010b).

Holding Times:

All holding times were met.

Sample Dilutions:

<u>Sample ID</u>	<u>Analyzed</u>	<u>Dilution</u>
AC15369-01	No Dilutions	
AC15369-02	No Dilutions	
AC15369-03	No Dilutions	
AC15369-04	No Dilutions	
AC15369-05	No Dilutions	
AC15369-06	No Dilutions	
AC15369-07	No Dilutions	
AC15369-08	No Dilutions	
AC15369-09	No Dilutions	
AC15369-10	No Dilutions	

Initial Calibration:

All acceptance criteria were met.

Initial Calibration Verification Standard (ICVS)- Second Source:

All acceptance criteria were met.

Laboratory Control Samples (LCS):

All acceptance criteria were met.

Continuing Calibration Verification Standard (CCVS):

All acceptance criteria were met.

Method Blanks (MB):

<u>Sample</u>	<u>Analysis</u>	<u>Analyte</u>	<u>Qualifier</u>	<u>Description</u>
BCD2253-BLK1	01-PCB-TO-10A	Decachlorobiphenyl [2C]	S	Surrogate recovery is outside the method



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012415369

LIMS Reference ID: AC15369

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Number:

NCSUPH

Customer PO:

EMSL Sales Rep:

Emily Stressman

Received:

04/30/2024 09:30

Reported:

05/23/2024 10:48

control limits.

BCD2253-BLK2 01-PCB-TO-10A Decachlorobiphenyl [2C] S Surrogate recovery is outside the method

control limits.

BCD2253-BLK2 01-PCB-TO-10A Tetrachloro-m-xylene [2C] S Surrogate recovery is outside the method

control limits.

BCD2253-BLK1 01-PCB-TO-10A Tetrachloro-m-xylene [2C] S Surrogate recovery is outside the method

control limits.

Samples:

<u>Sample</u>	<u>Analysis</u>	<u>Analyte</u>	<u>Qualifier</u>	<u>Description</u>
AC15369-03 control limits.	01-PCB-TO-10A	Decachlorobiphenyl	S	Surrogate recovery is outside the method
AC15369-03 control limits.	01-PCB-TO-10A	Decachlorobiphenyl [2C]	S	Surrogate recovery is outside the method
AC15369-03 control limits.	01-PCB-TO-10A	Tetrachloro-m-xylene [2C]	S	Surrogate recovery is outside the method
AC15369-10 control limits.	01-PCB-TO-10A	Decachlorobiphenyl	S	Surrogate recovery is outside the method
AC15369-10 control limits.	01-PCB-TO-10A	Decachlorobiphenyl [2C]	S	Surrogate recovery is outside the method
AC15369-10 control limits.	01-PCB-TO-10A	Tetrachloro-m-xylene	S	Surrogate recovery is outside the method
AC15369-10 control limits.	01-PCB-TO-10A	Tetrachloro-m-xylene [2C]	S	Surrogate recovery is outside the method

EMSL Analytical, Inc. certifies that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer ---readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature

Owen McKenna Laboratory Manager or other approved signatory

Certified Analyses included in this Report

Analyte	CAS #	Certifications
<i>EPA TO-10A in Tubes</i>		
Aroclor-1016	12674-11-2	NJDEP
Aroclor-1221	11104-28-2	NJDEP
Aroclor-1232	11141-16-5	NJDEP
Aroclor-1242	53469-21-9	NJDEP
Aroclor-1248	12672-29-6	NJDEP
Aroclor-1254	11097-69-1	NJDEP
Aroclor-1260	11096-82-5	NJDEP
Aroclor-1262	37324-23-5	NJDEP
Aroclor-1268	11100-14-4	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
NYSDOH	New York State Department of Health	10872	04/01/2025
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <<http://www.emsl.com>> for a complete listing of parameters for which EMSL is certified.



EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012415369

LIMS Reference ID: AC15369

EMSL Customer ID: GSCH75

Attention: Jeff Ahrens

Geosyntec Consultants of NC [GSCH75]
1300 S Mint Street, Suite 300
Charlotte, NC 28203-4168
(704) 227-0850
jahrens@geosyntec.com

Project Number:

NCSUPH

Customer PO:

EMSL Sales Rep:

Emily Stressman

Received:

04/30/2024 09:30

Reported:

05/23/2024 10:48

Notes and Definitions

Item	Definition
S	Surrogate recovery is outside the method control limits.
ND	Non Detect. This notation would be used in the results column in lieu of a "U" qualifier.
U	Compound was analyzed for but not detected at a listed and appropriately adjusted reporting level.
J(Target)	Concentration estimated between Reporting Limit and MDL.
J	Estimated value reported below adjusted reporting limit for target compounds or estimating a concentration for TICs where a 1:1 response is assumed
B	Compound found in associated method blank as well as in the sample.
E	Estimated value exceeding upper calibration range of instrument. Ethanol and isopropyl alcohol are not specifically targeted to dilute within calibration range.
D	Compound reported from additional diluted analysis.
N	indicates presumptive evidence of a compound based on library search match.

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Order Number / Lab Use Only
AC1536

Customer ID:		Billing ID:	
Company Name: Geosyntec Consultants		Company Name: Same as Customer Information	
Contact Name: Jeff Ahrens		Billing Contact:	
Street Address: 1300 S. Mint Street		Street Address:	
City, State, Zip: Charlotte, NC, 28203		City, State, Zip:	
Phone: 704-227-0840		Phone:	
Email(s) for Report: jahrens@geosyntec.com		Email(s) for Invoice:	
Project Name/No: NCSUPH		Purchase Order:	
EMSL LIMS Project ID: (If applicable, EMSL will provide)		State of Connecticut (CT) must select project location: Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable) <input type="checkbox"/>	
Samples for Compliance? <input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, for NPDES? <input type="checkbox"/> Yes <input type="checkbox"/> No	Other (Specify)	State Reporting Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Samples Collected by (Check One): <input type="checkbox"/> EMSL <input checked="" type="checkbox"/> CLIENT	Samples Received Chilled? <input type="checkbox"/> Yes <input type="checkbox"/> No	PWS ID:	
Sampled By Name: Marc Webb		Sample(s) Temperature Upon Receipt (LAB ONLY)	
Standard Turn-Around-Time: <input checked="" type="checkbox"/> 2 Weeks		No. of Samples in Shipment: 10	

The following TAT's are subject to Lab approval. Call lab to confirm TAT before submittal.

1 Day	2 Days	3 Days	4 Days	1 Week
-------	--------	--------	--------	--------

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line.)				Field Temp. Test Time	Field Temp. Deg.C	Field PH Test Time	Field PH Test Time	Comments
						Test 1:	Test 2:	Test 3:	Test 4:					
A-13-106-042424 ✓		<input checked="" type="checkbox"/>	04/25/2024 : 1842	W=Water S=Soil A=Air SL=Sludge O=Other	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe below in Special Instructions</i>	<input checked="" type="checkbox"/>								
DUP-01-106-042424		<input checked="" type="checkbox"/>	04/25/2024 : 1842	A	none	<input checked="" type="checkbox"/>								
A-15-117-042424 ✓		<input checked="" type="checkbox"/>	04/25/2024 : 1848	A	none	<input checked="" type="checkbox"/>								
A-11-209-042424 ✓		<input checked="" type="checkbox"/>	04/25/2024 : 1853	A	none	<input checked="" type="checkbox"/>								

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

FX#0740 **15 90 3563**

Reporting Requirements: Results and QC Reduced Deliverables HZresults EDD Excel Other (Describe Above)

Method of Shipment:

Relinquished by: **Marc Webb** Date/Time: **04/29/2024 : 1400**

Relinquished by: *[Signature]* Date/Time: **4/30/24 9:30am**

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this form of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

10.0°C *nic*

Environmental Chemistry - Sampling Event Chain of Custody

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: EnvChemistry2@EMSL.com

EMSL Order Number / Lab Use Only
AC15309

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Client Sample ID	Comp	Grab	Date / Time Collected	Matrix	Preservative	List Test(s) Needed (Write in test below, then check on sample line.)							Comments		
						Test 1: PCB Method TO-10A	Test 2:	Test 3:	Test 4:	Field PH	Field PH Test Time	Field Temp. Deg.C		Field Temp. Test Time	
A-12-228-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1802	A	1 HCL 2 HNO3 3 H2SO4 4 ICE 5 Other <i>Describe in Special Instructions</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
A-01-216-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1858	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
A-02-317F-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1908	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
A-09-402G-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/26/2024 : 1542	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
DUP-02-402G-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/26/2024 : 1543	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Blank-01-117-042424 ✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>	04/25/2024 : 1848	A	none	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

Method of Shipment:

Sample Condition Upon Receipt:

Relinquished by: **Marc Webb**

Date/Time: **04/29/2024 : 1400**

Date/Time: **4/30/24 9:30am**
Date/Time:

Relinquished by:

Received by:

[Signature]

Date/Time:

Received by:

Controlled Document - COC-80 Chemistry Sampling Event R2 02/26/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Emily Stressman
 Account Manager
 EMSL Analytical, Inc.

Phone: 843-958-8150 Direct: 843-480-4009 Cell (843) 259-9734 Toll Free: 888-958-8170

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From: Marc Webb <Marc.Webb@Geosyntec.com>
Sent: Thursday, May 2, 2024 12:59 PM
To: Stressman, Emily <estressman@EMSL.com>
Subject: Air Sample Sampling Times

[EXTERNAL E-MAIL]

Hi Emily,

Can you provide the following table to the lab that displays our air sample IDs, pre/post pump flow rates, sampling time, and sample volume (the volume uses the average of the pre and post flow check). Feel free to have the lab check our math:

Sample ID	Pre-Flow (L/min)	Post-Flow (L/min)	Total Sampling Time (min)	Total Sample Volume (L)
A-13-106-042424	5	4.92	1440	7142.4
DUP-01-106-042424	5.15	5.07	1440	7358.4
A-15-117-042424	5.22	5.17	1440	7480.8
A-11-209-042424	5.12	5.08	1440	7344
A-12-228-042424	5.21	5.17	1440	7473.6
A-01-216-042424	5.21	5.17	1440	7473.6
A-02-317F-042424	5.3	5.24	1440	7588.8
A-10-400-042424	5.2	5.17	1440	7466.4
A-09-402G-042624	5.16	5.1	1440	7387.2
DUP-02-402G-042624	5.24	5.2	1440	7516.8
A-07-510E-042424	5.21	5.19	1440	7488
A-08-526-042424	5.25	5.17	1440	7502.4
A-05-608J-042424	5.18	5.09	1440	7394.4
A-06-635-042424	5.13	5.09	1440	7358.4
A-04-714B-042424	5.14	5.16	1440	7416
A-03-742-042424	5.24	5.2	1440	7516.8

DUP-03-742-042424	5.16	5.1	1440	7387.2
A-14-ROOF-042424	5.26	5.25	1440	7567.2
Blank-01-117-042424	N/A	N/A	1440	passive air flow only, no pump

Thanks

Marc Webb, PhD

Senior Staff Professional



engineers | scientists | innovators

2501 Blue Ridge Road, Suite 430

Raleigh, NC 27607

Office: (919) 424-1856

Mobile: (919) 943-6697

www.geosyntec.com

Geosyntec Consultants, Inc.¹

Geosyntec Consultants of NC, P.C.²

1 – Services Outside of North Carolina

2 – Services Inside North Carolina

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AROCLOR

SAMPLE DATA

1 - FORM I ANALYSIS DATA SHEET

A-13-106-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-01	File ID: L14382.D
Sampled:	04/25/24 18:42	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 21:02
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00507	0.00700	
11104-28-2	Aroclor-1221		0.00507	0.00700	
11141-16-5	Aroclor-1232		0.00507	0.00700	
53469-21-9	Aroclor-1242		0.00507	0.00700	
12672-29-6	Aroclor-1248		0.00133	0.00700	
11097-69-1	Aroclor-1254		0.00133	0.00700	
11096-82-5	Aroclor-1260		0.00133	0.00700	
37324-23-5	Aroclor-1262	0.0766	0.00133	0.00700	
11100-14-4	Aroclor-1268		0.00133	0.00700	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14382.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:02 pm
 Operator : AxJ/KC
 Sample : AC15369-01
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:51:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

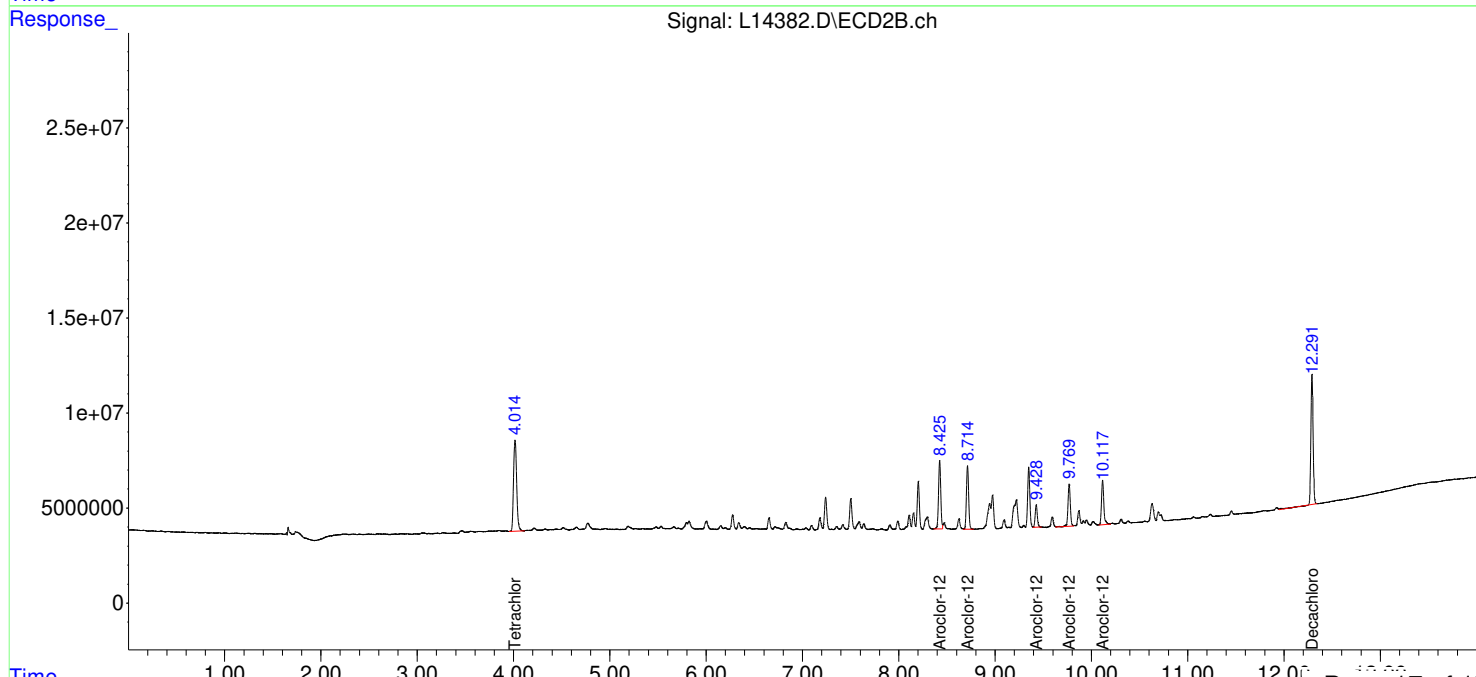
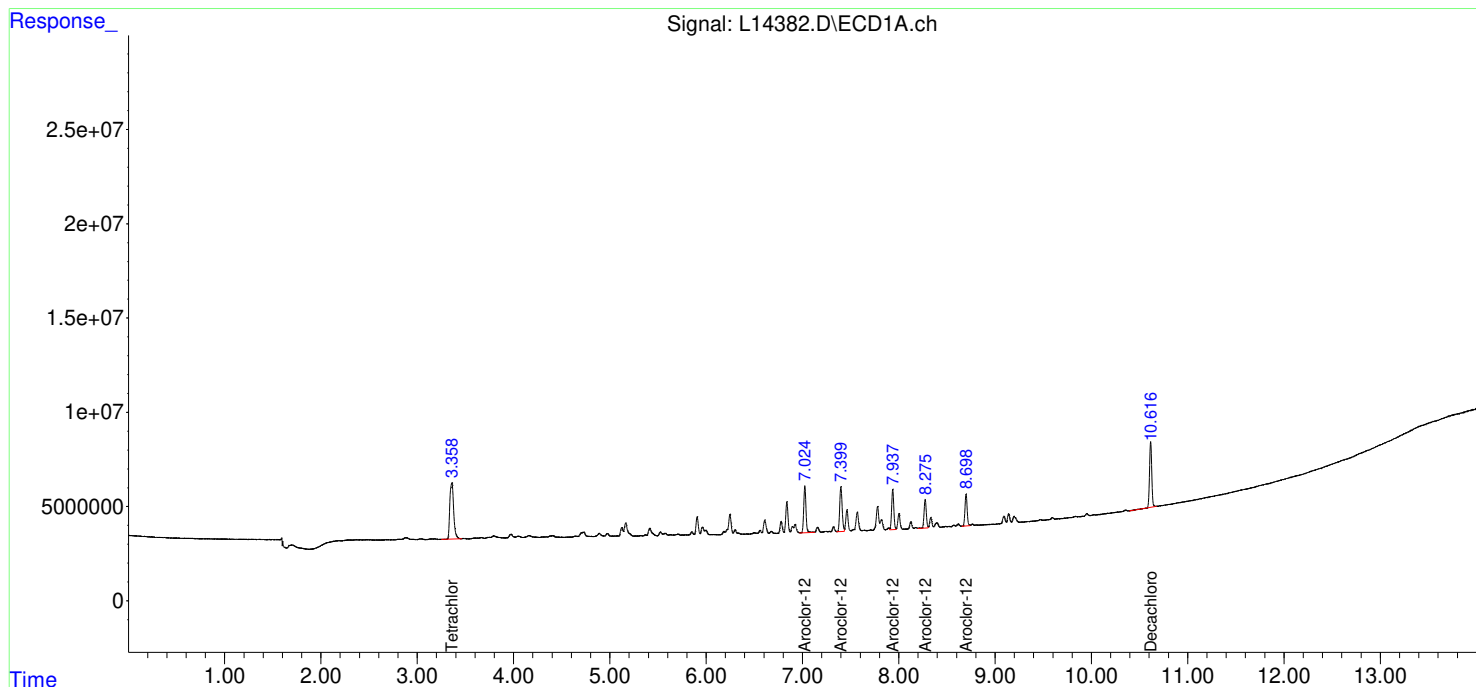
System Monitoring Compounds						
1) SA Tetrachlo...	3.358	4.015	82731867	108.3E6	6.517	6.528
Spiked Amount	10.000	Range	60 - 120	Recovery	= 65.17%	65.28%
2) SA Decachlor...	10.616	12.292	56754022	110.0E6	6.786	7.276
Spiked Amount	10.000	Range	60 - 120	Recovery	= 67.86%	72.76%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.425	40365035	58170007	90.136	92.244
34) L7 Aroclor-1...	7.399	8.715	42384255	53537828	70.268	73.879
35) L7 Aroclor-1...	7.937	9.428	33581800	18337158	49.148	48.150
36) L7 Aroclor-1...	8.275	9.770	24827566	36838563	41.344	42.511
37) L7 Aroclor-1...	8.699	10.117	26653725	39089183	22.806	23.444
Sum Aroclor-1262			167.8E6	206.0E6	273.702	280.228
Average Aroclor-1262					54.740	56.046
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14382.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:02 pm
 Operator : AxJ/KC
 Sample : AC15369-01
 Misc :
 ALS Vial : 18 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:51:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

DUP-01-106-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-02	File ID: L14383.D
Sampled:	04/25/24 18:42	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 21:18
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00492	0.00679	
11104-28-2	Aroclor-1221		0.00492	0.00679	
11141-16-5	Aroclor-1232		0.00492	0.00679	
53469-21-9	Aroclor-1242		0.00492	0.00679	
12672-29-6	Aroclor-1248		0.00130	0.00679	
11097-69-1	Aroclor-1254		0.00130	0.00679	
11096-82-5	Aroclor-1260		0.00130	0.00679	
37324-23-5	Aroclor-1262	0.0905	0.00130	0.00679	
11100-14-4	Aroclor-1268		0.00130	0.00679	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14383.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:18 pm
 Operator : AxJ/KC
 Sample : AC15369-02
 Misc :
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:52:10 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

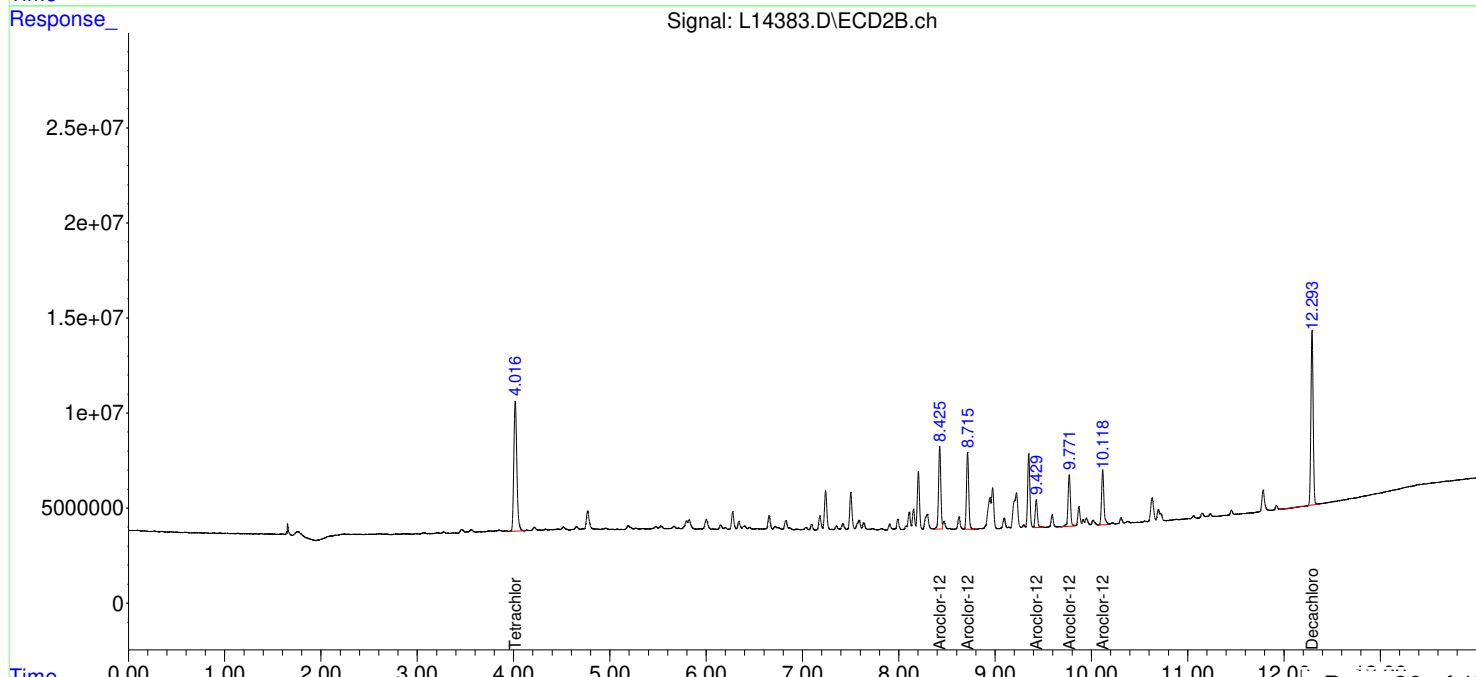
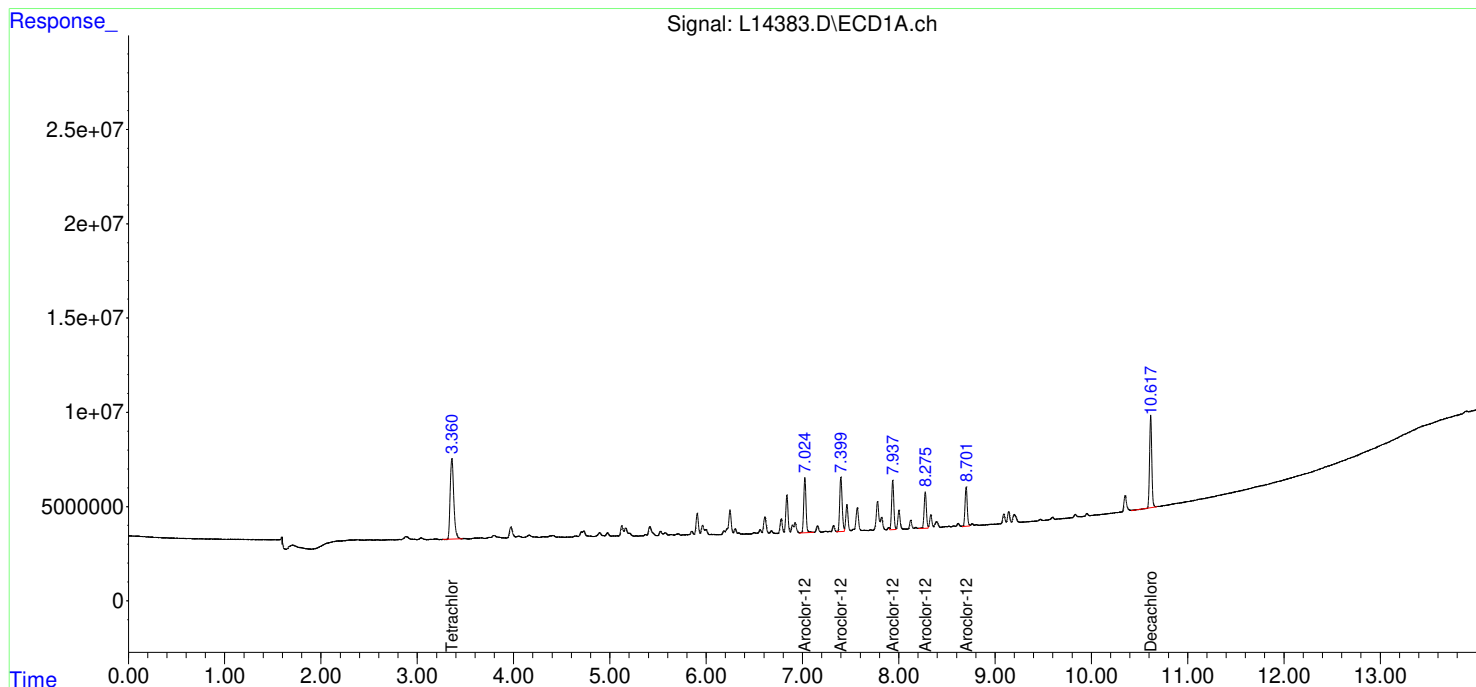
System Monitoring Compounds						
1) SA Tetrachlo...	3.359	4.017	111.3E6	149.1E6	8.765	8.993
Spiked Amount	10.000	Range	60 - 120	Recovery	= 87.65%	89.93%
2) SA Decachlor...	10.617	12.293	76646063	147.1E6	9.164	9.734
Spiked Amount	10.000	Range	60 - 120	Recovery	= 91.64%	97.34%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	48228438	71173780	107.695	112.864
34) L7 Aroclor-1...	7.399	8.715	51107107	65101379	84.729	89.836
35) L7 Aroclor-1...	7.937	9.429	41038597	23135580	60.061	60.750
36) L7 Aroclor-1...	8.276	9.771	31017922	46919831	51.652	54.145
37) L7 Aroclor-1...	8.700	10.119	33611570	48468763	28.760	29.070
Sum Aroclor-1262			205.0E6	254.8E6	332.897	346.665
Average Aroclor-1262					66.579	69.333
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14383.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:18 pm
 Operator : AxJ/KC
 Sample : AC15369-02
 Misc :
 ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:52:10 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-15-117-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-03	File ID: L14384.D
Sampled:	04/25/24 18:48	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 21:34
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00484	0.00668	
11104-28-2	Aroclor-1221		0.00484	0.00668	
11141-16-5	Aroclor-1232		0.00484	0.00668	
53469-21-9	Aroclor-1242		0.00484	0.00668	
12672-29-6	Aroclor-1248		0.00127	0.00668	
11097-69-1	Aroclor-1254		0.00127	0.00668	
11096-82-5	Aroclor-1260		0.00127	0.00668	
37324-23-5	Aroclor-1262	0.104	0.00127	0.00668	
11100-14-4	Aroclor-1268		0.00127	0.00668	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14384.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:34 pm
 Operator : AxJ/KC
 Sample : AC15369-03
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:53:02 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

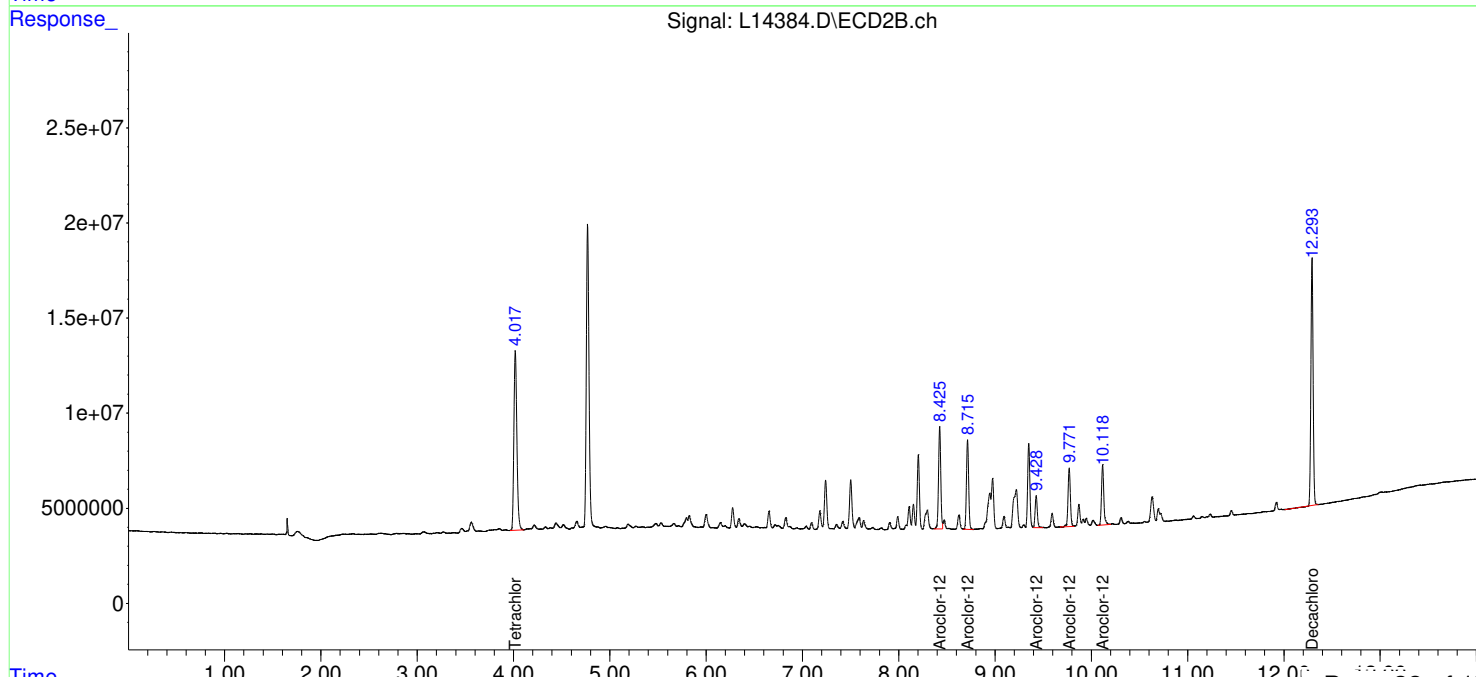
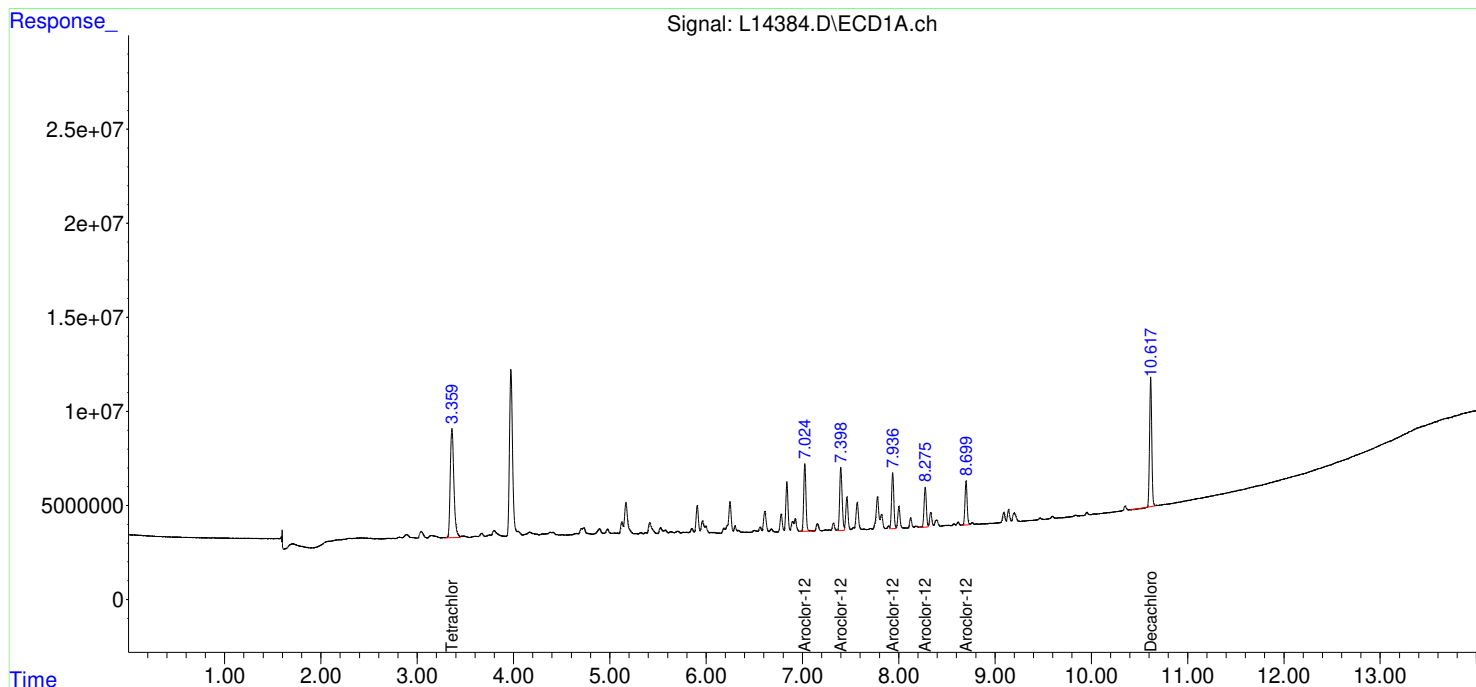
System Monitoring Compounds						
1) SA Tetrachlo...	3.360	4.018	151.9E6	204.7E6	11.965	12.342
Spiked Amount	10.000	Range	60 - 120	Recovery	= 119.65%	123.42%#
2) SA Decachlor...	10.617	12.293	105.3E6	207.2E6	12.591	13.711
Spiked Amount	10.000	Range	60 - 120	Recovery	= 125.91%#	137.11%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	58777724	86561488	131.251	137.266
34) L7 Aroclor-1...	7.398	8.715	59394938	75864876	98.470	104.689
35) L7 Aroclor-1...	7.937	9.428	47592973	26333670	69.654	69.148
36) L7 Aroclor-1...	8.276	9.771	34978789	51954261	58.248	59.954
37) L7 Aroclor-1...	8.700	10.118	36282068	52738556	31.045	31.631
Sum Aroclor-1262			237.0E6	293.5E6	388.668	402.687
Average Aroclor-1262					77.734	80.537
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14384.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:34 pm
 Operator : AxJ/KC
 Sample : AC15369-03
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:53:02 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-11-209-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-04	File ID: L14385.D
Sampled:	04/25/24 18:53	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 21:50
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00493	0.00681	
11104-28-2	Aroclor-1221		0.00493	0.00681	
11141-16-5	Aroclor-1232		0.00493	0.00681	
53469-21-9	Aroclor-1242		0.00493	0.00681	
12672-29-6	Aroclor-1248		0.00130	0.00681	
11097-69-1	Aroclor-1254		0.00130	0.00681	
11096-82-5	Aroclor-1260		0.00130	0.00681	
37324-23-5	Aroclor-1262	0.125	0.00130	0.00681	
11100-14-4	Aroclor-1268		0.00130	0.00681	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14385.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:50 pm
 Operator : AxJ/KC
 Sample : AC15369-04
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:53:52 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

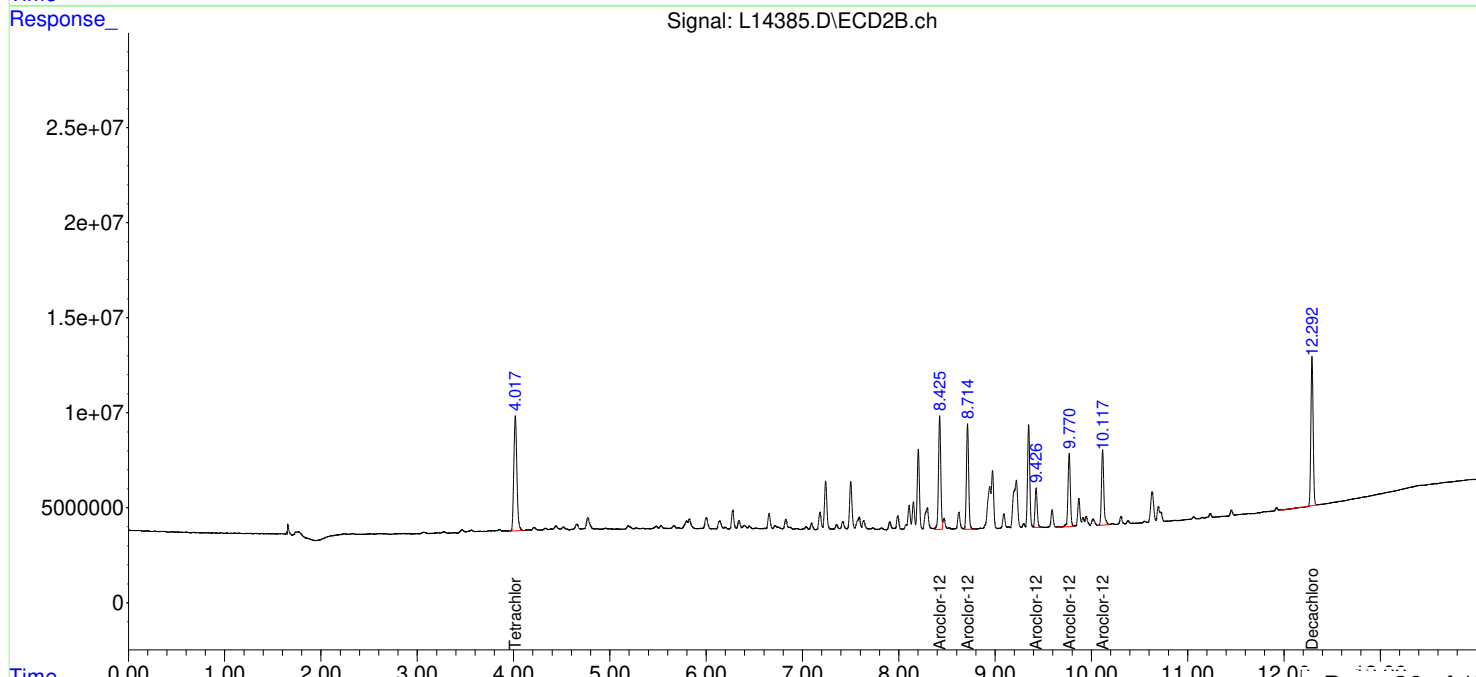
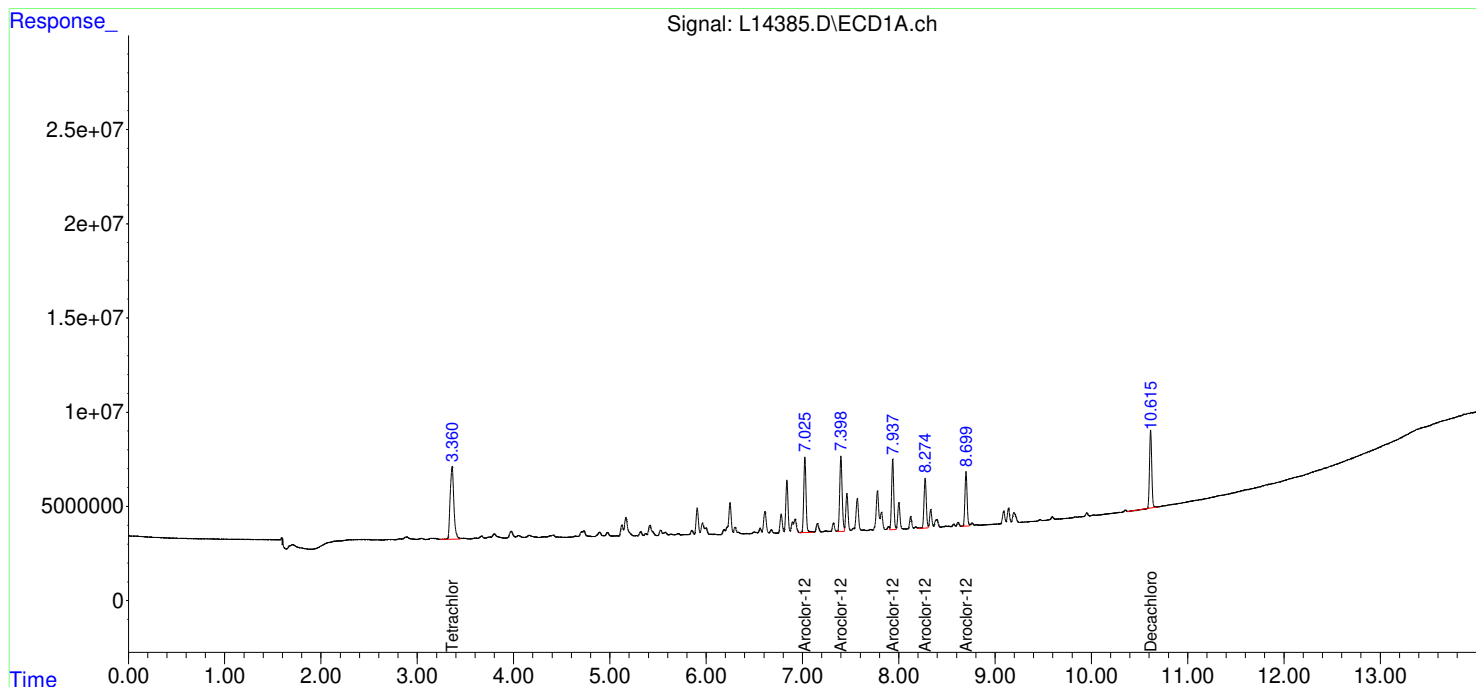
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.018	102.8E6	134.3E6	8.096	8.099
Spiked Amount	10.000	Range	60 - 120	Recovery	= 80.96%	80.99%
2) SA Decachlor...	10.616	12.293	65535341	126.4E6	7.836	8.364
Spiked Amount	10.000	Range	60 - 120	Recovery	= 78.36%	83.64%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.425	65700528	99036306	146.710	157.048
34) L7 Aroclor-1...	7.399	8.715	69849837	89369691	115.803	123.325
35) L7 Aroclor-1...	7.937	9.427	57783783	32296851	84.569	84.806
36) L7 Aroclor-1...	8.275	9.771	43407777	65513200	72.284	75.601
37) L7 Aroclor-1...	8.699	10.118	45275048	66529610	38.740	39.902
Sum Aroclor-1262			282.0E6	352.7E6	458.105	480.681
Average Aroclor-1262					91.621	96.136
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14385.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 9:50 pm
 Operator : AxJ/KC
 Sample : AC15369-04
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:53:52 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-12-228-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-05	File ID: L14386.D
Sampled:	04/25/24 19:02	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 22:06
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00484	0.00669	
11104-28-2	Aroclor-1221		0.00484	0.00669	
11141-16-5	Aroclor-1232		0.00484	0.00669	
53469-21-9	Aroclor-1242		0.00484	0.00669	
12672-29-6	Aroclor-1248		0.00128	0.00669	
11097-69-1	Aroclor-1254		0.00128	0.00669	
11096-82-5	Aroclor-1260		0.00128	0.00669	
37324-23-5	Aroclor-1262	0.117	0.00128	0.00669	
11100-14-4	Aroclor-1268		0.00128	0.00669	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14386.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:06 pm
 Operator : AxJ/KC
 Sample : AC15369-05
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:54:37 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

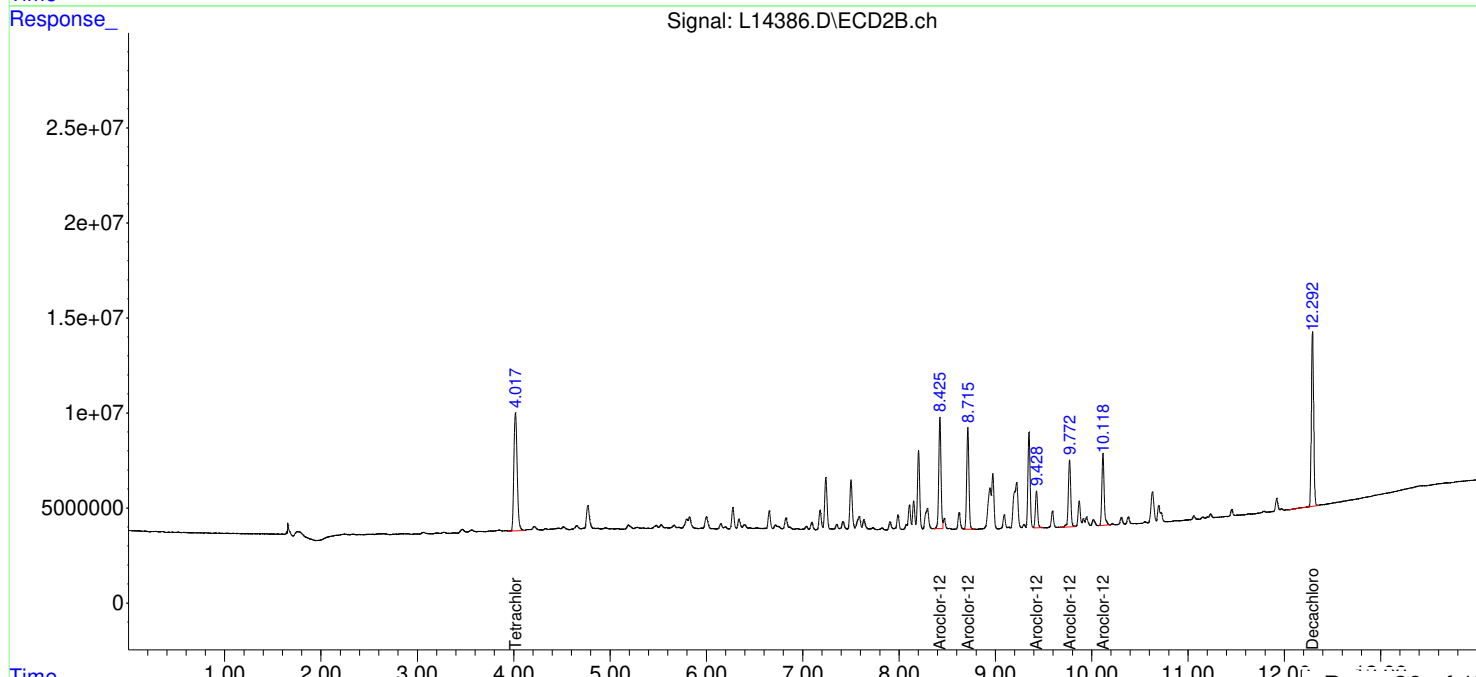
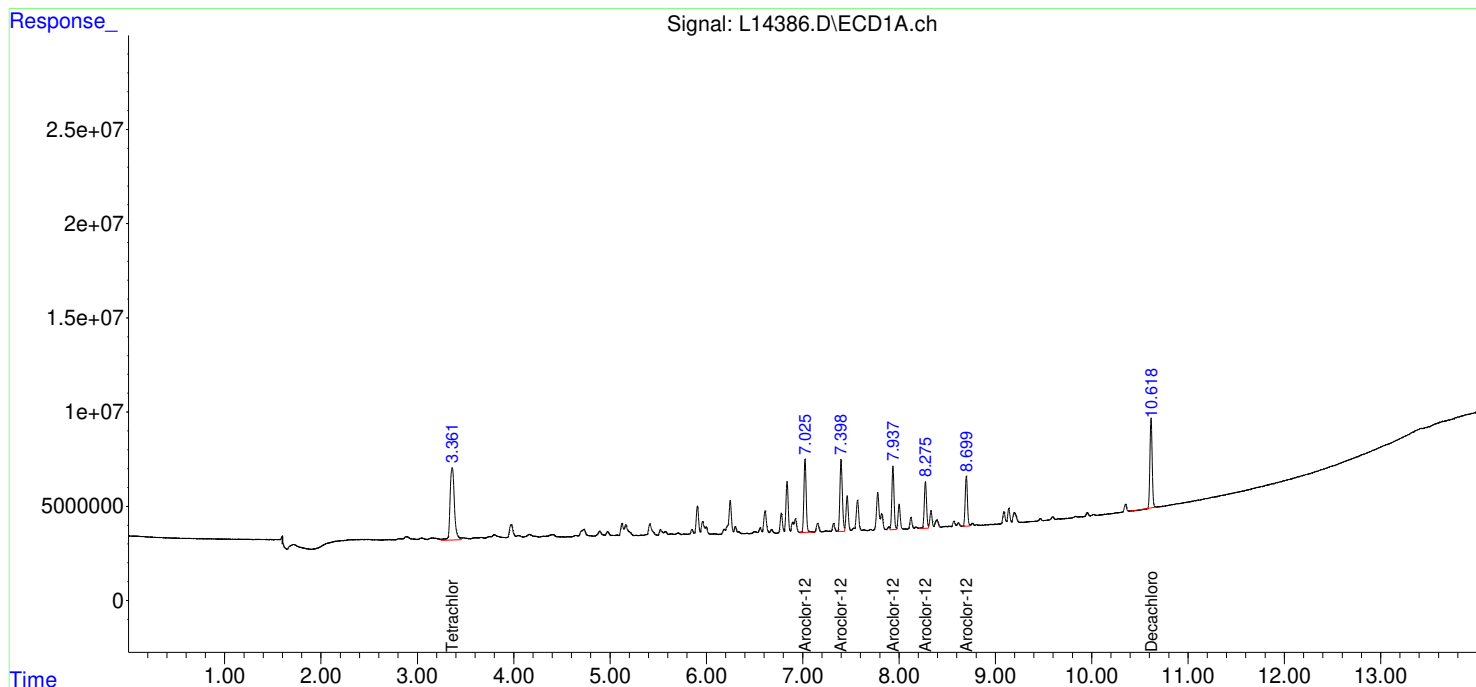
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.018	120.7E6	147.7E6	9.505	8.909
Spiked Amount	10.000	Range 60 - 120	Recovery =	95.05%	89.09%	
2) SA Decachlor...	10.617	12.293	75885776	151.9E6	9.074	10.052
Spiked Amount	10.000	Range 60 - 120	Recovery =	90.74%	100.52%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.425	64073035	95074434	143.076	150.765
34) L7 Aroclor-1...	7.398	8.715	67033830	85453536	111.134	117.920
35) L7 Aroclor-1...	7.937	9.428	53512700	30439044	78.318	79.928
36) L7 Aroclor-1...	8.275	9.771	40457331	60268131	67.371	69.549
37) L7 Aroclor-1...	8.700	10.118	42849180	62293861	36.664	37.362
Sum Aroclor-1262			267.9E6	333.5E6	436.562	455.523
Average Aroclor-1262					87.312	91.105
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14386.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:06 pm
 Operator : AxJ/KC
 Sample : AC15369-05
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:54:37 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-01-216-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-06	File ID: L14387.D
Sampled:	04/25/24 18:58	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 22:22
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00484	0.00669	
11104-28-2	Aroclor-1221		0.00484	0.00669	
11141-16-5	Aroclor-1232		0.00484	0.00669	
53469-21-9	Aroclor-1242		0.00484	0.00669	
12672-29-6	Aroclor-1248		0.00128	0.00669	
11097-69-1	Aroclor-1254		0.00128	0.00669	
11096-82-5	Aroclor-1260		0.00128	0.00669	
37324-23-5	Aroclor-1262	0.133	0.00128	0.00669	
11100-14-4	Aroclor-1268		0.00128	0.00669	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14387.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:22 pm
 Operator : AxJ/KC
 Sample : AC15369-06
 Misc :
 ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:55:24 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

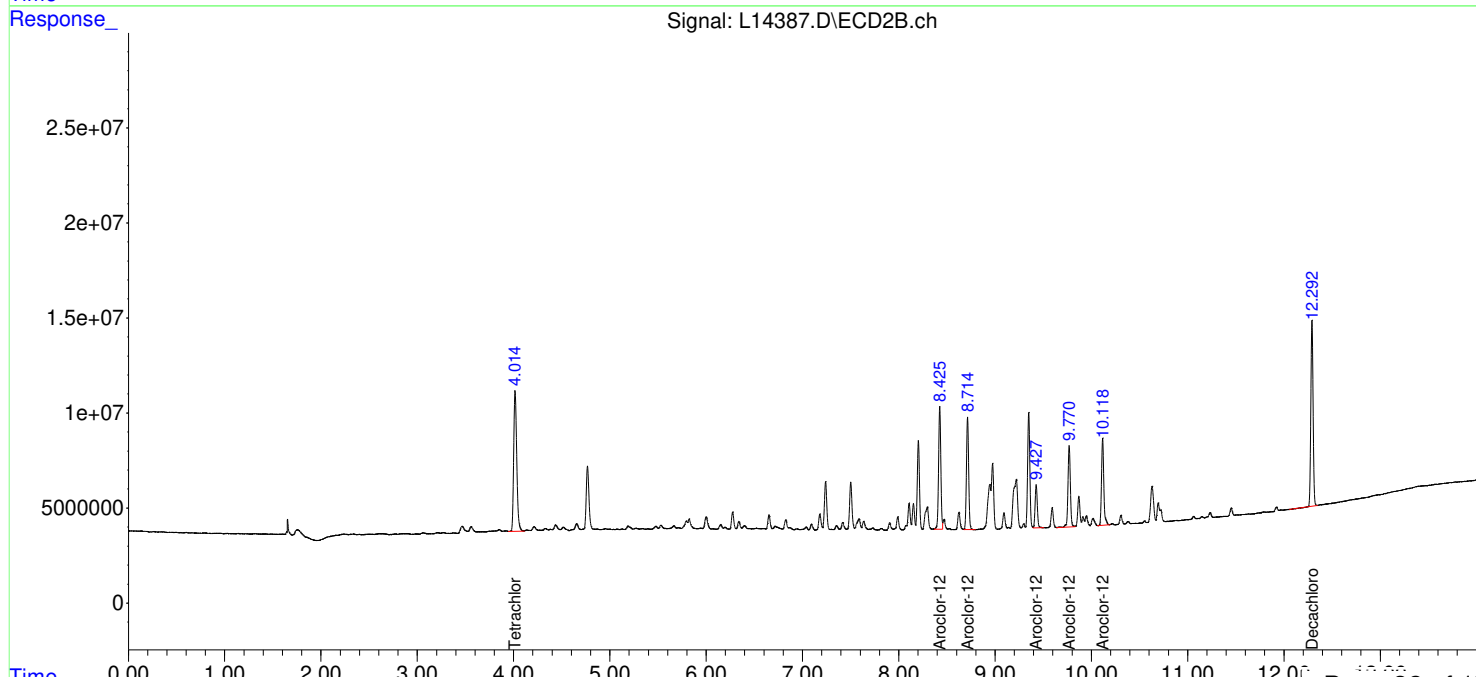
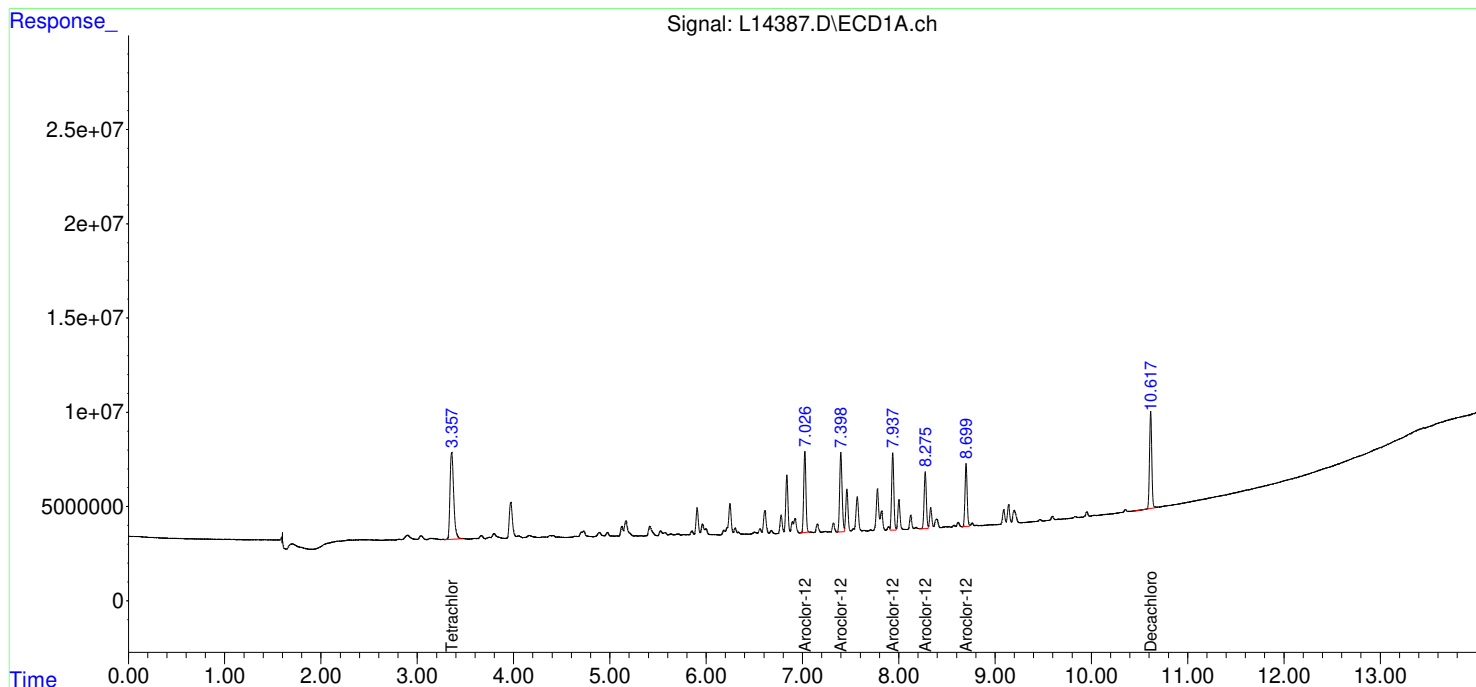
System Monitoring Compounds						
1) SA Tetrachlo...	3.357	4.015	121.4E6	163.1E6	9.564	9.835
Spiked Amount	10.000	Range	60 - 120	Recovery	= 95.64%	98.35%
2) SA Decachlor...	10.617	12.292	82429236	157.8E6	9.856	10.438
Spiked Amount	10.000	Range	60 - 120	Recovery	= 98.56%	104.38%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.426	69144452	104.8E6	154.400	166.162
34) L7 Aroclor-1...	7.398	8.715	73567946	94783472	121.967	130.795
35) L7 Aroclor-1...	7.938	9.428	64559050	36432871	94.484	95.666
36) L7 Aroclor-1...	8.275	9.771	48361263	73369198	80.533	84.667
37) L7 Aroclor-1...	8.699	10.118	51858898	74876414	44.373	44.908
Sum Aroclor-1262			307.5E6	384.2E6	495.758	522.198
Average Aroclor-1262					99.152	104.440
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14387.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:22 pm
 Operator : AxJ/KC
 Sample : AC15369-06
 Misc :
 ALS Vial : 23 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:55:24 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-02-317F-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-07	File ID: L14389.D
Sampled:	04/25/24 19:08	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 22:55
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00477	0.00659	
11104-28-2	Aroclor-1221		0.00477	0.00659	
11141-16-5	Aroclor-1232		0.00477	0.00659	
53469-21-9	Aroclor-1242		0.00477	0.00659	
12672-29-6	Aroclor-1248		0.00126	0.00659	
11097-69-1	Aroclor-1254		0.00126	0.00659	
11096-82-5	Aroclor-1260		0.00126	0.00659	
37324-23-5	Aroclor-1262	0.109	0.00126	0.00659	
11100-14-4	Aroclor-1268		0.00126	0.00659	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14389.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:55 pm
 Operator : AxJ/KC
 Sample : AC15369-07
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:56:30 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

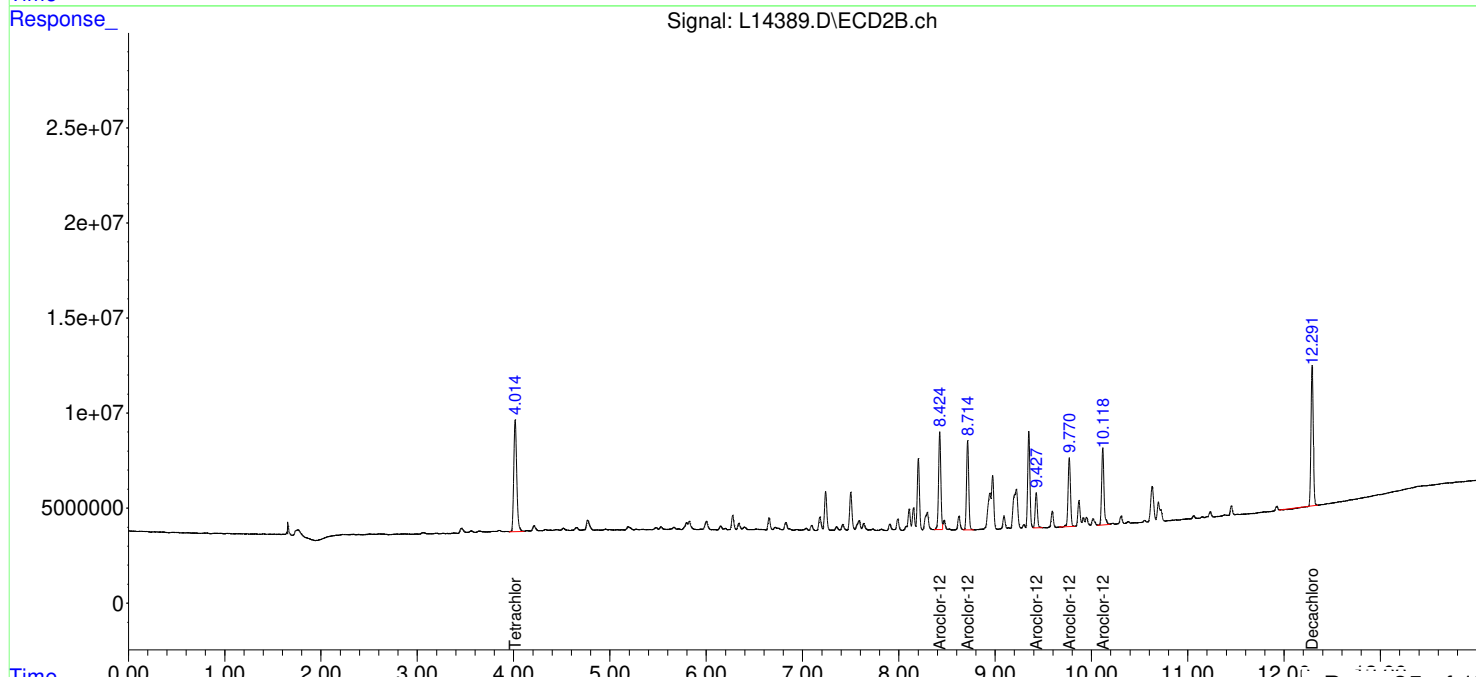
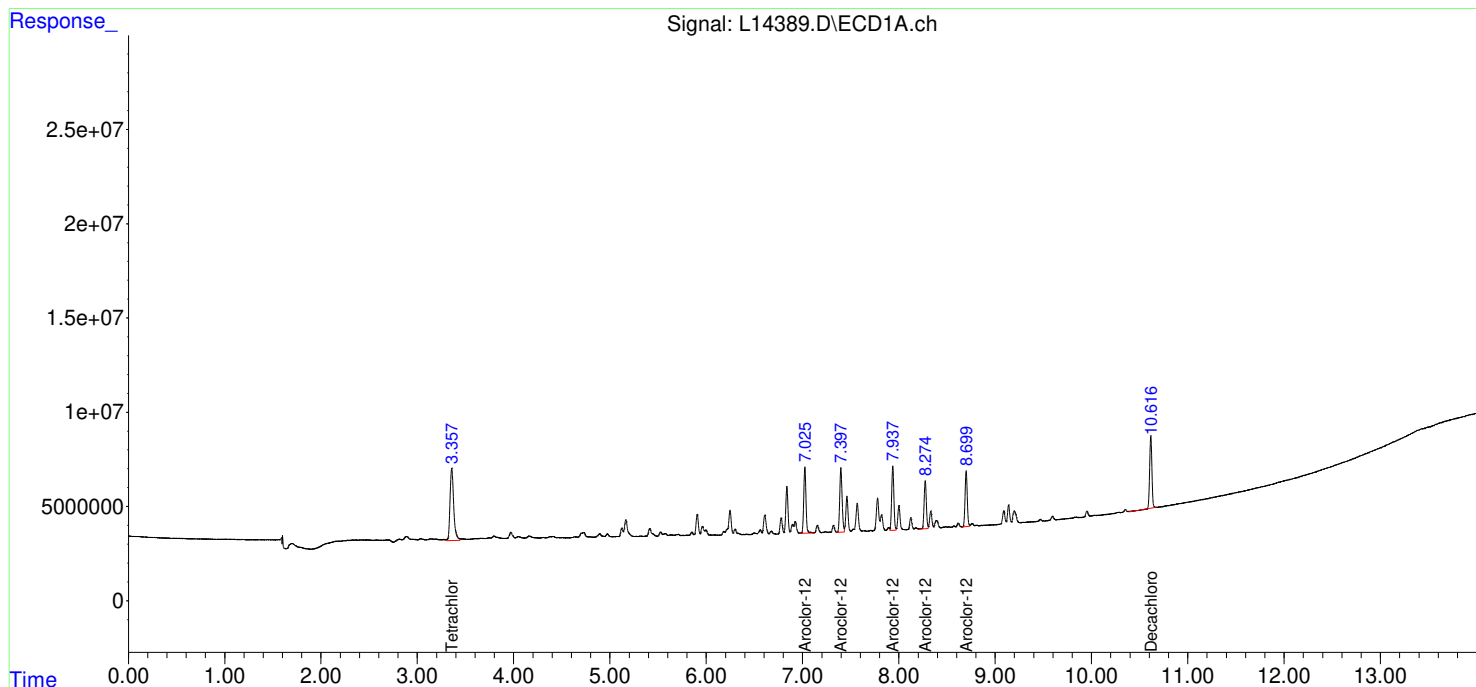
System Monitoring Compounds						
1) SA Tetrachlo...	3.356	4.015	102.0E6	125.7E6	8.039	7.581
Spiked Amount	10.000	Range	60 - 120	Recovery	= 80.39%	75.81%
2) SA Decachlor...	10.617	12.292	62012599	120.4E6	7.415	7.968
Spiked Amount	10.000	Range	60 - 120	Recovery	= 74.15%	79.68%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.024	8.425	57017763	83777873	127.321	132.852
34) L7 Aroclor-1...	7.398	8.714	58494681	74999190	96.977	103.494
35) L7 Aroclor-1...	7.937	9.427	53984330	29118863	79.008	76.461
36) L7 Aroclor-1...	8.274	9.770	41381629	61550443	68.910	71.028
37) L7 Aroclor-1...	8.699	10.118	47027321	67620982	40.239	40.557
Sum Aroclor-1262			257.9E6	317.1E6	412.456	424.392
Average Aroclor-1262					82.491	84.878
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14389.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:55 pm
 Operator : AxJ/KC
 Sample : AC15369-07
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:56:30 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

A-09-402G-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-08	File ID: L14390.D
Sampled:	04/26/24 16:42	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 23:11
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00490	0.00677	
11104-28-2	Aroclor-1221		0.00490	0.00677	
11141-16-5	Aroclor-1232		0.00490	0.00677	
53469-21-9	Aroclor-1242		0.00490	0.00677	
12672-29-6	Aroclor-1248		0.00129	0.00677	
11097-69-1	Aroclor-1254		0.00129	0.00677	
11096-82-5	Aroclor-1260		0.00129	0.00677	
37324-23-5	Aroclor-1262	0.155	0.00129	0.00677	
11100-14-4	Aroclor-1268		0.00129	0.00677	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14390.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:11 pm
 Operator : AxJ/KC
 Sample : AC15369-08
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:57:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

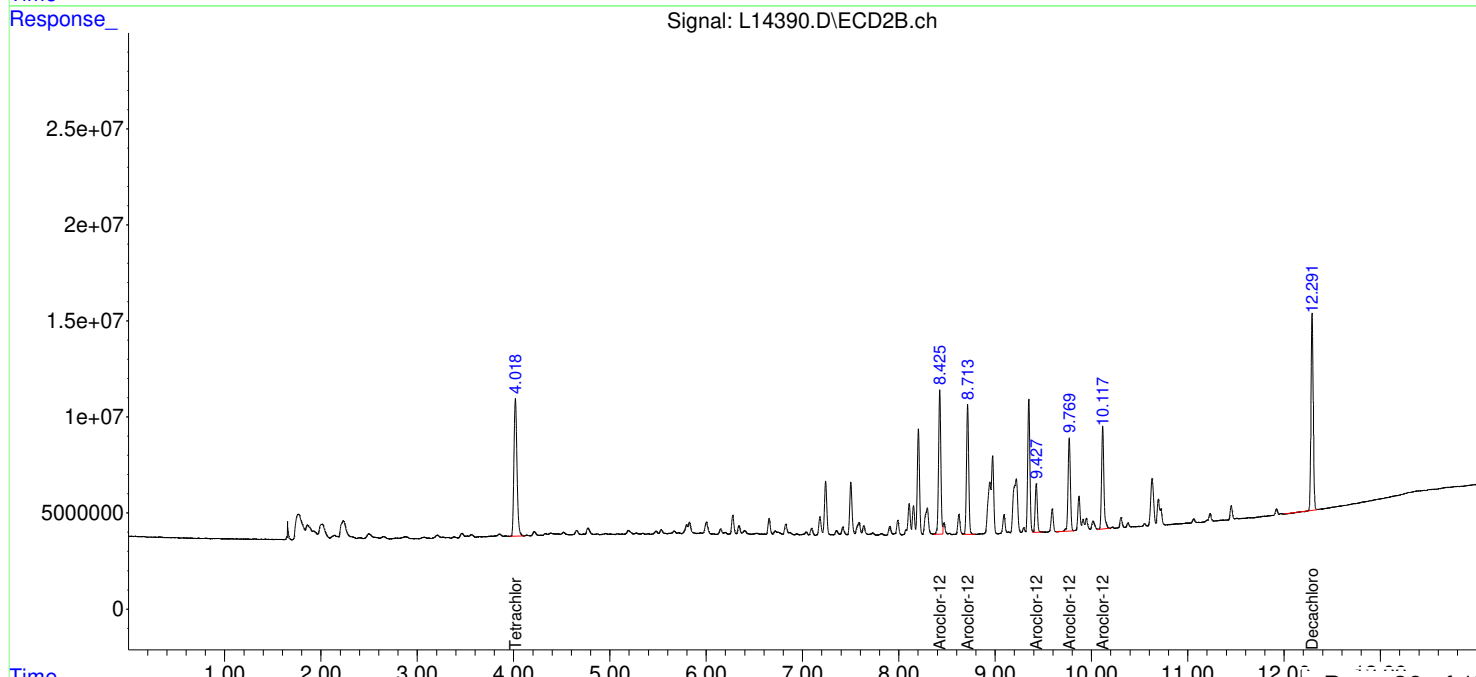
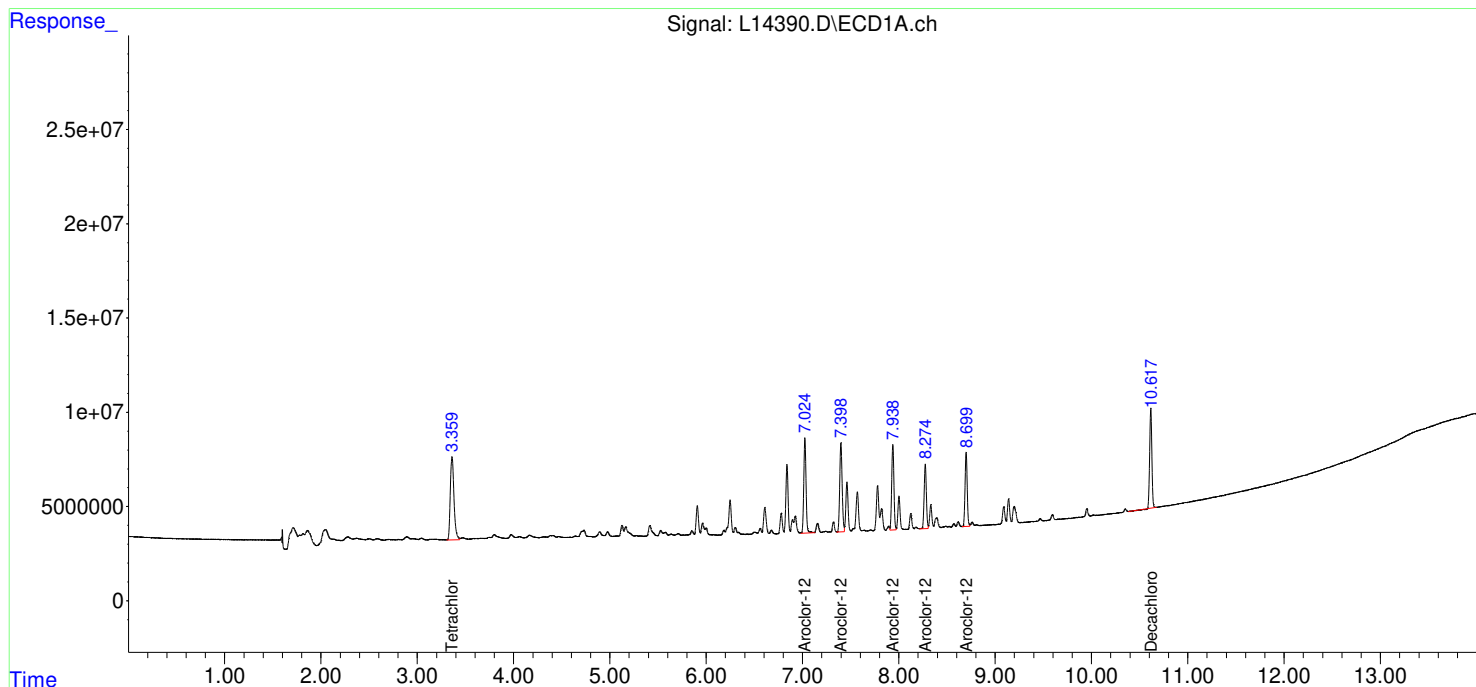
System Monitoring Compounds						
1) SA Tetrachlo...	3.360	4.018	117.6E6	157.3E6	9.265	9.484
Spiked Amount	10.000	Range	60 - 120	Recovery	= 92.65%	94.84%
2) SA Decachlor...	10.617	12.292	83062794	164.3E6	9.932	10.870
Spiked Amount	10.000	Range	60 - 120	Recovery	= 99.32%	108.70%
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.025	8.425	82514969	122.3E6	184.257	193.960
34) L7 Aroclor-1...	7.398	8.714	83031274	106.8E6	137.656	147.343
35) L7 Aroclor-1...	7.938	9.427	72629163	39817446	106.295	104.554
36) L7 Aroclor-1...	8.275	9.770	54552231	82486467	90.842	95.188
37) L7 Aroclor-1...	8.699	10.117	60860997	88118563	52.076	52.850
Sum Aroclor-1262			353.6E6	439.5E6	571.126	593.896
Average Aroclor-1262					114.225	118.779
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14390.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:11 pm
 Operator : AxJ/KC
 Sample : AC15369-08
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:57:21 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

DUP-02-402G-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-09	File ID: L14391.D
Sampled:	04/26/24 16:43	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 23:27
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		0.00482	0.00665	
11104-28-2	Aroclor-1221		0.00482	0.00665	
11141-16-5	Aroclor-1232		0.00482	0.00665	
53469-21-9	Aroclor-1242		0.00482	0.00665	
12672-29-6	Aroclor-1248		0.00127	0.00665	
11097-69-1	Aroclor-1254		0.00127	0.00665	
11096-82-5	Aroclor-1260		0.00127	0.00665	
37324-23-5	Aroclor-1262	0.145	0.00127	0.00665	
11100-14-4	Aroclor-1268		0.00127	0.00665	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502\
 Data File : L14391.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:27 pm
 Operator : AxJ/KC
 Sample : AC15369-09
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:58:31 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

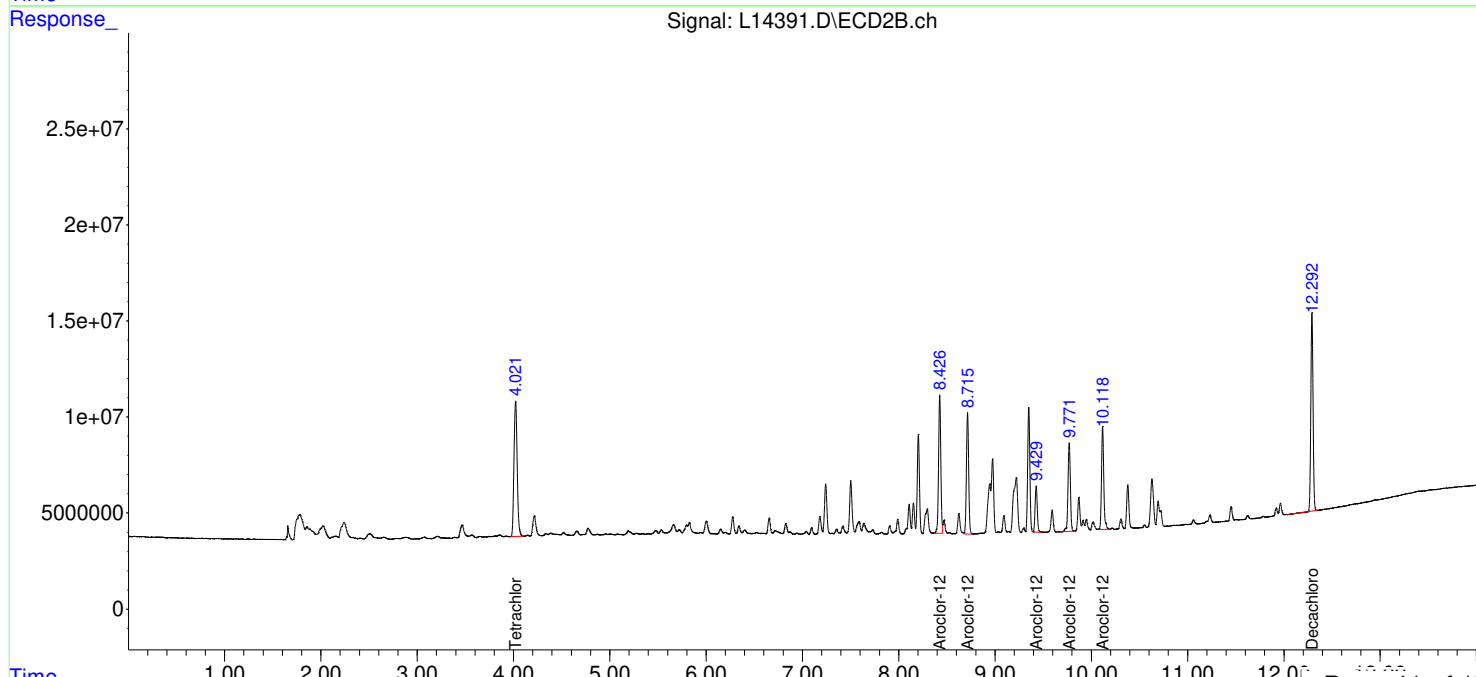
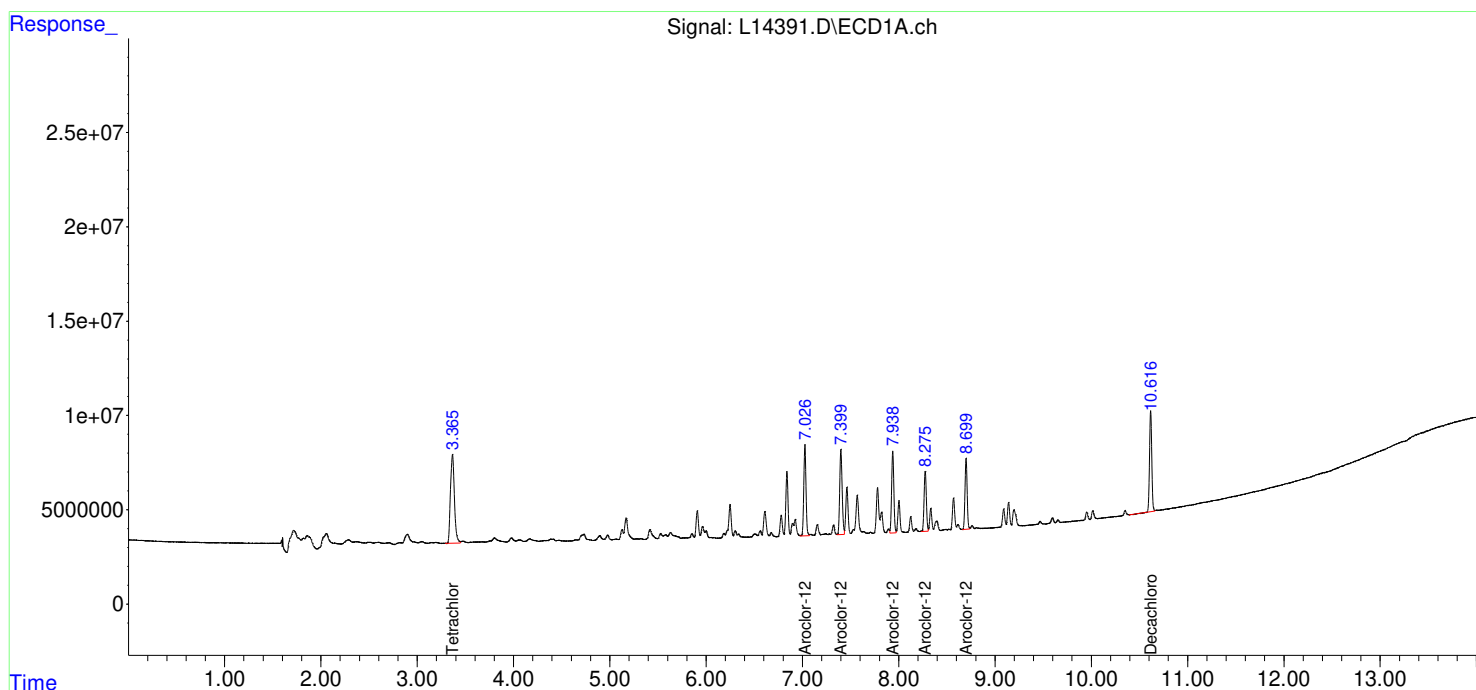
System Monitoring Compounds						
1) SA Tetrachlo...	3.365	4.021	133.5E6	163.1E6	10.518	9.835
Spiked Amount	10.000	Range 60 - 120	Recovery =	105.18%	98.35%	
2) SA Decachlor...	10.617	12.292	85807495	164.8E6	10.260	10.906
Spiked Amount	10.000	Range 60 - 120	Recovery =	102.60%	109.06%	
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
33) L7 Aroclor-1...	7.026	8.426	77735681	116.1E6	173.585	184.106
34) L7 Aroclor-1...	7.399	8.715	79791458	102.2E6	132.285	140.990
35) L7 Aroclor-1...	7.938	9.428	69074243	37881685	101.093	99.471
36) L7 Aroclor-1...	8.276	9.771	52464442	79000907	87.366	91.166
37) L7 Aroclor-1...	8.700	10.118	58536257	86458372	50.087	51.855
Sum Aroclor-1262			337.6E6	421.6E6	544.414	567.588
Average Aroclor-1262					108.883	113.518
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502\
 Data File : L14391.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:27 pm
 Operator : AxJ/KC
 Sample : AC15369-09
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 16:58:31 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

Blank-01-117-042424

Laboratory:	EMSL-CIN-01	SDG:		
Client:	Geosyntec Consultants of NC [GSC]	Project:	NCSUPH	
Matrix:	Tubes	Laboratory ID:	AC15369-10	File ID: L14392.D
Sampled:	04/25/24 18:48	Prepared:	04/30/24 15:23	Analyzed: 05/02/24 23:43
Solids:		Preparation:	EPA TO-10A	Dilution: 1
Batch:	BCD2253	Sequence:	SCE0475	Calibration: AA40009
				Instrument: GCECD-L

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		36.2	50.0	
11104-28-2	Aroclor-1221		36.2	50.0	
11141-16-5	Aroclor-1232		36.2	50.0	
53469-21-9	Aroclor-1242		36.2	50.0	
12672-29-6	Aroclor-1248		9.53	50.0	
11097-69-1	Aroclor-1254		9.53	50.0	
11096-82-5	Aroclor-1260		9.53	50.0	
37324-23-5	Aroclor-1262		9.53	50.0	
11100-14-4	Aroclor-1268		9.53	50.0	

* Values outside of QC limits

Data Path : C:\gcms\1\data\L240502A\
 Data File : L14392.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:43 pm
 Operator : AxJ/KC
 Sample : AC15369-10
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 17:00:04 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

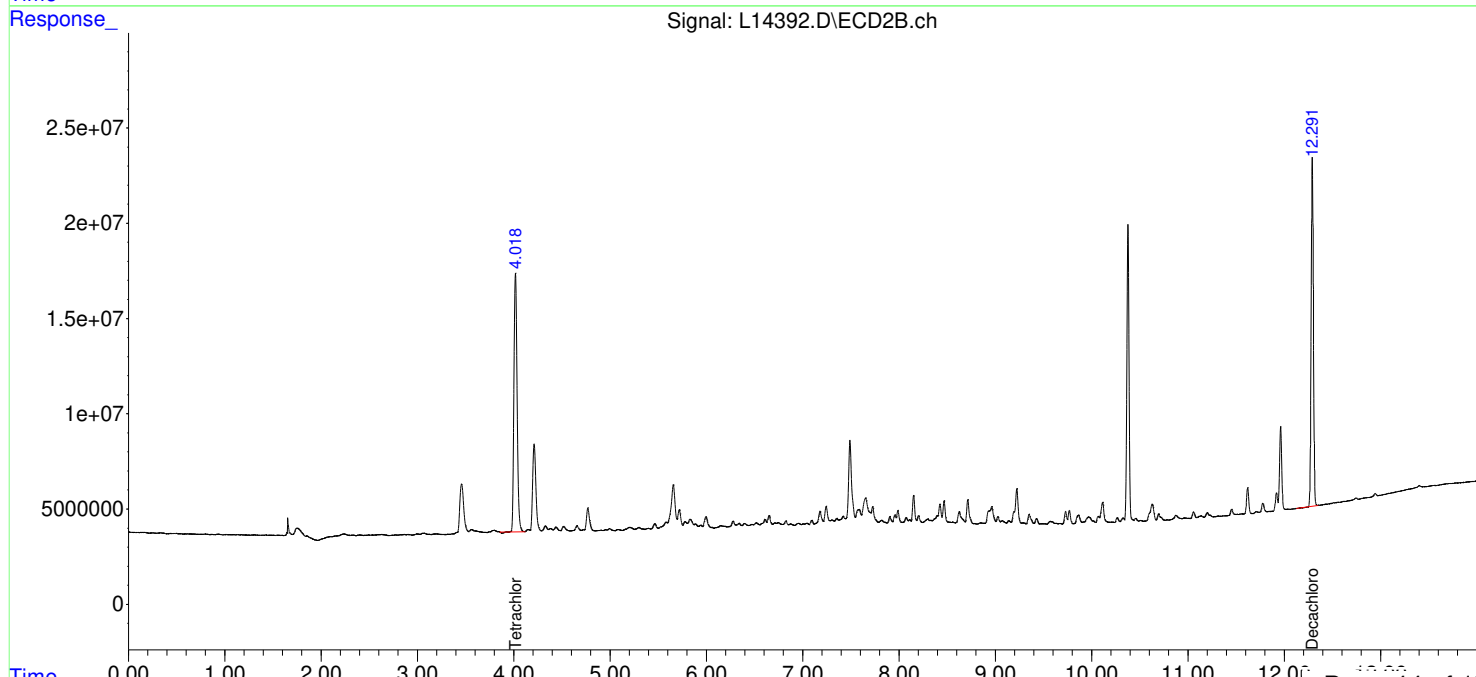
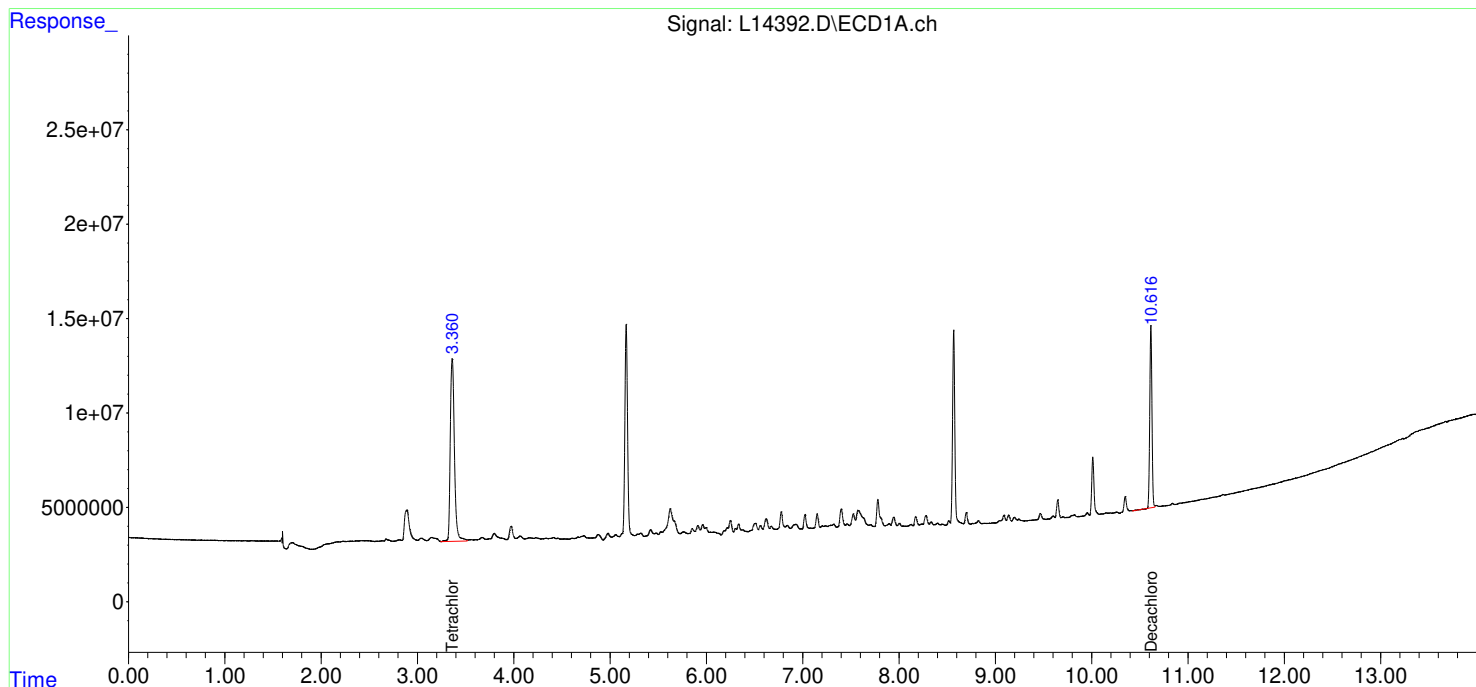
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.018	290.0E6	312.9E6	22.843	18.869
Spiked Amount	10.000	Range	60 - 120	Recovery	= 228.43%#	188.69%#
2) SA Decachlor...	10.617	12.292	153.2E6	293.2E6	18.323	19.398
Spiked Amount	10.000	Range	60 - 120	Recovery	= 183.23%#	193.98%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : C:\gcms\1\data\L240502A\
 Data File : L14392.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:43 pm
 Operator : AxJ/KC
 Sample : AC15369-10
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 22 17:00:04 2024
 Quant Method : C:\gcms\1\methods\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed May 22 16:38:45 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



QC DATA

2 - FORM II
SYSTEM MONITORING COMPOUND SUMMARY
EPA TO-10A

Laboratory:	EMSL-CIN-01	SDG:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Instrument:	GCECD-L

(60% - 120%)

AC15369-01	73
AC15369-02	97
AC15369-03	137*
AC15369-04	84
AC15369-05	95
AC15369-06	99
AC15369-07	80
AC15369-08	99
AC15369-09	98
AC15369-10	228*
BCD2253-BLK1	120
BCD2253-BLK2	118
BCD2253-BS1	126*
BCD2253-BSD1	95

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15369
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Matrix: Tubes	Preparation: EPA TO-10A
Batch: BCD2253	Laboratory ID: BCD2253-BS1
Column: 1	Initial/Final: 1 L / 10 mL

ANALYTE	SPIKE ADDED ($\mu\text{g}/\text{m}^3$)	LCS CONCENTRATION ($\mu\text{g}/\text{m}^3$)	LCS % REC.	QC LIMITS REC.
Aroclor-1016	1000	941	94	70 - 130
Aroclor-1260	1000	955	95	70 - 130

ANALYTE	SPIKE ADDED ($\mu\text{g}/\text{m}^3$)	LCSD CONCENTRATION ($\mu\text{g}/\text{m}^3$)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Aroclor-1016	1000	856	86	10	25	70 - 130
Aroclor-1260	1000	872	87	9	25	70 - 130

CALIBRATION DATA

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1016	5	495704.6	10	481634.3	25	452246.8	50	468625.8	100	433606.3	250	384879.6
Aroclor-1016 [2C]	5	641160.4	10	626861.8	25	599450	50	595656.4	100	562532.6	250	510296.8
Aroclor-1221												
Aroclor-1221 [2C]												
Aroclor-1232												
Aroclor-1232 [2C]												
Aroclor-1242												
Aroclor-1242 [2C]												
Aroclor-1248												
Aroclor-1248 [2C]												
Aroclor-1254												
Aroclor-1254 [2C]												
Aroclor-1260	5	781026.2	10	765537.4	25	722357.2	50	728444.8	100	684500.9	250	615981.6
Aroclor-1260 [2C]	5	968226.2	10	967714.3	25	951264.8	50	916812.4	100	883149.8	250	803608.8
Aroclor-1262												
Aroclor-1262 [2C]												
Aroclor-1268												
Aroclor-1268 [2C]												
Aroclor-1016{1}	5	254552.2	10	270321.1	25	264005.1	50	301458.6	100	274980.9	250	251097.1
Aroclor-1016{1} [2C]	5	365920.2	10	358800.2	25	363677.5	50	366185.6	100	349709.8	250	316059.6
Aroclor-1016{2}	5	608935	10	584347.7	25	534036	50	555553	100	503969.6	250	442705.2
Aroclor-1016{2} [2C]	5	844491.4	10	843667.7	25	774303.6	50	778699.8	100	743826.3	250	666996.4
Aroclor-1016{3}	5	739685.2	10	705453.6	25	640627.2	50	658738	100	627663.1	250	556929.6
Aroclor-1016{3} [2C]	5	981463	10	933319.1	25	908458	50	883062.4	100	822345.9	250	764595.6
Aroclor-1016{4}	5	513694	10	469486.3	25	462860.8	50	467019.6	100	438457	250	386406.7
Aroclor-1016{4} [2C]	5	652270.6	10	619959.2	25	591106	50	589974	100	573820.6	250	516572.8
Aroclor-1016{5}	5	361656.2	10	378562.9	25	359704.6	50	360360.2	100	322960.9	250	287259
Aroclor-1016{5} [2C]	5	512371.6	10	534671.8	25	490161.2	50	484294.4	100	459988.8	250	424870.8
Aroclor-1221{1}												
Aroclor-1221{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1221{2}												
Aroclor-1221{2} [2C]												
Aroclor-1221{3}												
Aroclor-1221{3} [2C]												
Aroclor-1221{4}												
Aroclor-1221{4} [2C]												
Aroclor-1221{5}												
Aroclor-1221{5} [2C]												
Aroclor-1232{1}												
Aroclor-1232{1} [2C]												
Aroclor-1232{2}												
Aroclor-1232{2} [2C]												
Aroclor-1232{3}												
Aroclor-1232{3} [2C]												
Aroclor-1232{4}												
Aroclor-1232{4} [2C]												
Aroclor-1232{5}												
Aroclor-1232{5} [2C]												
Aroclor-1242{1}												
Aroclor-1242{1} [2C]												
Aroclor-1242{2}												
Aroclor-1242{2} [2C]												
Aroclor-1242{3}												
Aroclor-1242{3} [2C]												
Aroclor-1242{4}												
Aroclor-1242{4} [2C]												
Aroclor-1242{5}												
Aroclor-1242{5} [2C]												
Aroclor-1248{1}												
Aroclor-1248{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1248{2}												
Aroclor-1248{2} [2C]												
Aroclor-1248{3}												
Aroclor-1248{3} [2C]												
Aroclor-1248{4}												
Aroclor-1248{4} [2C]												
Aroclor-1248{5}												
Aroclor-1248{5} [2C]												
Aroclor-1254{1}												
Aroclor-1254{1} [2C]												
Aroclor-1254{2}												
Aroclor-1254{2} [2C]												
Aroclor-1254{3}												
Aroclor-1254{3} [2C]												
Aroclor-1254{4}												
Aroclor-1254{4} [2C]												
Aroclor-1254{5}												
Aroclor-1254{5} [2C]												
Aroclor-1260{1}	5	597196	10	615118.8	25	571516.4	50	570791.2	100	526233.1	250	466735.2
Aroclor-1260{1} [2C]	5	853152.4	10	861418.2	25	802550	50	796291.2	100	746297.4	250	667387.6
Aroclor-1260{2}	5	972630.4	10	880455.3	25	846115.2	50	841838.6	100	790578.1	250	700014
Aroclor-1260{2} [2C]	5	983957.8	10	978288.9	25	943634.8	50	924282	100	885643.1	250	797185.2
Aroclor-1260{3}	5	736063	10	738947.7	25	706010	50	704821.4	100	644869.6	250	590668.1
Aroclor-1260{3} [2C]	5	649772	10	707498.7	25	669852	50	672994.8	100	660185.9	250	595816
Aroclor-1260{4}	5	503132.4	10	501666.7	25	457006	50	485673.6	100	466189.8	250	416470.4
Aroclor-1260{4} [2C]	5	756918	10	744619.4	25	706958	50	698549.6	100	665158.2	250	599864.8
Aroclor-1260{5}	5	1096109	10	1091498	25	1031138	50	1039100	100	994634.5	250	906019.9
Aroclor-1260{5} [2C]	5	1597330	10	1546746	25	1633329	50	1491944	100	1458465	250	1357790
Aroclor-1262{1}												
Aroclor-1262{1} [2C]												

6 - FORM VI INITIAL CALIBRATION DATA SHEET

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Aroclor-1262{2}												
Aroclor-1262{2} [2C]												
Aroclor-1262{3}												
Aroclor-1262{3} [2C]												
Aroclor-1262{4}												
Aroclor-1262{4} [2C]												
Aroclor-1262{5}												
Aroclor-1262{5} [2C]												
Aroclor-1268{1}												
Aroclor-1268{1} [2C]												
Aroclor-1268{2}												
Aroclor-1268{2} [2C]												
Aroclor-1268{3}												
Aroclor-1268{3} [2C]												
Aroclor-1268{4}												
Aroclor-1268{4} [2C]												
Aroclor-1268{5}												
Aroclor-1268{5} [2C]												
Tetrachloro-m-xylene	0.5	1.373183E+07	1	1.370369E+07	2.5	1.295056E+07	5	1.270288E+07	10	1.200848E+07	25	1.1071E+07
Tetrachloro-m-xylene [2C]	0.5	1.759129E+07	1	1.734953E+07	2.5	1.642149E+07	5	1.681078E+07	10	1.606116E+07	25	1.526414E+07
Decachlorobiphenyl	0.5	8980100	1	8709110	2.5	8461256	5	8433468	10	8215975	25	7380793
Decachlorobiphenyl [2C]	0.5	1.6305E+07	1	1.638365E+07	2.5	1.532663E+07	5	1.518878E+07	10	1.453701E+07	25	1.294063E+07

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1016												
Aroclor-1016 [2C]												
Aroclor-1221	50	180090.8										
Aroclor-1221 [2C]	50	241326.4										
Aroclor-1232			50	229836.8								
Aroclor-1232 [2C]			50	301519.2								
Aroclor-1242					50	237983.2						
Aroclor-1242 [2C]					50	310751.4						
Aroclor-1248							50	353867.4				
Aroclor-1248 [2C]							50	471050.4				
Aroclor-1254	50	556874.6										
Aroclor-1254 [2C]	50	698202										
Aroclor-1260												
Aroclor-1260 [2C]												
Aroclor-1262									50	700699.1		
Aroclor-1262 [2C]									50	854000.4		
Aroclor-1268											50	1087378
Aroclor-1268 [2C]											50	1726582
Aroclor-1016{1}												
Aroclor-1016{1} [2C]												
Aroclor-1016{2}												
Aroclor-1016{2} [2C]												
Aroclor-1016{3}												
Aroclor-1016{3} [2C]												
Aroclor-1016{4}												
Aroclor-1016{4} [2C]												
Aroclor-1016{5}												
Aroclor-1016{5} [2C]												
Aroclor-1221{1}	50	142867.8										
Aroclor-1221{1} [2C]	50	152274.7										

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1221{2}	50	168075.4										
Aroclor-1221{2} [2C]	50	226172.8										
Aroclor-1221{3}	50	96479.2										
Aroclor-1221{3} [2C]	50	156360.2										
Aroclor-1221{4}	50	433043.2										
Aroclor-1221{4} [2C]	50	545992.8										
Aroclor-1221{5}	50	59988.36										
Aroclor-1221{5} [2C]	50	125831.5										
Aroclor-1232{1}			50	316758								
Aroclor-1232{1} [2C]			50	400962.6								
Aroclor-1232{2}			50	225561								
Aroclor-1232{2} [2C]			50	335247.4								
Aroclor-1232{3}			50	285282.8								
Aroclor-1232{3} [2C]			50	351087.6								
Aroclor-1232{4}			50	192028.9								
Aroclor-1232{4} [2C]			50	240175.6								
Aroclor-1232{5}			50	129553.8								
Aroclor-1232{5} [2C]			50	180123								
Aroclor-1242{1}					50	143820						
Aroclor-1242{1} [2C]					50	186095.7						
Aroclor-1242{2}					50	286096.4						
Aroclor-1242{2} [2C]					50	394589.4						
Aroclor-1242{3}					50	342929.6						
Aroclor-1242{3} [2C]					50	438497.8						
Aroclor-1242{4}					50	234113.8						
Aroclor-1242{4} [2C]					50	295635						
Aroclor-1242{5}					50	182956.2						
Aroclor-1242{5} [2C]					50	238939.2						
Aroclor-1248{1}							50	338190.8				
Aroclor-1248{1} [2C]							50	491841.8				

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1248{2}							50	444846				
Aroclor-1248{2} [2C]							50	603202.8				
Aroclor-1248{3}							50	251369.2				
Aroclor-1248{3} [2C]							50	325640.4				
Aroclor-1248{4}							50	492573.2				
Aroclor-1248{4} [2C]							50	632091.6				
Aroclor-1248{5}							50	242358				
Aroclor-1248{5} [2C]							50	302475.4				
Aroclor-1254{1}	50	430212										
Aroclor-1254{1} [2C]	50	682960.2										
Aroclor-1254{2}	50	627298.2										
Aroclor-1254{2} [2C]	50	794484.6										
Aroclor-1254{3}	50	442914.2										
Aroclor-1254{3} [2C]	50	552104										
Aroclor-1254{4}	50	764233.8										
Aroclor-1254{4} [2C]	50	1009289										
Aroclor-1254{5}	50	519715										
Aroclor-1254{5} [2C]	50	452172.2										
Aroclor-1260{1}												
Aroclor-1260{1} [2C]												
Aroclor-1260{2}												
Aroclor-1260{2} [2C]												
Aroclor-1260{3}												
Aroclor-1260{3} [2C]												
Aroclor-1260{4}												
Aroclor-1260{4} [2C]												
Aroclor-1260{5}												
Aroclor-1260{5} [2C]												
Aroclor-1262{1}									50	447826		
Aroclor-1262{1} [2C]									50	630612.6		

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Client: Geosyntec Consultants of NC [GSCH75]

SDG:

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Aroclor-1262{2}									50	603180.6		
Aroclor-1262{2} [2C]									50	724671.1		
Aroclor-1262{3}									50	683276.9		
Aroclor-1262{3} [2C]									50	380832.6		
Aroclor-1262{4}									50	600515.6		
Aroclor-1262{4} [2C]									50	866562		
Aroclor-1262{5}									50	1168696		
Aroclor-1262{5} [2C]									50	1667324		
Aroclor-1268{1}											50	1294797
Aroclor-1268{1} [2C]											50	1943574
Aroclor-1268{2}											50	1241666
Aroclor-1268{2} [2C]											50	1885616
Aroclor-1268{3}											50	1028872
Aroclor-1268{3} [2C]											50	1581801
Aroclor-1268{4}											50	442752
Aroclor-1268{4} [2C]											50	686694.4
Aroclor-1268{5}											50	1428800
Aroclor-1268{5} [2C]											50	2535224
Tetrachloro-m-xylene												
Tetrachloro-m-xylene [2C]												
Decachlorobiphenyl												
Decachlorobiphenyl [2C]												

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15369

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1016	452782.9	8.8			20	
Aroclor-1016 [2C]	589326.3	8.0			20	
Aroclor-1221		0.0			20	
Aroclor-1221 [2C]		0.0			20	
Aroclor-1232		0.0			20	
Aroclor-1232 [2C]		0.0			20	
Aroclor-1242		0.0			20	
Aroclor-1242 [2C]		0.0			20	
Aroclor-1248		0.0			20	
Aroclor-1248 [2C]		0.0			20	
Aroclor-1254		0.0			20	
Aroclor-1254 [2C]		0.0			20	
Aroclor-1260	716308	8.3			20	
Aroclor-1260 [2C]	915129.4	7.0			20	
Aroclor-1262		0.0			20	
Aroclor-1262 [2C]		0.0			20	
Aroclor-1268		0.0			20	
Aroclor-1268 [2C]		0.0			20	
Aroclor-1016{1}	269402.5	6.7			20	
Aroclor-1016{1} [2C]	353392.1	5.5			20	
Aroclor-1016{2}	538257.8	11.1			20	
Aroclor-1016{2} [2C]	775330.9	8.6			20	
Aroclor-1016{3}	654849.5	9.7			20	
Aroclor-1016{3} [2C]	882207.3	8.9			20	
Aroclor-1016{4}	456320.7	9.2			20	
Aroclor-1016{4} [2C]	590617.2	7.7			20	
Aroclor-1016{5}	345084	9.8			20	
Aroclor-1016{5} [2C]	484393.1	8.0			20	
Aroclor-1221{1}		0.0			20	
Aroclor-1221{1} [2C]		0.0			20	
Aroclor-1221{2}		0.0			20	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15369

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1221{2} [2C]		0.0			20	
Aroclor-1221{3}		0.0			20	
Aroclor-1221{3} [2C]		0.0			20	
Aroclor-1221{4}		0.0			20	
Aroclor-1221{4} [2C]		0.0			20	
Aroclor-1221{5}		0.0			20	
Aroclor-1221{5} [2C]		0.0			20	
Aroclor-1232{1}		0.0			20	
Aroclor-1232{1} [2C]		0.0			20	
Aroclor-1232{2}		0.0			20	
Aroclor-1232{2} [2C]		0.0			20	
Aroclor-1232{3}		0.0			20	
Aroclor-1232{3} [2C]		0.0			20	
Aroclor-1232{4}		0.0			20	
Aroclor-1232{4} [2C]		0.0			20	
Aroclor-1232{5}		0.0			20	
Aroclor-1232{5} [2C]		0.0			20	
Aroclor-1242{1}		0.0			20	
Aroclor-1242{1} [2C]		0.0			20	
Aroclor-1242{2}		0.0			20	
Aroclor-1242{2} [2C]		0.0			20	
Aroclor-1242{3}		0.0			20	
Aroclor-1242{3} [2C]		0.0			20	
Aroclor-1242{4}		0.0			20	
Aroclor-1242{4} [2C]		0.0			20	
Aroclor-1242{5}		0.0			20	
Aroclor-1242{5} [2C]		0.0			20	
Aroclor-1248{1}		0.0			20	
Aroclor-1248{1} [2C]		0.0			20	
Aroclor-1248{2}		0.0			20	
Aroclor-1248{2} [2C]		0.0			20	

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory: EMSL-CIN-01

Work Order: AC15369

Client: Geosyntec Consultants of NC [GSCH75]

Project: NCSUPH

Calibration: AA40009

Instrument: GCECD-L

Calibration Date: 1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1248{3}		0.0			20	
Aroclor-1248{3} [2C]		0.0			20	
Aroclor-1248{4}		0.0			20	
Aroclor-1248{4} [2C]		0.0			20	
Aroclor-1248{5}		0.0			20	
Aroclor-1248{5} [2C]		0.0			20	
Aroclor-1254{1}		0.0			20	
Aroclor-1254{1} [2C]		0.0			20	
Aroclor-1254{2}		0.0			20	
Aroclor-1254{2} [2C]		0.0			20	
Aroclor-1254{3}		0.0			20	
Aroclor-1254{3} [2C]		0.0			20	
Aroclor-1254{4}		0.0			20	
Aroclor-1254{4} [2C]		0.0			20	
Aroclor-1254{5}		0.0			20	
Aroclor-1254{5} [2C]		0.0			20	
Aroclor-1260{1}	557931.8	9.6			20	
Aroclor-1260{1} [2C]	787849.5	9.2			20	
Aroclor-1260{2}	838605.3	10.8			20	
Aroclor-1260{2} [2C]	918832	7.6			20	
Aroclor-1260{3}	686896.6	8.4			20	
Aroclor-1260{3} [2C]	659353.2	5.6			20	
Aroclor-1260{4}	471689.8	7.0			20	
Aroclor-1260{4} [2C]	695344.7	8.2			20	
Aroclor-1260{5}	1026417	6.9			20	
Aroclor-1260{5} [2C]	1514267	6.6			20	
Aroclor-1262{1}		0.0			20	
Aroclor-1262{1} [2C]		0.0			20	
Aroclor-1262{2}		0.0			20	
Aroclor-1262{2} [2C]		0.0			20	
Aroclor-1262{3}		0.0			20	

6 - FORM VI INITIAL CALIBRATION DATA SHEET (Continued)

EPA TO-10A

Laboratory:	EMSL-CIN-01	Work Order:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Calibration:	AA40009	Instrument:	GCECD-L
		Calibration Date:	1/16/2024 12:00:54AM

COMPOUND	Mean RF	RF RSD	Linear r ²	Quad COD	LIMIT	Q
Aroclor-1262{3} [2C]		0.0			20	
Aroclor-1262{4}		0.0			20	
Aroclor-1262{4} [2C]		0.0			20	
Aroclor-1262{5}		0.0			20	
Aroclor-1262{5} [2C]		0.0			20	
Aroclor-1268{1}		0.0			20	
Aroclor-1268{1} [2C]		0.0			20	
Aroclor-1268{2}		0.0			20	
Aroclor-1268{2} [2C]		0.0			20	
Aroclor-1268{3}		0.0			20	
Aroclor-1268{3} [2C]		0.0			20	
Aroclor-1268{4}		0.0			20	
Aroclor-1268{4} [2C]		0.0			20	
Aroclor-1268{5}		0.0			20	
Aroclor-1268{5} [2C]		0.0			20	
Tetrachloro-m-xylene	1.269474E+07	8.1			20	
Tetrachloro-m-xylene [2C]	1.658307E+07	5.2			20	
Decachlorobiphenyl	8363450	6.6			20	
Decachlorobiphenyl [2C]	1.511362E+07	8.4			20	

Method Path : T:\METHODS\ECD-L\
 Method File : PCB240116L.M
 Title : 8082a PCB
 Last Update : Tue May 14 14:39:44 2024
 Response Via : Initial Calibration

Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L13622.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
1) SA	Tetrachloro-m...		1.373	1.370	1.107	1.201	1.270	1.295	E7	8.08
2) SA	Decachlorobip...		8.980	8.709	7.381	8.216	8.433	8.461	E6	6.55
3) L1	Aroclor-1016{1}		2.546	2.703	2.511	2.750	3.015	2.640	E5	6.73
4) L1	Aroclor-1016{2}		6.089	5.843	4.427	5.040	5.556	5.340	E5	11.07
5) L1	Aroclor-1016{3}		7.397	7.055	5.569	6.277	6.587	6.406	E5	9.73
6) L1	Aroclor-1016{4}		5.137	4.695	3.864	4.385	4.670	4.629	E5	9.21
7) L1	Aroclor-1016{5}		3.617	3.786	2.873	3.230	3.604	3.597	E5	9.76
8) L2	Aroclor-1221{1}						1.429		E5	0.00
9) L2	Aroclor-1221{2}					1.681		1.681	E5	0.00
10) L2	Aroclor-1221{3}					9.648		9.648	E4	0.00
11) L2	Aroclor-1221{4}					4.330		4.330	E5	0.00
12) L2	Aroclor-1221{5}					5.999		5.999	E4	0.00
13) L3	Aroclor-1232{1}					3.168		3.168	E5	0.00
14) L3	Aroclor-1232{2}					2.256		2.256	E5	0.00
15) L3	Aroclor-1232{3}					2.853		2.853	E5	0.00
16) L3	Aroclor-1232{4}					1.920		1.920	E5	0.00
17) L3	Aroclor-1232{5}					1.296		1.296	E5	0.00
18) L4	Aroclor-1242{1}					1.438		1.438	E5	0.00
19) L4	Aroclor-1242{2}					2.861		2.861	E5	0.00
20) L4	Aroclor-1242{3}					3.429		3.429	E5	0.00
21) L4	Aroclor-1242{4}					2.341		2.341	E5	0.00
22) L4	Aroclor-1242{5}					1.830		1.830	E5	0.00
23) L5	Aroclor-1248{1}					3.382		3.382	E5	0.00
24) L5	Aroclor-1248{2}					4.448		4.448	E5	0.00
25) L5	Aroclor-1248{3}					2.514		2.514	E5	0.00
26) L5	Aroclor-1248{4}					4.926		4.926	E5	0.00
27) L5	Aroclor-1248{5}					2.424		2.424	E5	0.00
28) L6	Aroclor-1254{1}					4.302		4.302	E5	0.00
29) L6	Aroclor-1254{2}					6.273		6.273	E5	0.00
30) L6	Aroclor-1254{3}					4.429		4.429	E5	0.00
31) L6	Aroclor-1254{4}					7.642		7.642	E5	0.00
32) L6	Aroclor-1254{5}					5.197		5.197	E5	0.00
33) L7	Aroclor-1262{1}					4.478		4.478	E5	0.00
34) L7	Aroclor-1262{2}					6.032		6.032	E5	0.00
35) L7	Aroclor-1262{3}					6.833		6.833	E5	0.00
36) L7	Aroclor-1262{4}					6.005		6.005	E5	0.00
37) L7	Aroclor-1262{5}					1.169		1.169	E6	0.00
38) L8	Aroclor-1268{1}					1.295		1.295	E6	0.00
39) L8	Aroclor-1268{2}					1.242		1.242	E6	0.00
40) L8	Aroclor-1268{3}					1.029		1.029	E6	0.00
41) L8	Aroclor-1268{4}					4.428		4.428	E5	0.00
42) L8	Aroclor-1268{5}					1.429		1.429	E6	0.00
43) L9	Aroclor-1260{1}		5.972	6.151	4.667	5.262	5.708	5.715	E5	9.65
44) L9	Aroclor-1260{2}		9.726	8.805	7.000	7.906	8.418	8.461	E5	10.84
45) L9	Aroclor-1260{3}		7.361	7.389	5.907	6.449	7.048	7.060	E5	8.45
46) L9	Aroclor-1260{4}		5.031	5.017	4.165	4.662	4.857	4.570	E5	6.95
47) L9	Aroclor-1260{5}		1.096	1.091	0.906	0.995	1.039	1.031	E6	6.86

Signal #2 Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L14014.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
1) SA	Tetrachloro-m...		1.759	1.735	1.526	1.606	1.681	1.642	E7	5.18
2) SA	Decachlorobip...		1.630	1.638	1.294	1.454	1.519	1.533	E7	8.44
3) L1	Aroclor-1016{1}		3.659	3.588	3.161	3.497	3.662	3.637	E5	5.46
4) L1	Aroclor-1016{2}		8.445	8.437	6.670	7.438	7.787	7.743	E5	8.59
5) L1	Aroclor-1016{3}		9.815	9.333	7.646	8.223	8.831	9.085	E5	8.86
6) L1	Aroclor-1016{4}		6.523	6.200	5.166	5.738	5.900	5.911	E5	7.73
7) L1	Aroclor-1016{5}		5.124	5.347	4.249	4.600	4.843	4.902	E5	7.99
8) L2	Aroclor-1221{1}						1.523		E5	0.00

Method Path : T:\METHODS\ECD-L\
 Method File : PCB240116L.M
 Title : 8082a PCB
 Last Update : Tue May 14 14:39:44 2024
 Response Via : Initial Calibration

Calibration Files

5 =L13618.D 10 =L13619.D =
 250 =L13623.D 100 =L13622.D 50 =L14604.D

Compound			5	10	250	100	50	Avg	%RSD	
9)	L2	Aroclor-1221{2}				2.262		2.262 E5	0.00	
10)	L2	Aroclor-1221{3}				1.564		1.564 E5	0.00	
11)	L2	Aroclor-1221{4}				5.460		5.460 E5	0.00	
12)	L2	Aroclor-1221{5}				1.258		1.258 E5	0.00	
13)	L3	Aroclor-1232{1}				4.010		4.010 E5	0.00	
14)	L3	Aroclor-1232{2}				3.352		3.352 E5	0.00	
15)	L3	Aroclor-1232{3}				3.511		3.511 E5	0.00	
16)	L3	Aroclor-1232{4}				2.402		2.402 E5	0.00	
17)	L3	Aroclor-1232{5}				1.801		1.801 E5	0.00	
18)	L4	Aroclor-1242{1}				1.861		1.861 E5	0.00	
19)	L4	Aroclor-1242{2}				3.946		3.946 E5	0.00	
20)	L4	Aroclor-1242{3}				4.385		4.385 E5	0.00	
21)	L4	Aroclor-1242{4}				2.956		2.956 E5	0.00	
22)	L4	Aroclor-1242{5}				2.389		2.389 E5	0.00	
23)	L5	Aroclor-1248{1}				4.918		4.918 E5	0.00	
24)	L5	Aroclor-1248{2}				6.032		6.032 E5	0.00	
25)	L5	Aroclor-1248{3}				3.256		3.256 E5	0.00	
26)	L5	Aroclor-1248{4}				6.321		6.321 E5	0.00	
27)	L5	Aroclor-1248{5}				3.025		3.025 E5	0.00	
28)	L6	Aroclor-1254{1}				6.830		6.830 E5	0.00	
29)	L6	Aroclor-1254{2}				7.945		7.945 E5	0.00	
30)	L6	Aroclor-1254{3}				5.521		5.521 E5	0.00	
31)	L6	Aroclor-1254{4}				1.009		1.009 E6	0.00	
32)	L6	Aroclor-1254{5}				4.522		4.522 E5	0.00	
33)	L7	Aroclor-1262{1}				6.306		6.306 E5	0.00	
34)	L7	Aroclor-1262{2}				7.247		7.247 E5	0.00	
35)	L7	Aroclor-1262{3}				3.808		3.808 E5	0.00	
36)	L7	Aroclor-1262{4}				8.666		8.666 E5	0.00	
37)	L7	Aroclor-1262{5}				1.667		1.667 E6	0.00	
38)	L8	Aroclor-1268{1}				1.944		1.944 E6	0.00	
39)	L8	Aroclor-1268{2}				1.886		1.886 E6	0.00	
40)	L8	Aroclor-1268{3}				1.582		1.582 E6	0.00	
41)	L8	Aroclor-1268{4}				6.867		6.867 E5	0.00	
42)	L8	Aroclor-1268{5}				2.535		2.535 E6	0.00	
43)	L9	Aroclor-1260{1}	8.532	8.614	6.674	7.463	7.963	8.025	7.878 E5	9.19
44)	L9	Aroclor-1260{2}	9.840	9.783	7.972	8.856	9.243	9.436	9.188 E5	7.59
45)	L9	Aroclor-1260{3}	6.498	7.075	5.958	6.602	6.730	6.699	6.594 E5	5.57
46)	L9	Aroclor-1260{4}	7.569	7.446	5.999	6.652	6.985	7.070	6.953 E5	8.23
47)	L9	Aroclor-1260{5}	1.597	1.547	1.358	1.458	1.492	1.633	1.514 E6	6.62

(#) = Out of Range ### Number of calibration levels exceeded format ###

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13618.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:11 pm
 Operator : TL1
 Sample : SEQ-CAL1
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:32:03 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

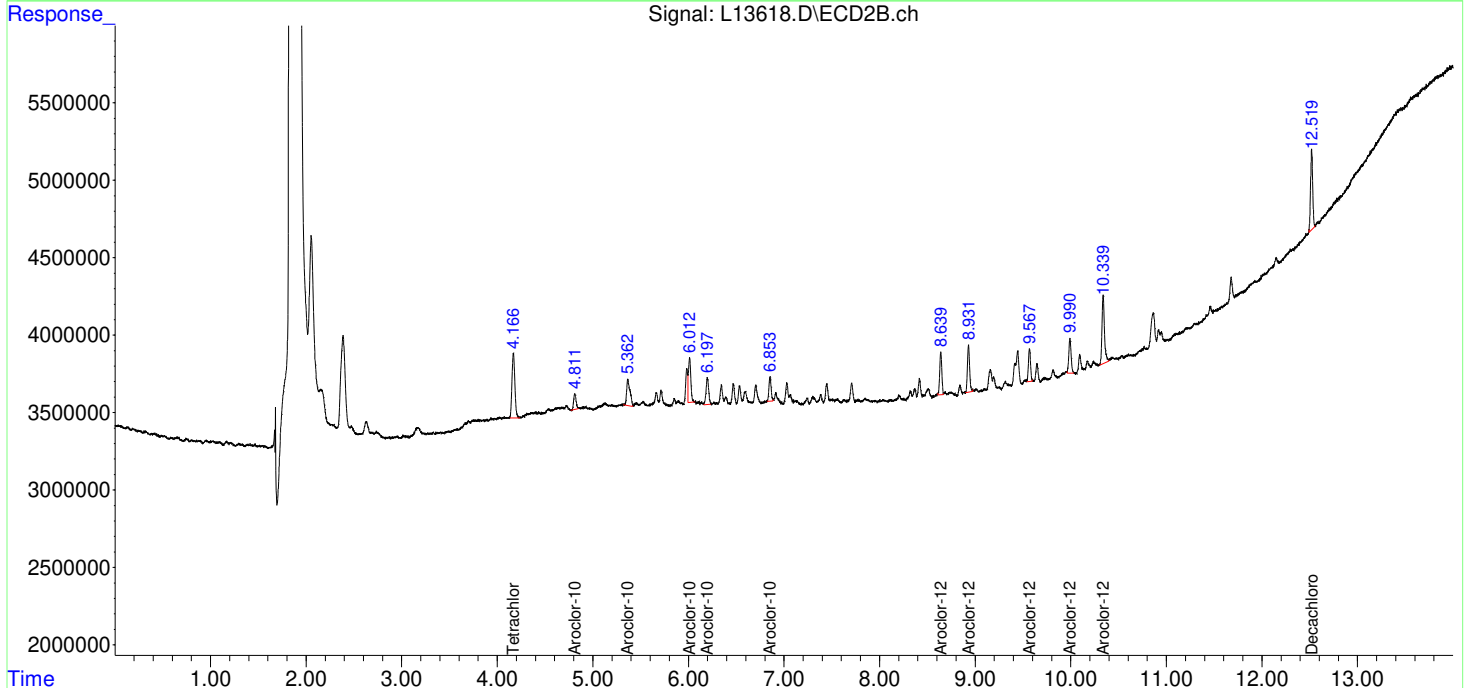
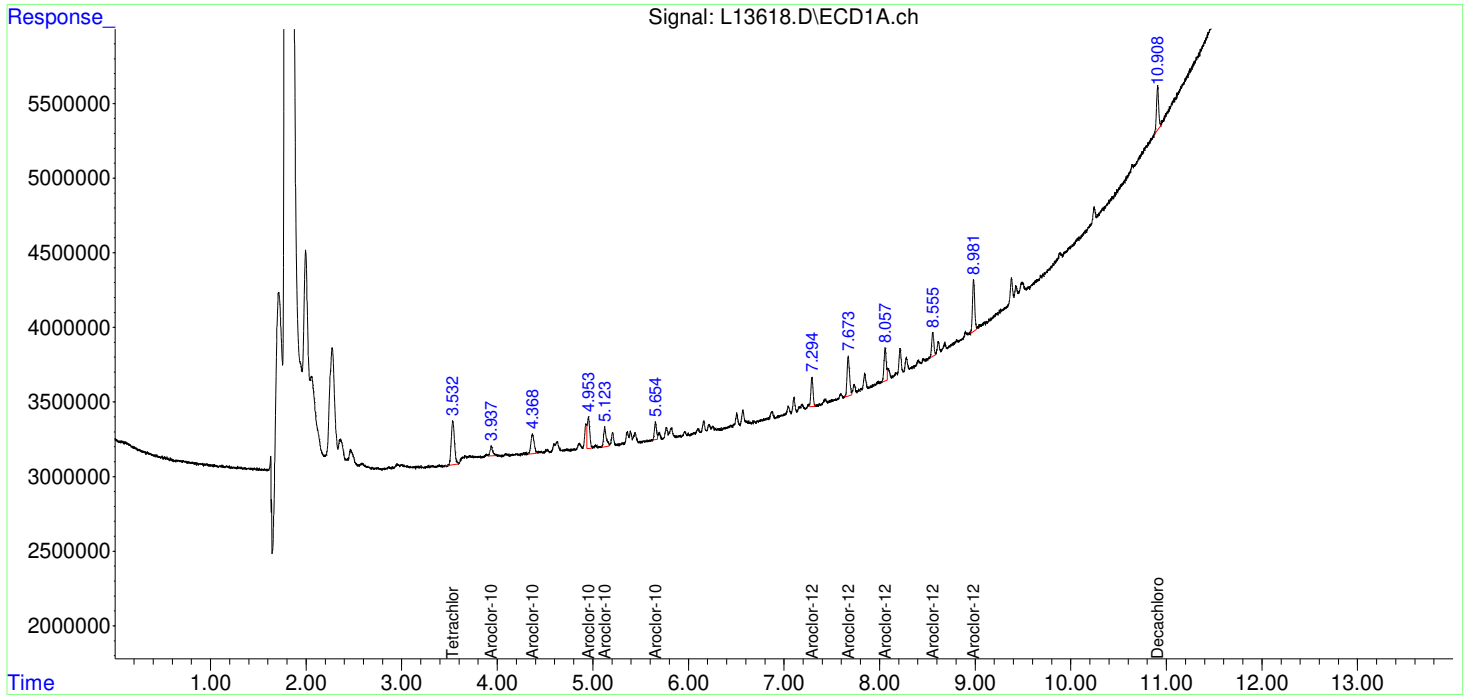
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.167	6865916	8795643	0.600	0.617
Spiked Amount	10.000 Range	60 - 120	Recovery =		6.00%#	6.17%#
2) SA Decachlor...	10.908f	12.519f	4490050	8152498	0.602m	0.617m
Spiked Amount	10.000 Range	60 - 120	Recovery =		6.02%#	6.17%#
Target Compounds						
3) L1 Aroclor-1...	3.937	4.811	1272761	1829601	5.764m	6.031m
4) L1 Aroclor-1...	4.368f	5.362f	3044675	4222457	6.687m	6.432m
5) L1 Aroclor-1...	4.953f	6.012f	3698426	4907315	6.623m	6.649
6) L1 Aroclor-1...	5.123f	6.197f	2568470	3261353	6.537m	6.546m
7) L1 Aroclor-1...	5.654f	6.853f	1808281	2561858	6.068m	6.107m
Sum Aroclor-1016			12392614	16782584	31.680	31.765
Average Aroclor-1016					6.336	6.353
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.294	8.639	2985980	4265762	6.034m	6.548m
44) L9 Aroclor-1...	7.673	8.931	4863152	4919789	6.417m	6.067m
45) L9 Aroclor-1...	8.057	9.567	3680315	3248860	6.116m	5.773m
46) L9 Aroclor-1...	8.555	9.990	2515662	3784590	6.045m	6.159m
47) L9 Aroclor-1...	8.981f	10.339f	5480547	7986652	5.974m	6.185m
Sum Aroclor-1260			19525656	24205654	30.586	30.733
Average Aroclor-1260					6.117	6.147

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13618.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:11 pm
 Operator : TL1
 Sample : SEQ-CAL1
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:32:03 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13619.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:28 pm
 Operator : TL1
 Sample : SEQ-CAL2
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:38:29 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

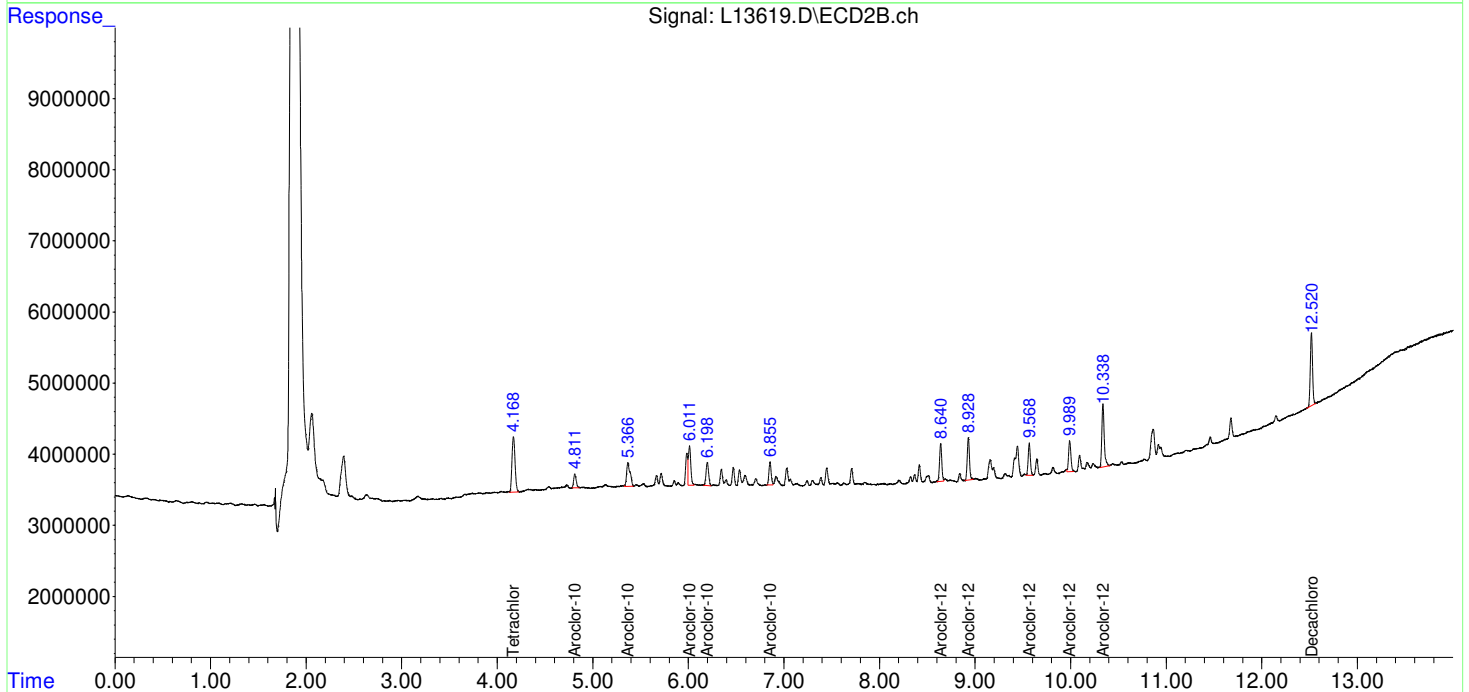
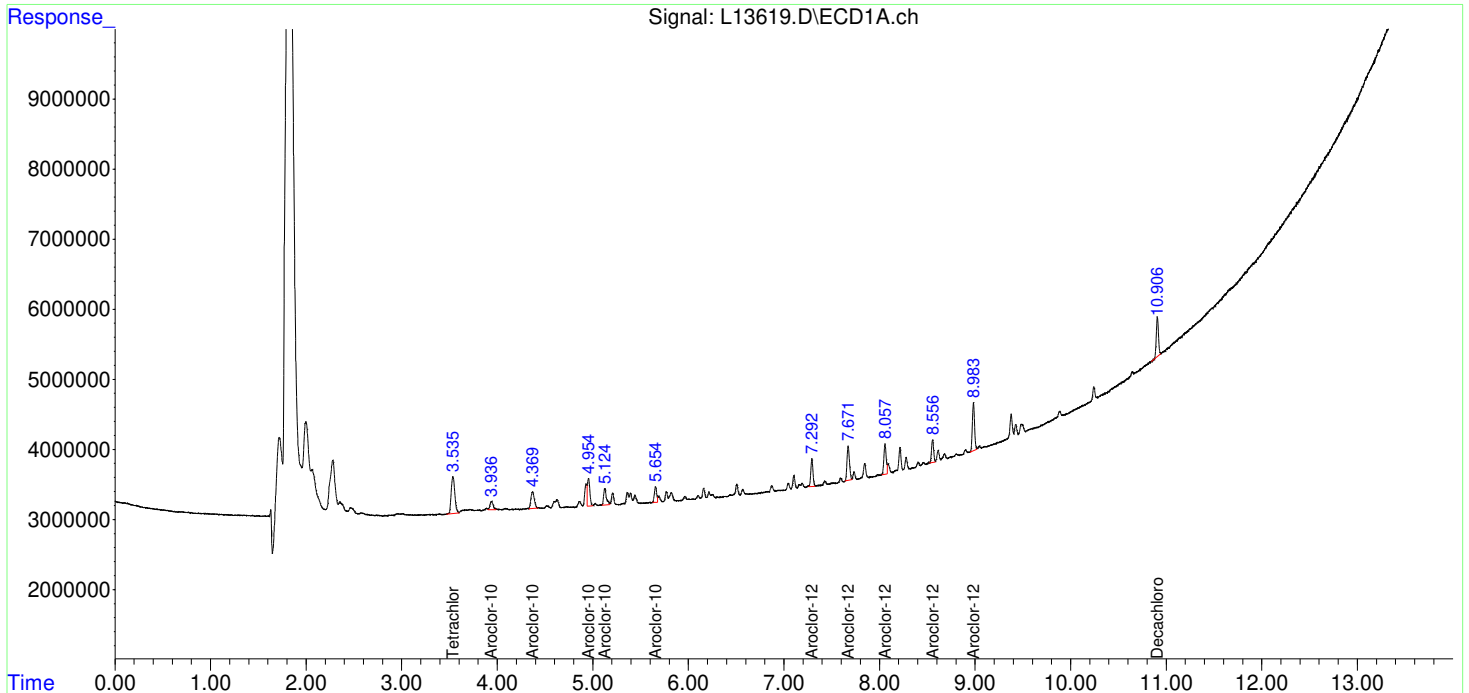
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.536	4.168	13703693	17349533	1.197	1.218m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	11.97%#	12.18%#
2) SA Decachlor...	10.908f	12.521f	8709110	16383652	1.167	1.240
Spiked Amount	10.000 Range	60 - 120	Recovery	=	11.67%#	12.40%#
Target Compounds						
3) L1 Aroclor-1...	3.936f	4.811	2703211	3588002	12.243m	11.827m
4) L1 Aroclor-1...	4.369	5.366	5843477	8436677	12.834m	12.852m
5) L1 Aroclor-1...	4.954f	6.011f	7054536	9333191	12.633m	12.645m
6) L1 Aroclor-1...	5.124f	6.198f	4694863	6199592	11.949m	12.444m
7) L1 Aroclor-1...	5.654f	6.855f	3785629	5346718	12.703m	12.745m
Sum Aroclor-1016			24081716	32904181	62.362	62.513
Average Aroclor-1016					12.472	12.503
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.292	8.640	6151188	8614182	12.431m	13.224m
44) L9 Aroclor-1...	7.671	8.928	8804553	9782889	11.618m	12.064m
45) L9 Aroclor-1...	8.057	9.568	7389477	7074987	12.279m	12.573m
46) L9 Aroclor-1...	8.556	9.989	5016667	7446194	12.055m	12.119m
47) L9 Aroclor-1...	8.983f	10.338f	10914982	15467462	11.898m	11.977m
Sum Aroclor-1260			38276867	48385714	60.281	61.957
Average Aroclor-1260					12.056	12.391

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13619.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 8:28 pm
Operator : TL1
Sample : SEQ-CAL2
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 12:38:29 2024
Quant Method : T:\METHODS\ECD-L\PCB230926L.M
Quant Title : 8082a PCB
QLast Update : Tue Jan 02 09:10:57 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13620.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:44 pm
 Operator : TL1
 Sample : SEQ-CAL3
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:42:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

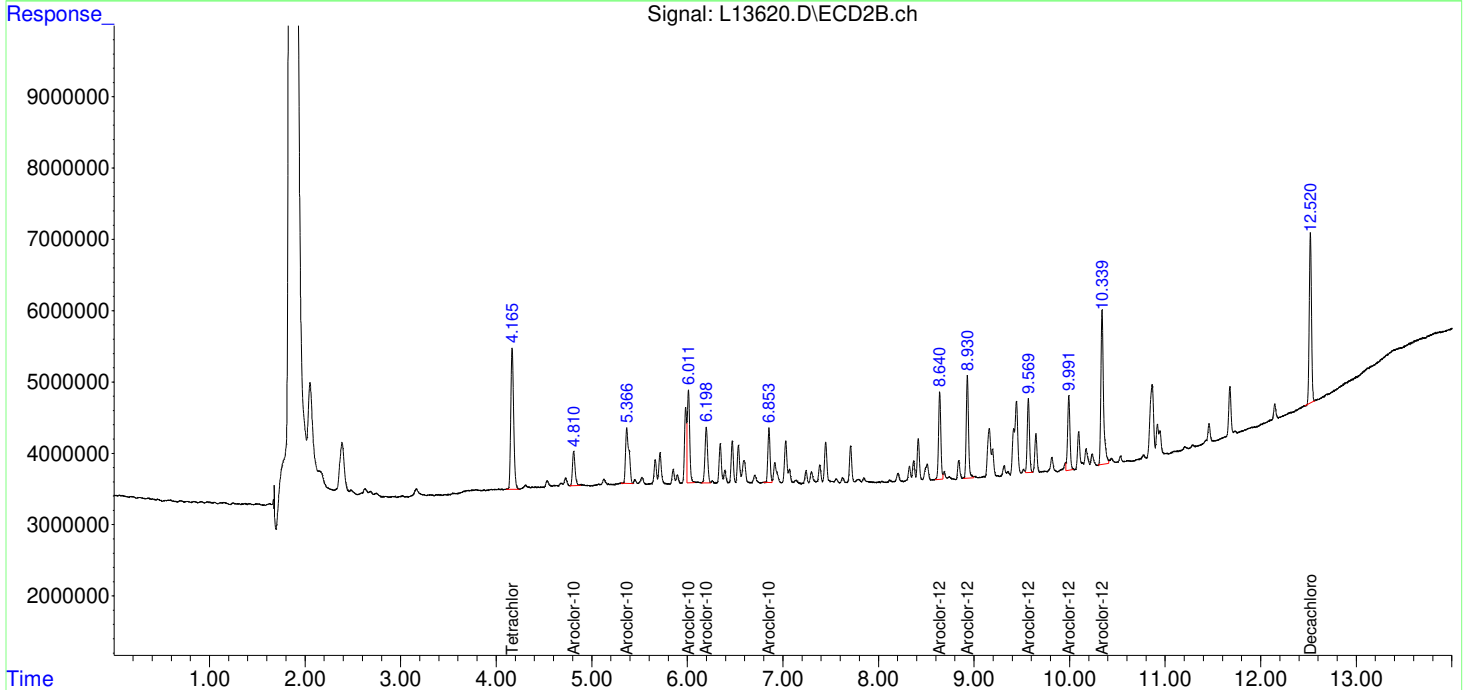
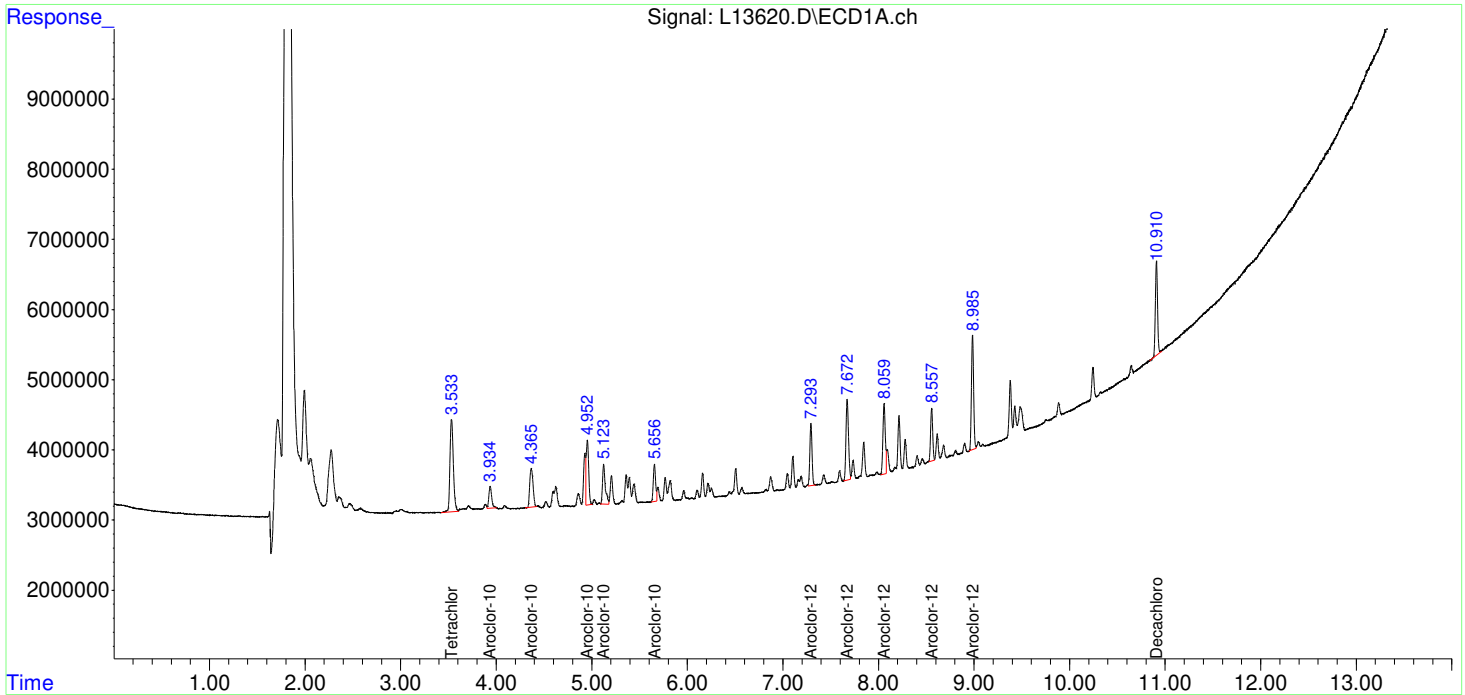
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.532f	4.166	32376409	41053727	2.828	2.881
Spiked Amount	10.000 Range	60 - 120	Recovery	=	28.28%#	28.81%#
2) SA Decachlor...	10.910f	12.521f	21153145	38316575	2.835	2.901
Spiked Amount	10.000 Range	60 - 120	Recovery	=	28.35%#	29.01%#
Target Compounds						
3) L1 Aroclor-1...	3.936f	4.810	6600128	9091937	29.892	29.970
4) L1 Aroclor-1...	4.366f	5.365f	13350897	19357593	29.323	29.489
5) L1 Aroclor-1...	4.954f	6.012f	16015684	22711451	28.680	30.770
6) L1 Aroclor-1...	5.124f	6.198f	11571518	14777645	29.452	29.663m
7) L1 Aroclor-1...	5.656f	6.854f	8992616	12254029	30.176m	29.209
Sum Aroclor-1016			56530843	78192655	147.522	149.101
Average Aroclor-1016					29.504	29.820
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	14287910	20063747	28.874m	30.800m
44) L9 Aroclor-1...	7.672	8.930	21152882	23590870	27.912m	29.092m
45) L9 Aroclor-1...	8.059	9.569	17650253	16746300	29.330m	29.759m
46) L9 Aroclor-1...	8.557	9.991	11425150	17673953	27.455m	28.765m
47) L9 Aroclor-1...	8.985f	10.339f	25778441	40833228	28.100m	31.619m
Sum Aroclor-1260			90294636	118.9E6	141.671	150.035
Average Aroclor-1260					28.334	30.007

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13620.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 8:44 pm
 Operator : TL1
 Sample : SEQ-CAL3
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:42:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13621.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:00 pm
 Operator : TL1
 Sample : SEQ-CAL4
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:47:23 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

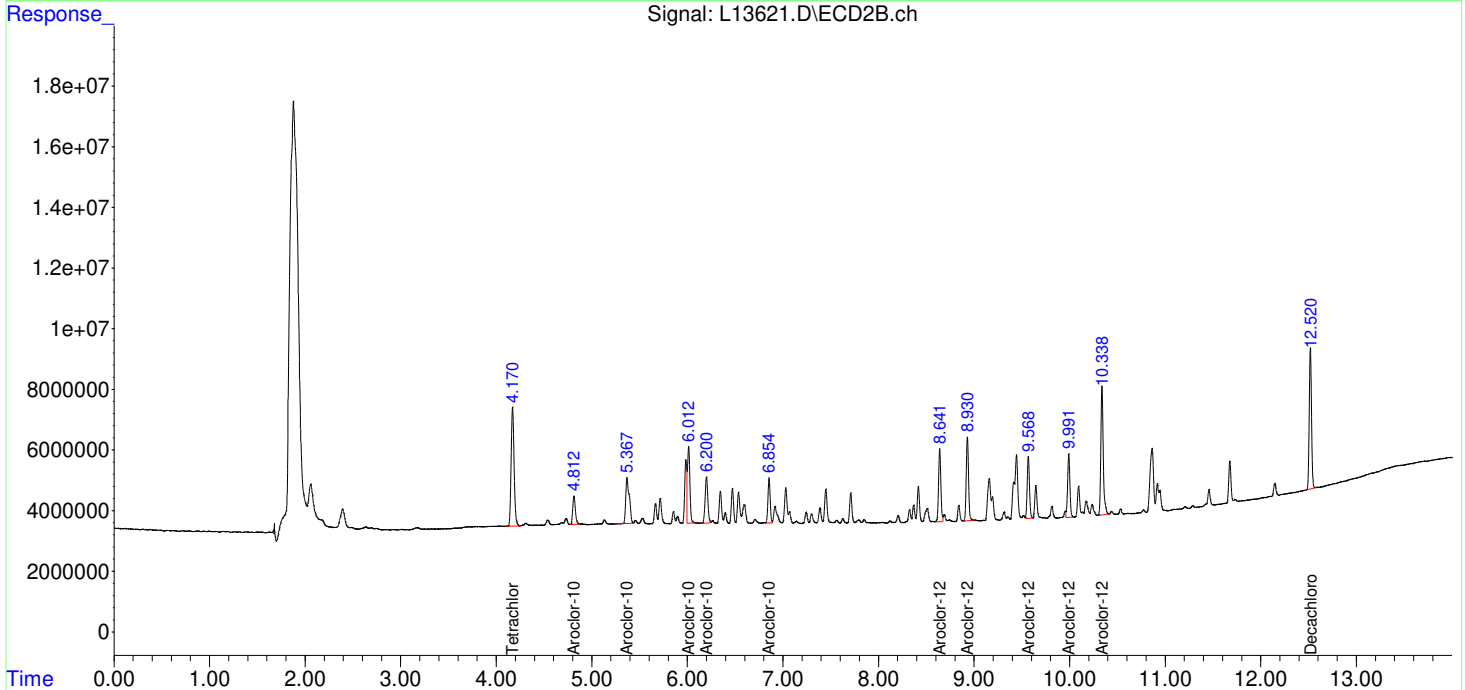
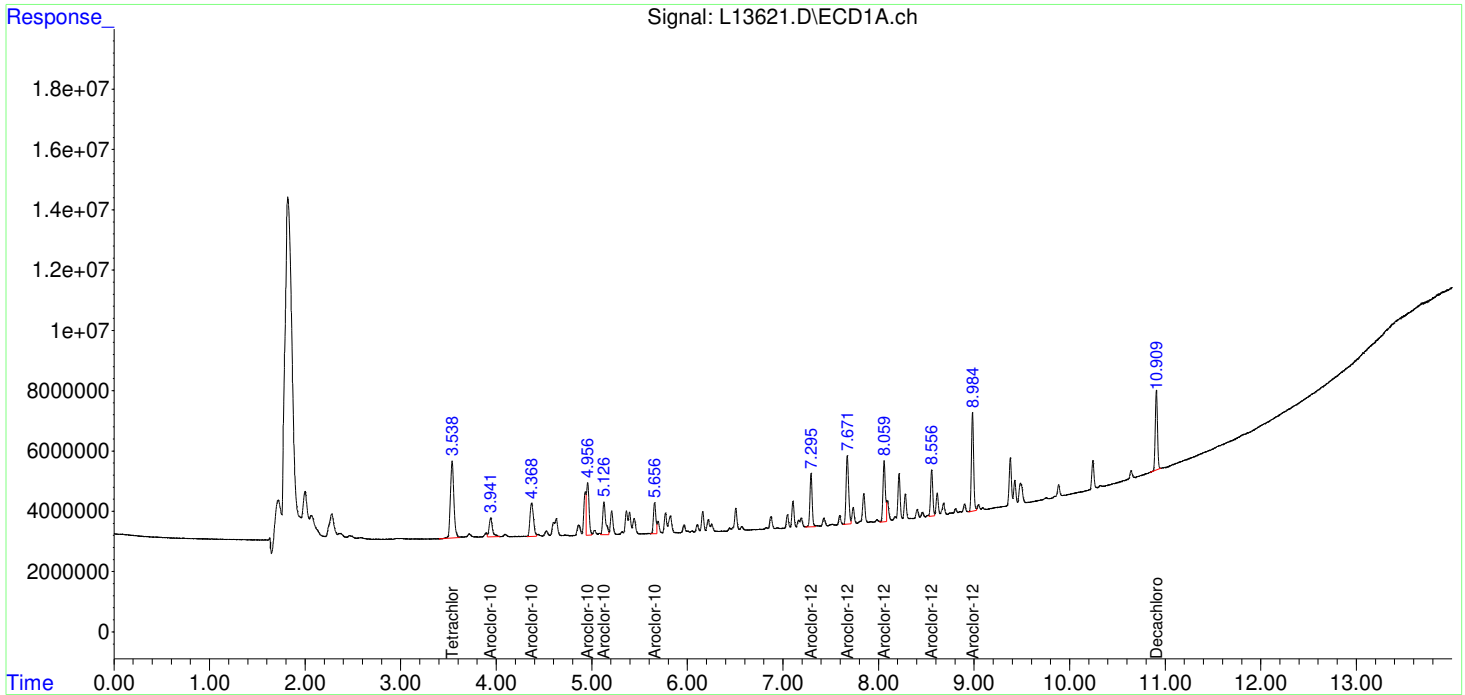
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.538	4.170	63514382	84053905	5.548	5.899
Spiked Amount	10.000 Range	60 - 120	Recovery	=	55.48%#	58.99%#
2) SA Decachlor...	10.909f	12.520f	42167337	75943898	5.651	5.750
Spiked Amount	10.000 Range	60 - 120	Recovery	=	56.51%#	57.50%#
Target Compounds						
3) L1 Aroclor-1...	3.941	4.813	15072931	18309278	68.265	60.353
4) L1 Aroclor-1...	4.368f	5.368	27777653	38934987	61.008m	59.313
5) L1 Aroclor-1...	4.957f	6.013	32936899	44153115	58.982	59.820
6) L1 Aroclor-1...	5.126f	6.200	23350985	29498704	59.433m	59.211m
7) L1 Aroclor-1...	5.657f	6.854f	18018006	24214720	60.462	57.719m
Sum Aroclor-1016			117.2E6	155.1E6	308.150	296.417
Average Aroclor-1016					61.630	59.283
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.294	8.641	28539560	39814565	57.674	61.120m
44) L9 Aroclor-1...	7.673	8.931	42091931	46214097	55.542	56.991
45) L9 Aroclor-1...	8.059	9.568	35241070	33649740	58.562m	59.798
46) L9 Aroclor-1...	8.556	9.991	24283685	34927485	58.355m	56.845m
47) L9 Aroclor-1...	8.984f	10.339f	51954975	74597191	56.633m	57.765
Sum Aroclor-1260			182.1E6	229.2E6	286.766	292.518
Average Aroclor-1260					57.353	58.504

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13621.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:00 pm
 Operator : TL1
 Sample : SEQ-CAL4
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:47:23 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13622.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:16 pm
 Operator : TL1
 Sample : SEQ-CAL5
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:50:12 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

1) SA Tetrachlo...	3.531f	4.166	120.1E6	160.6E6	10.490	11.272
Spiked Amount	10.000 Range	60 - 120	Recovery	=	104.90%	112.72%
2) SA Decachlor...	10.909f	12.520f	82159738	145.4E6	11.010	11.006
Spiked Amount	10.000 Range	60 - 120	Recovery	=	110.10%	110.06%

Target Compounds

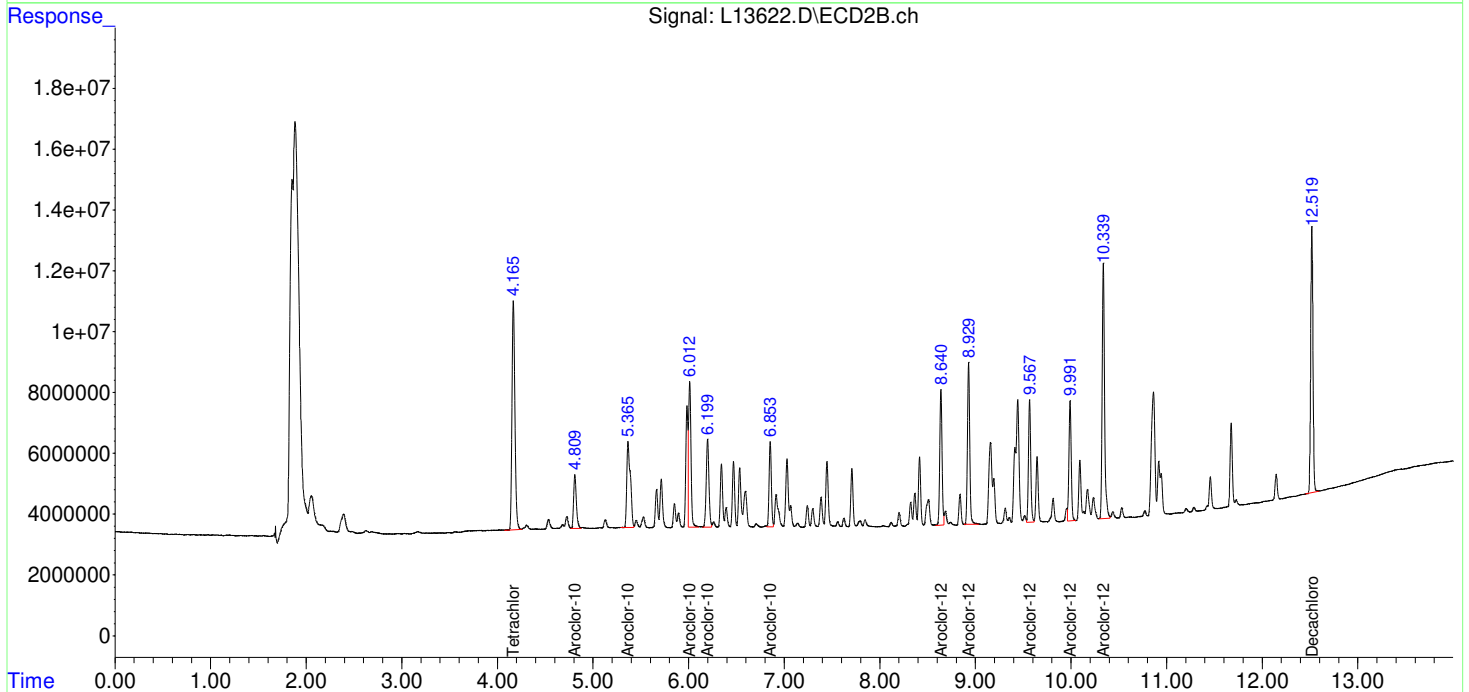
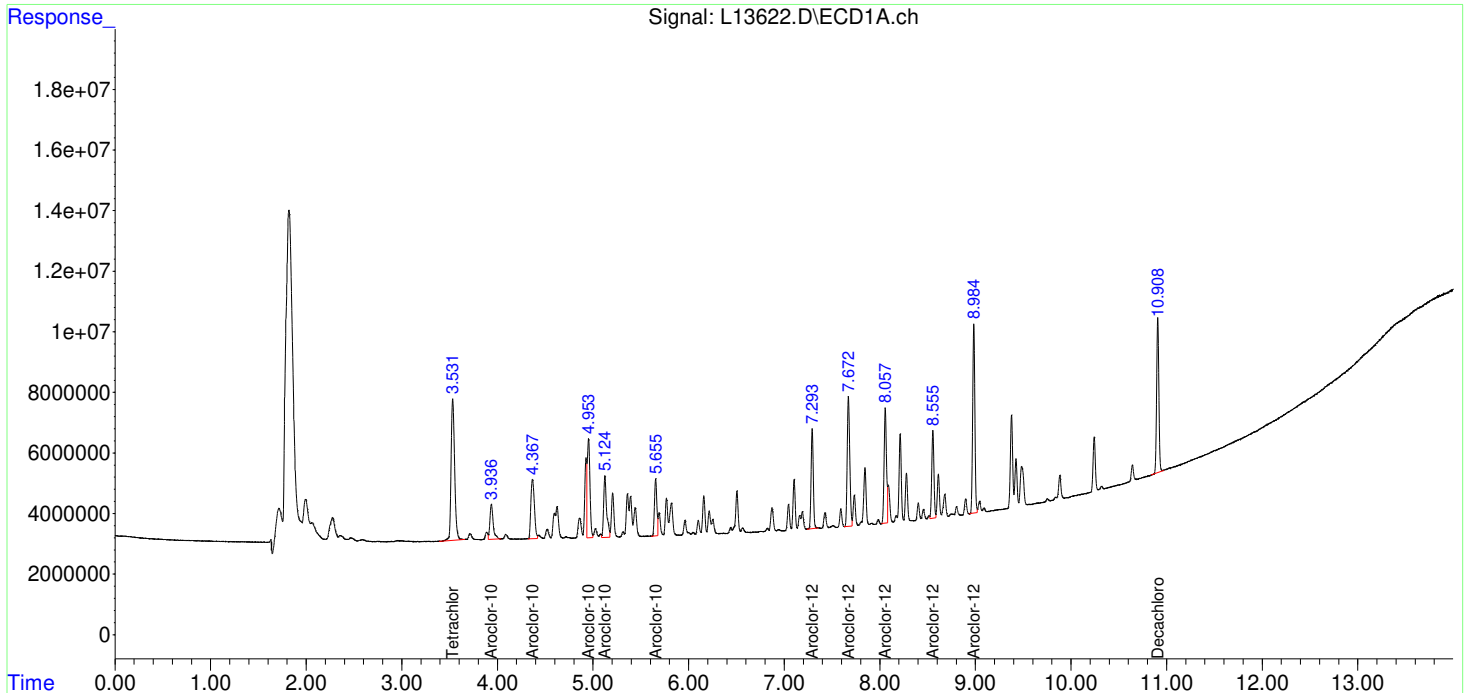
3) L1 Aroclor-1...	3.936f	4.809	27498087	34970975	124.538	115.275m
4) L1 Aroclor-1...	4.367f	5.366f	50396955	74382623	110.688m	113.314
5) L1 Aroclor-1...	4.953f	6.012f	62766312	82234589	112.398	111.415m
6) L1 Aroclor-1...	5.124f	6.199f	43845705	57382054	111.597	115.181m
7) L1 Aroclor-1...	5.655f	6.853f	32296086	45998881	108.374m	109.645m
Sum Aroclor-1016			216.8E6	295.0E6	567.595	564.829
Average Aroclor-1016					113.519	112.966
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	52623311	74629733	106.344	114.565m
44) L9 Aroclor-1...	7.672	8.929	79057804	88564304	104.320	109.217m
45) L9 Aroclor-1...	8.057	9.568	64486957	66018591	107.161m	117.319
46) L9 Aroclor-1...	8.555	9.991	46618983	66515824	112.028m	108.255m
47) L9 Aroclor-1...	8.984f	10.339f	99463448	145.8E6	108.419m	112.937m
Sum Aroclor-1260			342.3E6	441.6E6	538.272	562.293
Average Aroclor-1260					107.654	112.459

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13622.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:16 pm
 Operator : TL1
 Sample : SEQ-CAL5
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:50:12 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13623.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 9:32 pm
 Operator : TL1
 Sample : SEQ-CAL6
 Misc :
 ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 12:54:02 2024
 Quant Method : T:\METHODS\ECD-L\PCB230926L.M
 Quant Title : 8082a PCB
 QLast Update : Tue Jan 02 09:10:57 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

1) SA Tetrachlo...	3.534	4.168	276.8E6	381.6E6	24.178	26.782
Spiked Amount	10.000 Range	60 - 120	Recovery	=	241.78%#	267.82%#
2) SA Decachlor...	10.908f	12.520f	184.5E6	323.5E6	24.727	24.494
Spiked Amount	10.000 Range	60 - 120	Recovery	=	247.27%#	244.94%#

Target Compounds

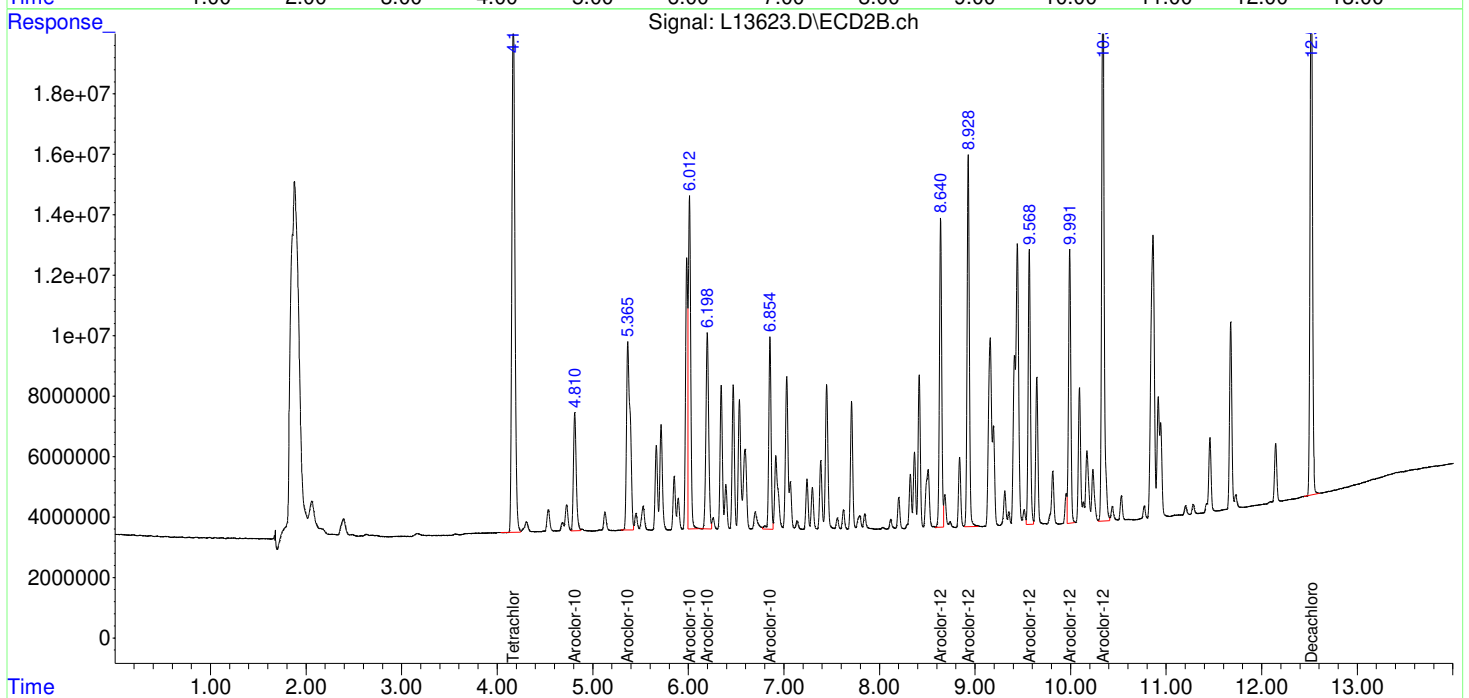
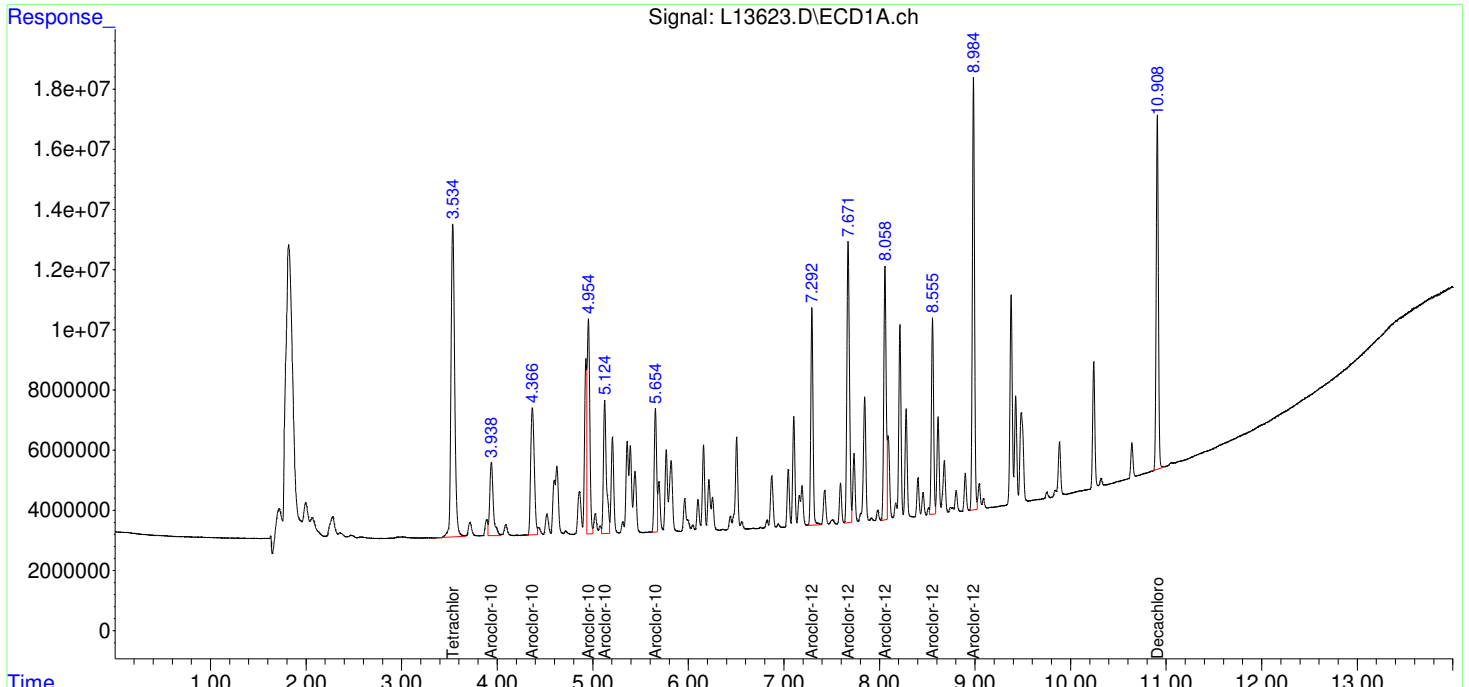
3) L1 Aroclor-1...	3.938	4.810	62774280	79014902	284.302	260.456m
4) L1 Aroclor-1...	4.367f	5.366	110.7E6	166.7E6	243.080	254.024
5) L1 Aroclor-1...	4.954f	6.012f	139.2E6	191.1E6	249.330	258.976
6) L1 Aroclor-1...	5.124f	6.198f	96601684	129.1E6	245.873	259.224
7) L1 Aroclor-1...	5.654f	6.854f	71814751	106.2E6	240.984m	253.186
Sum Aroclor-1016			481.1E6	672.3E6	1263.568	1285.866
Average Aroclor-1016					252.714	257.173
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.640	116.7E6	166.8E6	235.801	256.128m
44) L9 Aroclor-1...	7.672	8.928	175.0E6	199.3E6	230.924	245.770m
45) L9 Aroclor-1...	8.058	9.568	147.7E6	149.0E6	245.385m	264.701
46) L9 Aroclor-1...	8.555	9.991	104.1E6	150.0E6	250.201m	244.072m
47) L9 Aroclor-1...	8.984f	10.338f	226.5E6	339.4E6	246.900m	262.853
Sum Aroclor-1260			770.0E6	1004.5E6	1209.210	1273.524
Average Aroclor-1260					241.842	254.705

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13623.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 9:32 pm
Operator : TL1
Sample : SEQ-CAL6
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 12:54:02 2024
Quant Method : T:\METHODS\ECD-L\PCB230926L.M
Quant Title : 8082a PCB
QLast Update : Tue Jan 02 09:10:57 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13626.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:21 pm
 Operator : TL1
 Sample : SEQ-CAL7
 Misc :
 ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:05:21 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

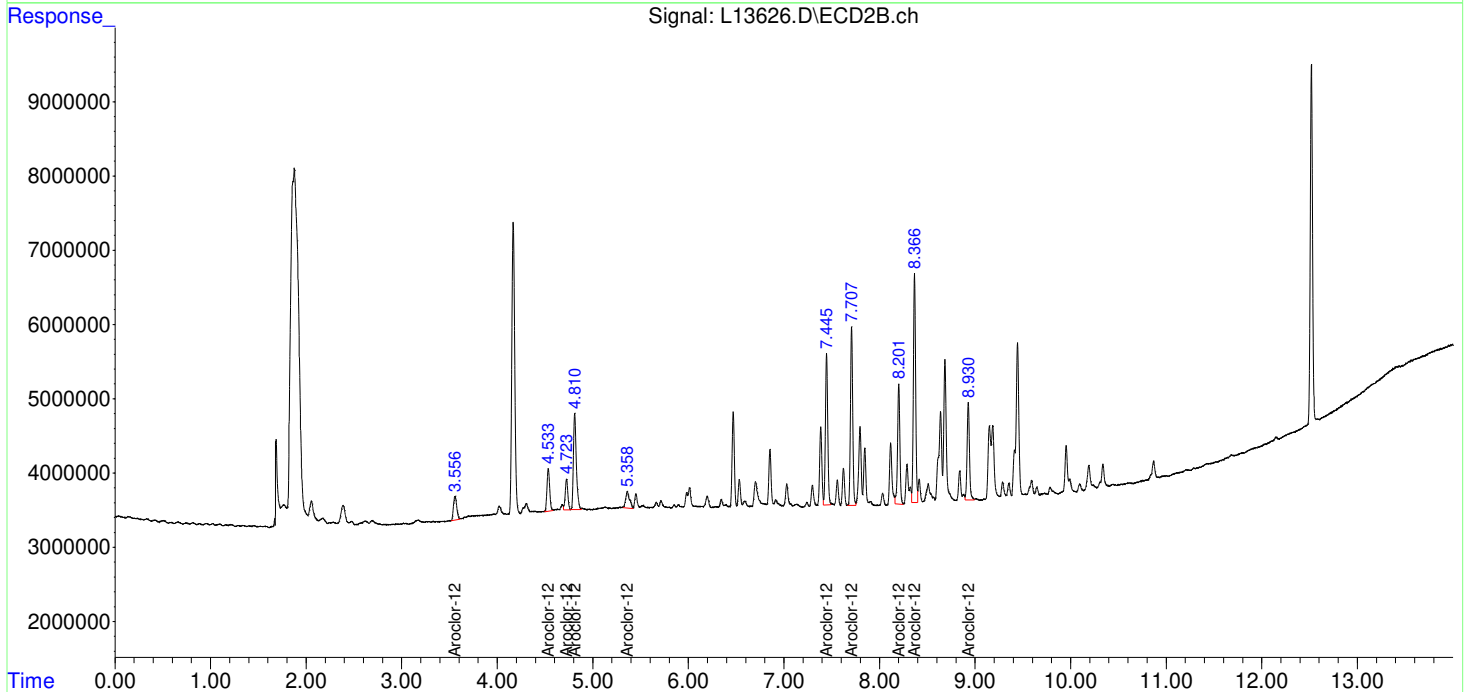
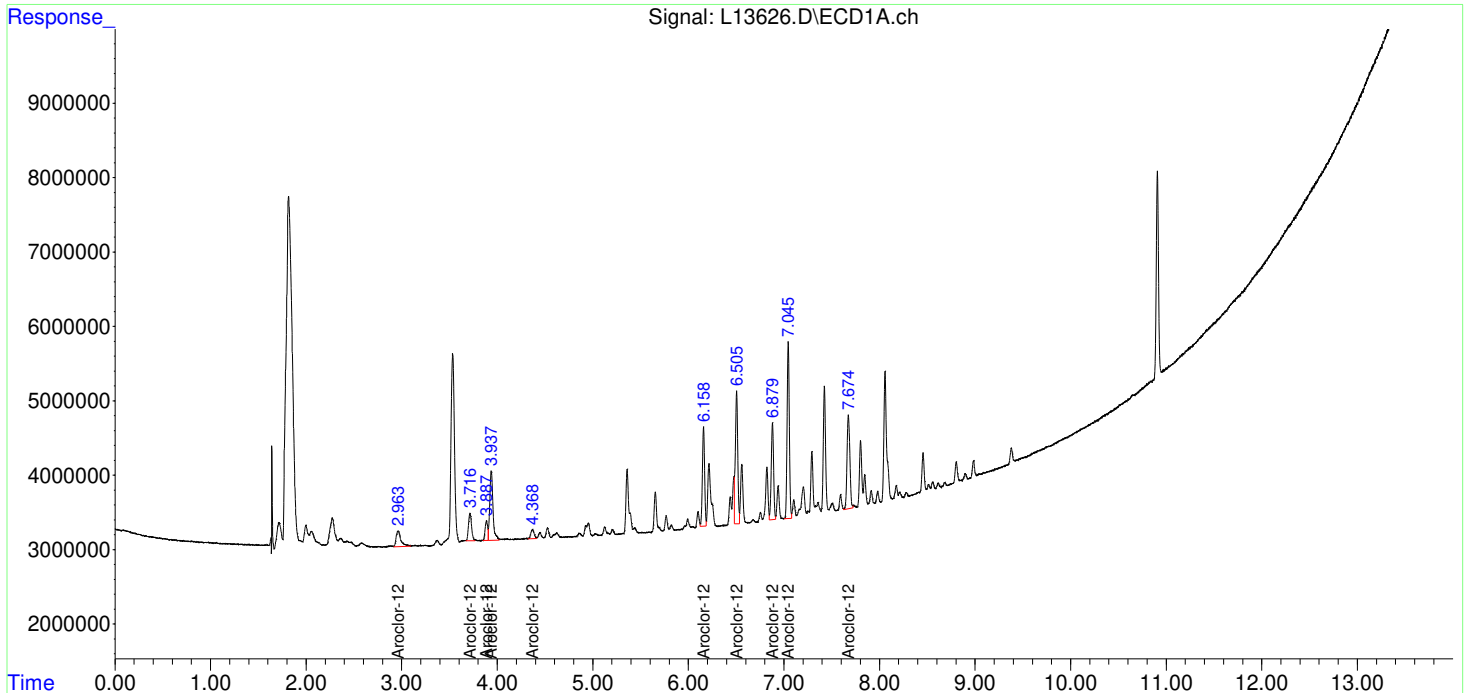
System Monitoring Compounds						
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
8) L2 Aroclor-1...	2.963f	3.556f	7143390	7613736	68.179m	56.085m
9) L2 Aroclor-1...	3.716f	4.533f	8403769	11308644	59.186m	56.477m
10) L2 Aroclor-1...	3.887f	4.723f	4823960	7818012	60.594m	56.063m
11) L2 Aroclor-1...	3.937f	4.810f	21652161	27299642	59.517m	57.716m
12) L2 Aroclor-1...	4.368f	5.358f	2999418	6291573	61.879m	62.033m
Sum Aroclor-1221			45022697	60331607	309.354	288.374
Average Aroclor-1221					61.871	57.675
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
28) L6 Aroclor-1...	6.158f	7.445f	21510599	34148007	55.339m	55.482m
29) L6 Aroclor-1...	6.505f	7.707f	31364914	39724229	56.846m	57.980m
30) L6 Aroclor-1...	6.879f	8.201f	22145710	27605200	56.276m	55.518m
31) L6 Aroclor-1...	7.045f	8.366f	38211692	50464460	57.508m	56.927m
32) L6 Aroclor-1...	7.674f	8.930f	25985753	22608608	55.931m	55.504m
Sum Aroclor-1254			139.2E6	174.6E6	281.900	281.411
Average Aroclor-1254					56.380	56.282
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13626.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 10:21 pm
Operator : TL1
Sample : SEQ-CAL7
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 13:05:21 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Jan 17 13:00:01 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13627.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:37 pm
 Operator : TL1
 Sample : SEQ-CAL8
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:11:26 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

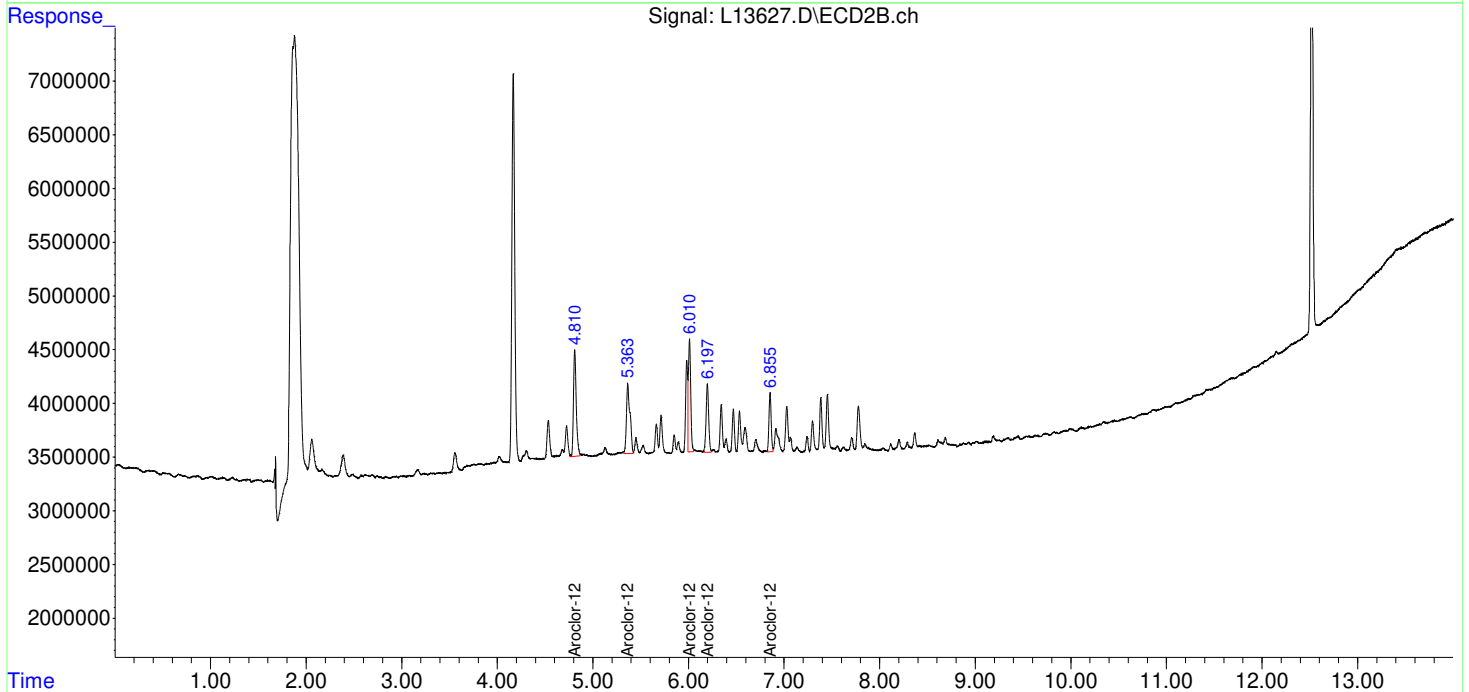
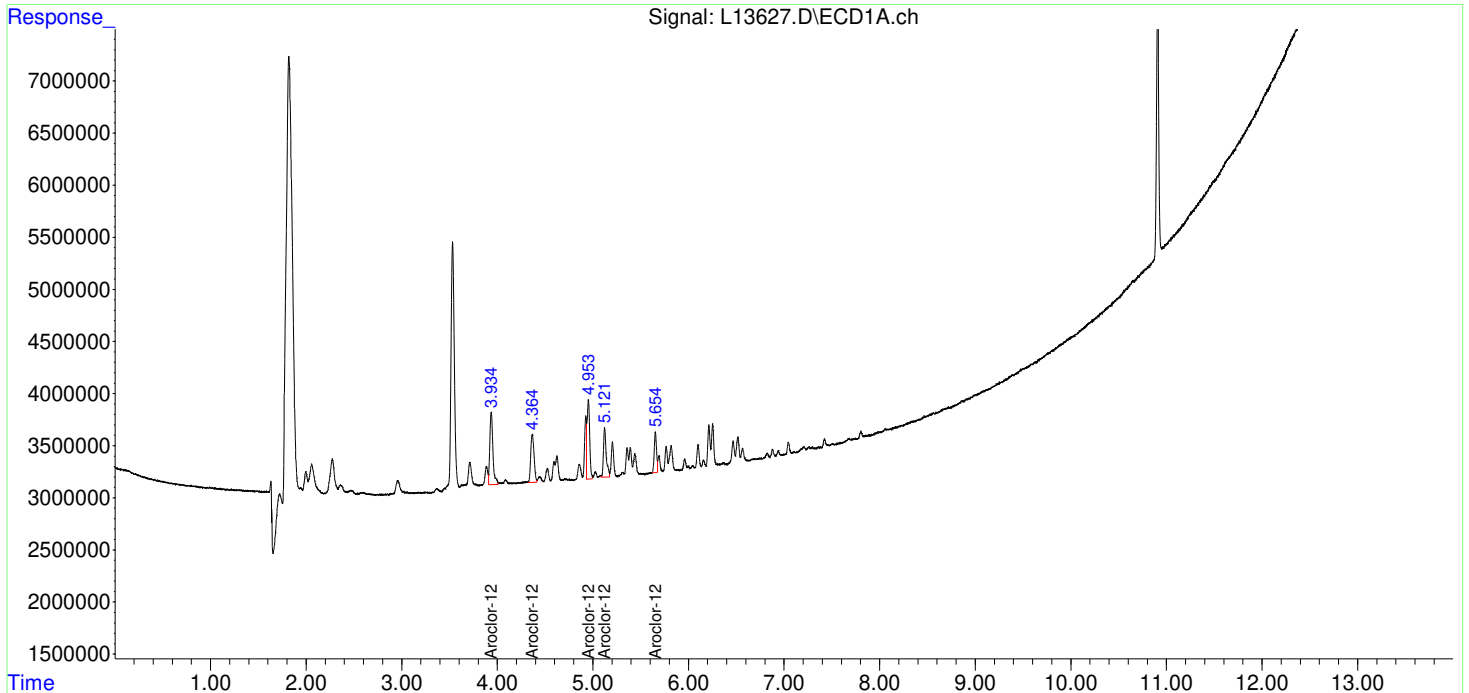
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
13) L3 Aroclor-1...	3.934f	4.810f	15837895	20048134	57.252m	55.013m
14) L3 Aroclor-1...	4.364f	5.363f	11278052	16762368	57.449m	56.573m
15) L3 Aroclor-1...	4.953f	6.010f	14264139	17554380	58.174m	54.165m
16) L3 Aroclor-1...	5.121f	6.197f	9601446	12008780	59.092m	55.275m
17) L3 Aroclor-1...	5.654f	6.855f	6477690	9006148	55.091m	52.956m
Sum Aroclor-1232			57459222	75379810	287.057	273.982
Average Aroclor-1232					57.411	54.796
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13627.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 10:37 pm
Operator : TL1
Sample : SEQ-CAL8
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 13:11:26 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Jan 17 13:00:01 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13628.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:53 pm
 Operator : TL1
 Sample : SEQ-CAL9
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:14:30 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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 System Monitoring Compounds

Target Compounds

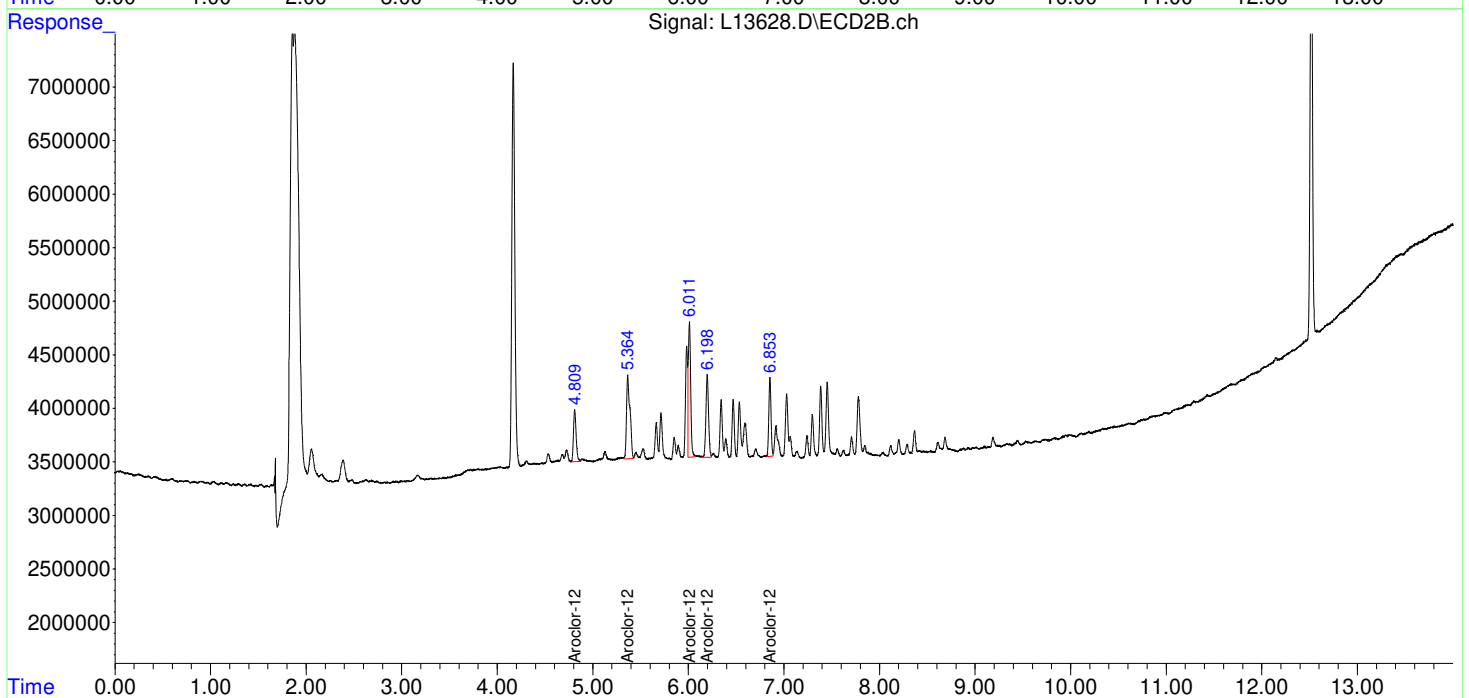
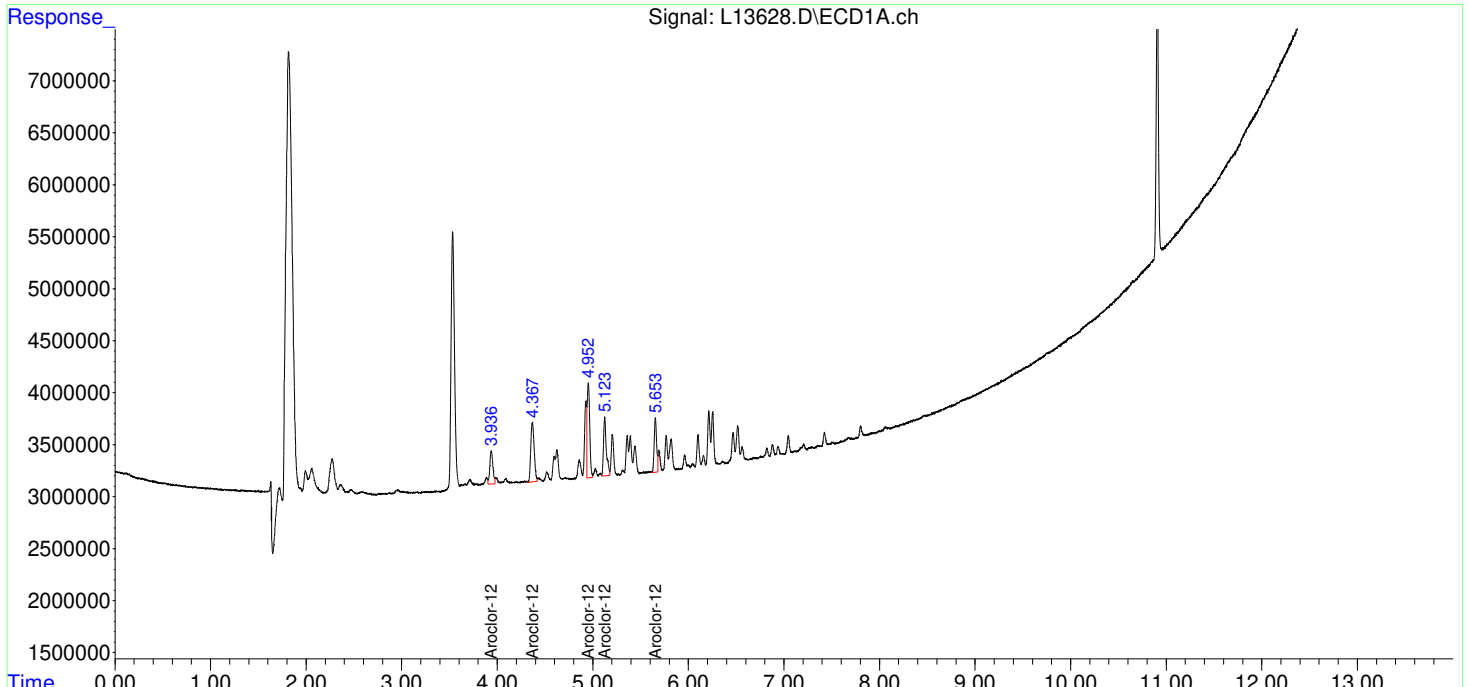
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
18) L4 Aroclor-1...	3.936f	4.809f	7191001	9304784	60.187m	55.633m
19) L4 Aroclor-1...	4.367f	5.364f	14304819	19729467	60.434m	57.055m
20) L4 Aroclor-1...	4.952f	6.011f	17146482	21924886	59.232m	57.433m
21) L4 Aroclor-1...	5.123f	6.198f	11705688	14781752	99.800m	56.472m#
22) L4 Aroclor-1...	5.653f	6.853f	9147812	11946961	60.298m	54.530m
Sum Aroclor-1242			59495801	77687850	339.950	281.124
Average Aroclor-1242					67.990	56.225
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13628.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:53 pm
 Operator : TL1
 Sample : SEQ-CAL9
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:14:30 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13629.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:09 pm
 Operator : TL1
 Sample : SEQ-CALA
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:17:58 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

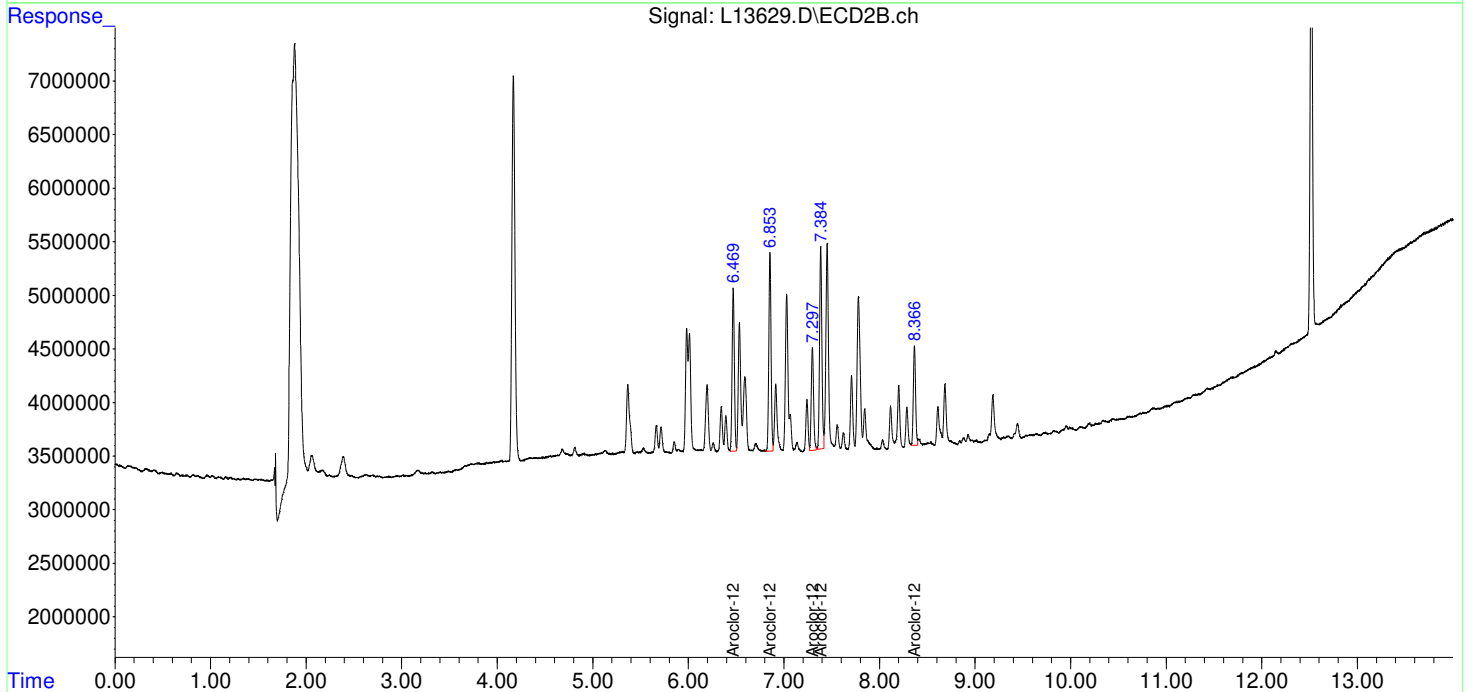
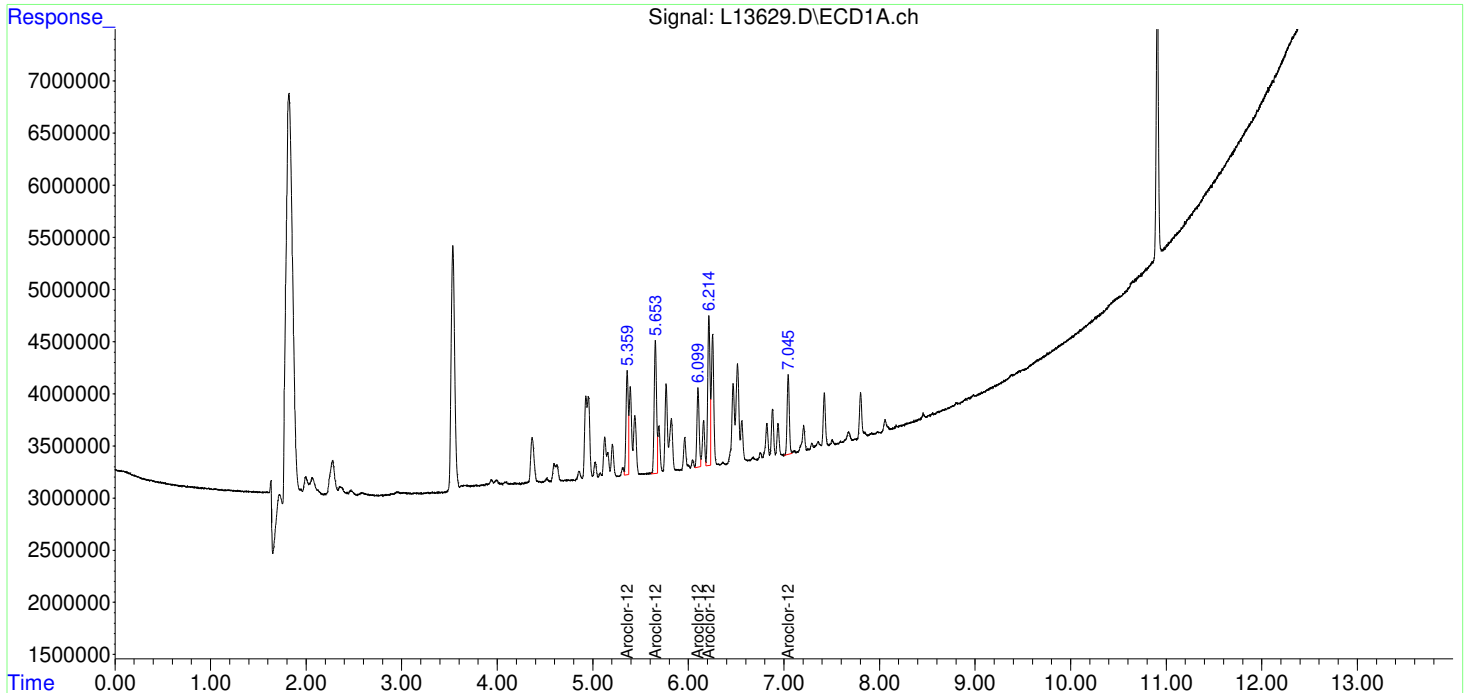
System Monitoring Compounds						
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
23) L5 Aroclor-1...	5.359f	6.469f	16909541	24592088	55.084m	54.726m
24) L5 Aroclor-1...	5.653f	6.853f	22242298	30160137	56.577m	54.070m
25) L5 Aroclor-1...	6.099f	7.297f	12568464	16282017	54.119m	50.824m
26) L5 Aroclor-1...	6.213f	7.384f	24628661	31604575	62.356m	52.978m
27) L5 Aroclor-1...	7.045f	8.366f	12117904	15123769	52.772m	52.007m
Sum Aroclor-1248			88466868	117.8E6	280.909	264.604
Average Aroclor-1248					56.182	52.921
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

 (f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13629.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:09 pm
 Operator : TL1
 Sample : SEQ-CALA
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:17:58 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13630.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:25 pm
 Operator : TL1
 Sample : SEQ-CALB
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:22:14 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

Target Compounds

Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000

Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000

Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000

Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000

Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000

Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000

33) L7 Aroclor-1...	7.292f	8.639f	22391299	31530632	56.308m	58.440m
34) L7 Aroclor-1...	7.670f	8.929f	30159030	36233551	57.713m	57.418m
35) L7 Aroclor-1...	8.214f	9.646	34163847	19041630	56.848m	23.110m#
36) L7 Aroclor-1...	8.555f	9.991f	30025785	43328103	56.025m	57.769m
37) L7 Aroclor-1...	8.984f	10.339f	58434777	83366172	57.417m	57.760m
Sum Aroclor-1262			175.2E6	213.5E6	284.311	254.497
Average Aroclor-1262					56.862	50.899

Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000

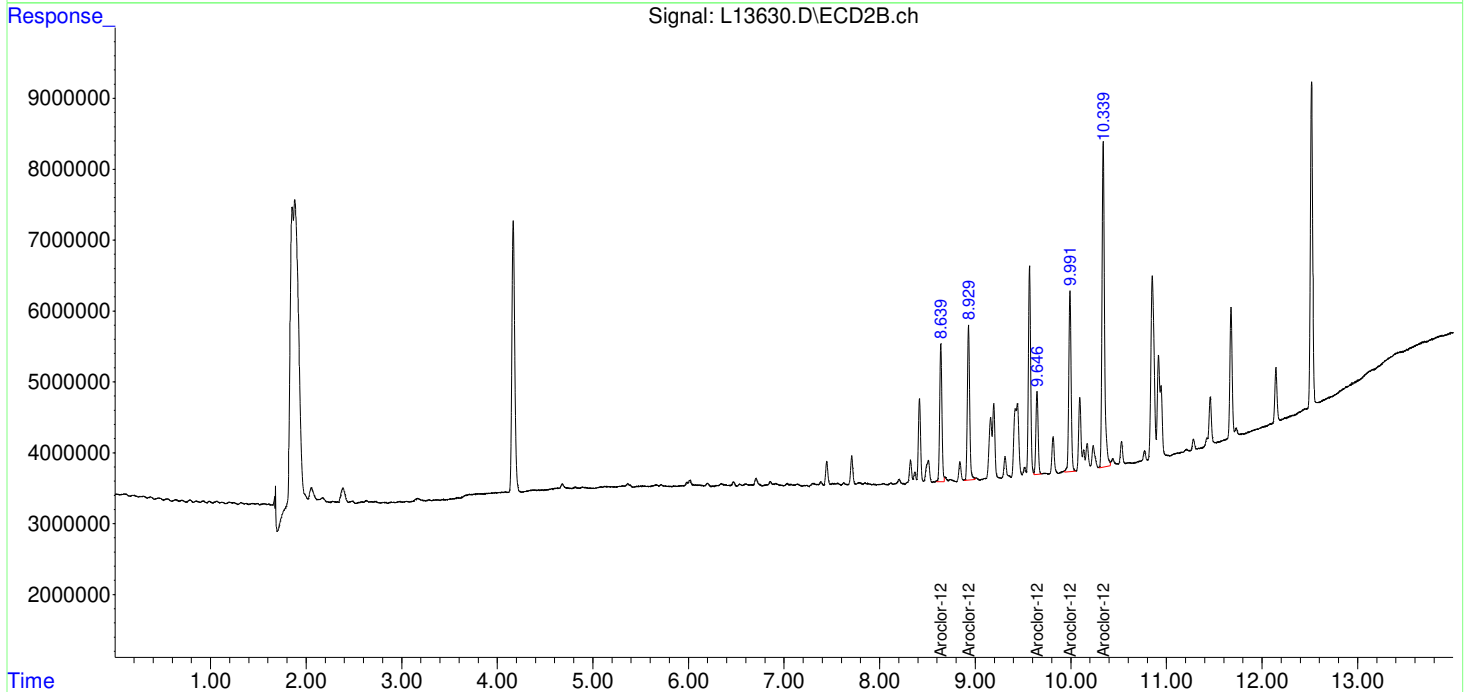
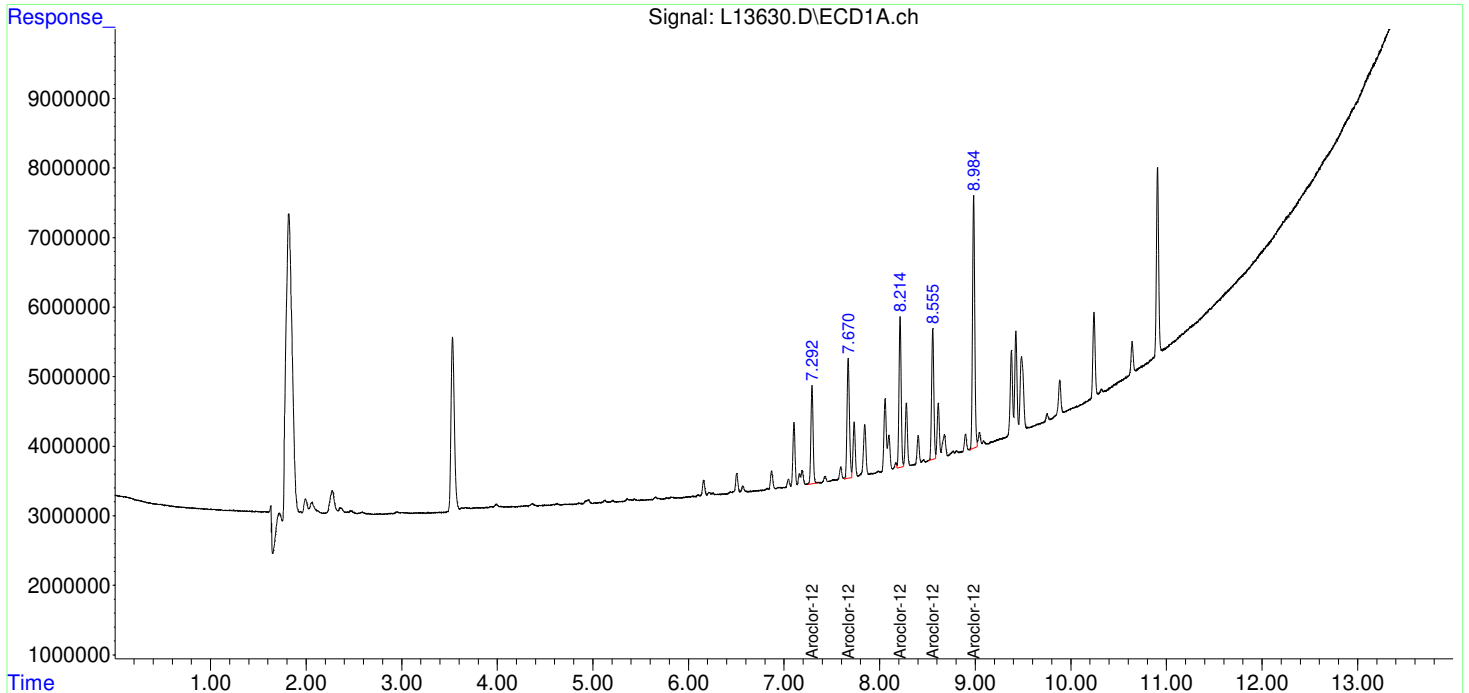
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
Data File : L13630.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 16 Jan 2024 11:25 pm
Operator : TL1
Sample : SEQ-CALB
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Jan 17 13:22:14 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Jan 17 13:00:01 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240116\
 Data File : L13631.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:41 pm
 Operator : TL1
 Sample : SEQ-CALC
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:25:11 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
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System Monitoring Compounds

Target Compounds

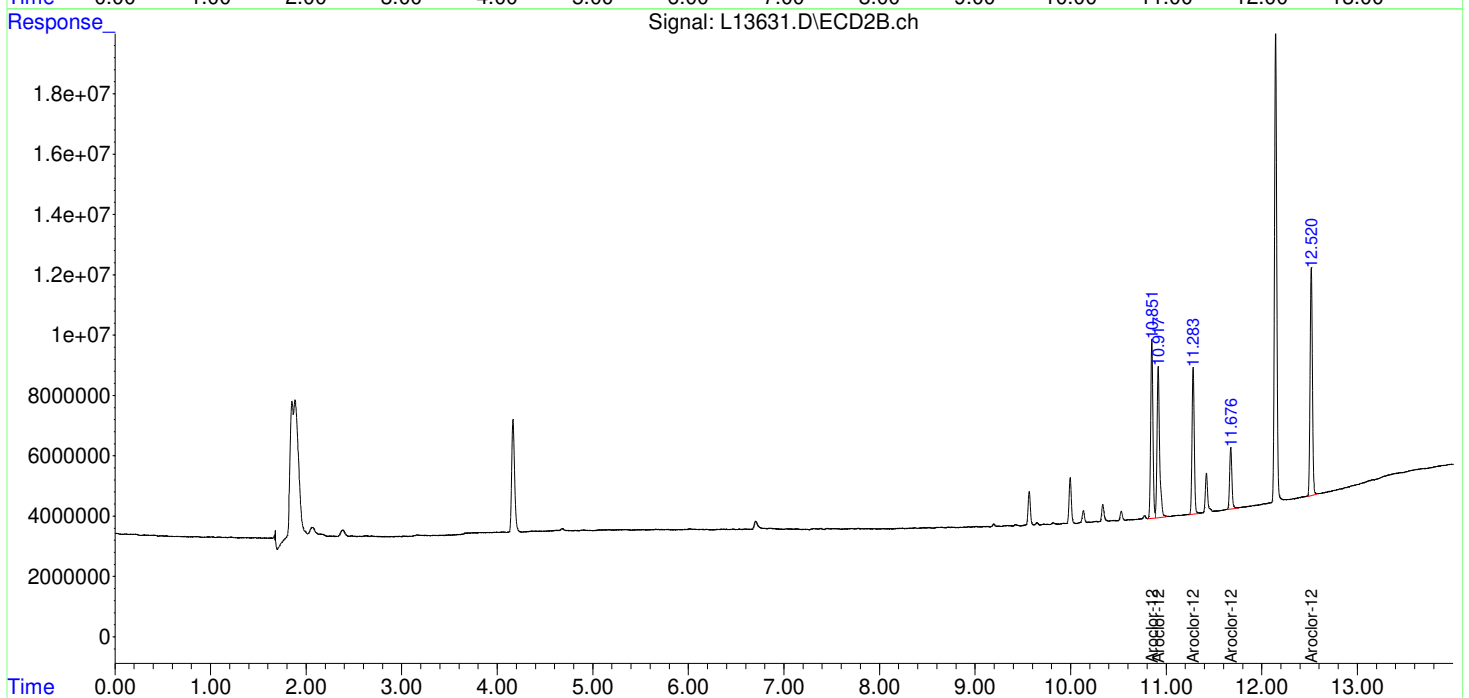
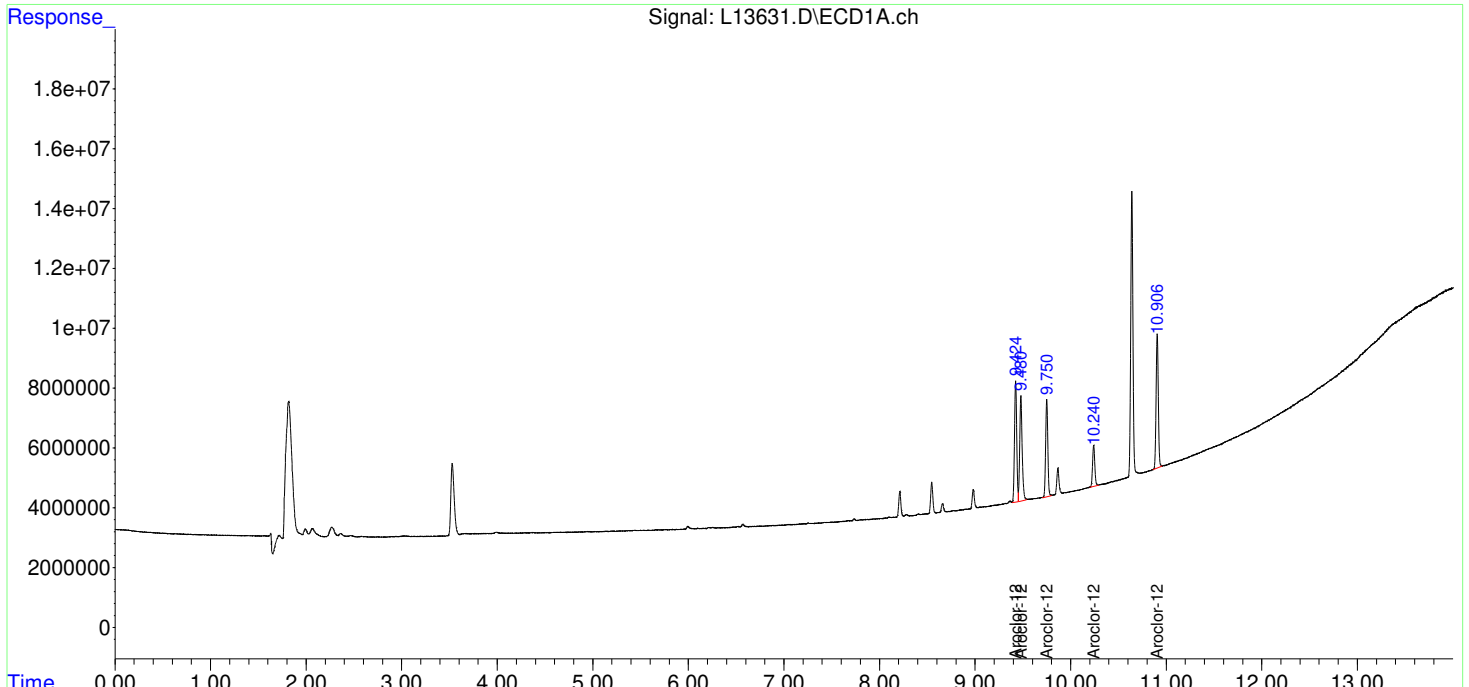
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
38) L8 Aroclor-1...	9.424f	10.851f	64739853	97178718	54.745m	55.565m
39) L8 Aroclor-1...	9.480f	10.917f	62083282	94280774	55.088m	56.271m
40) L8 Aroclor-1...	9.750f	11.283f	51443610	79090046	56.121m	55.995m
41) L8 Aroclor-1...	10.240f	11.676f	22137604	34334721	54.845m	55.809m
42) L8 Aroclor-1...	10.906f	12.520f	71440019	126.8E6	54.416m	55.103m
Sum Aroclor-1268			271.8E6	431.6E6	275.214	278.743
Average Aroclor-1268					55.043	55.749
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13631.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:41 pm
 Operator : TL1
 Sample : SEQ-CALC
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:25:11 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII

INITIAL CALIBRATION VERIFICATION

EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15369
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L13625.D	Calibration Date: 01/16/24 00:00
Sequence: SCA0465	Injection Date: 01/16/24
Lab Sample ID: SCA0465-ICV1	Injection Time: 22:04

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	ICV	ICAL	ICV	MIN (#)	ICV
Aroclor-1016	A	50.00	48.6	452782.9	437674.2	-2.8	20
Aroclor-1260	A	50.00	46.6	716308	667207.2	-6.8	20
Tetrachloro-m-xylene	A	5.000	4.67	1.269474E+07	1.186843E+07	-6.6	20
Decachlorobiphenyl	A	5.000	4.64	8363450	7759872	-7.2	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.168	59342150	78381099	4.675	4.727
Spiked Amount	10.000	Range	60 - 120	Recovery	= 46.75%#	47.27%#
2) SA Decachlor...	10.908	12.520	38799363	70512983	4.639	4.666
Spiked Amount	10.000	Range	60 - 120	Recovery	= 46.39%#	46.66%#
Target Compounds						
3) L1 Aroclor-1...	3.939	4.811	13859686	17491536	51.446	49.496
4) L1 Aroclor-1...	4.367	5.366	25883501	36139906	48.088m	46.612
5) L1 Aroclor-1...	4.954	6.012	31562750	41331826	48.198	46.850
6) L1 Aroclor-1...	5.123	6.199	21647523	27477708	47.439m	46.524m
7) L1 Aroclor-1...	5.655	6.854	16465073	22375890	47.713	46.194
Sum Aroclor-1016			109.4E6	144.8E6	242.885	235.676
Average Aroclor-1016					48.577	47.135
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.293	8.639	26980059	38343729	48.357	48.669m
44) L9 Aroclor-1...	7.671	8.929	39091530	43264591	46.615	47.087
45) L9 Aroclor-1...	8.058	9.568	30473912	31481769	44.365m	47.746
46) L9 Aroclor-1...	8.556	9.991	21974952	33959169	46.588m	48.838
47) L9 Aroclor-1...	8.982	10.338	48281346	69178793	47.039m	45.685
Sum Aroclor-1260			166.8E6	216.2E6	232.963	238.024
Average Aroclor-1260					46.593	47.605

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

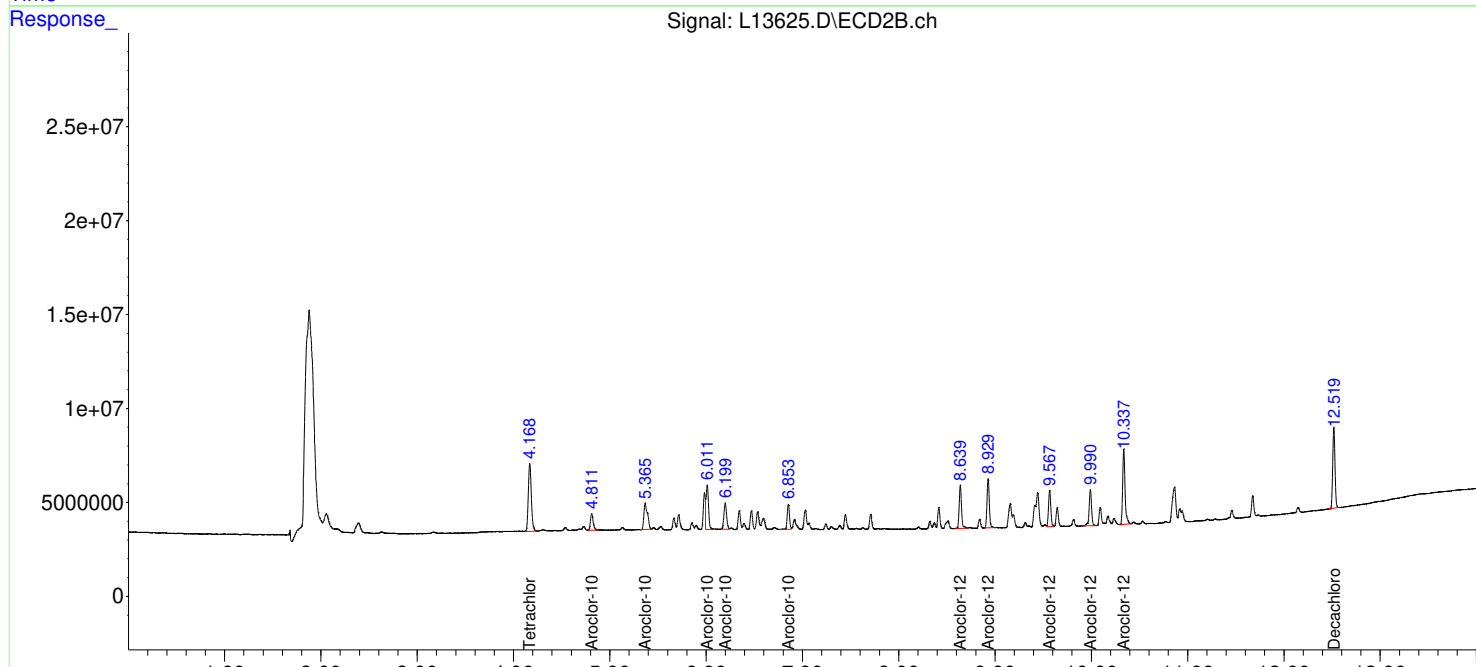
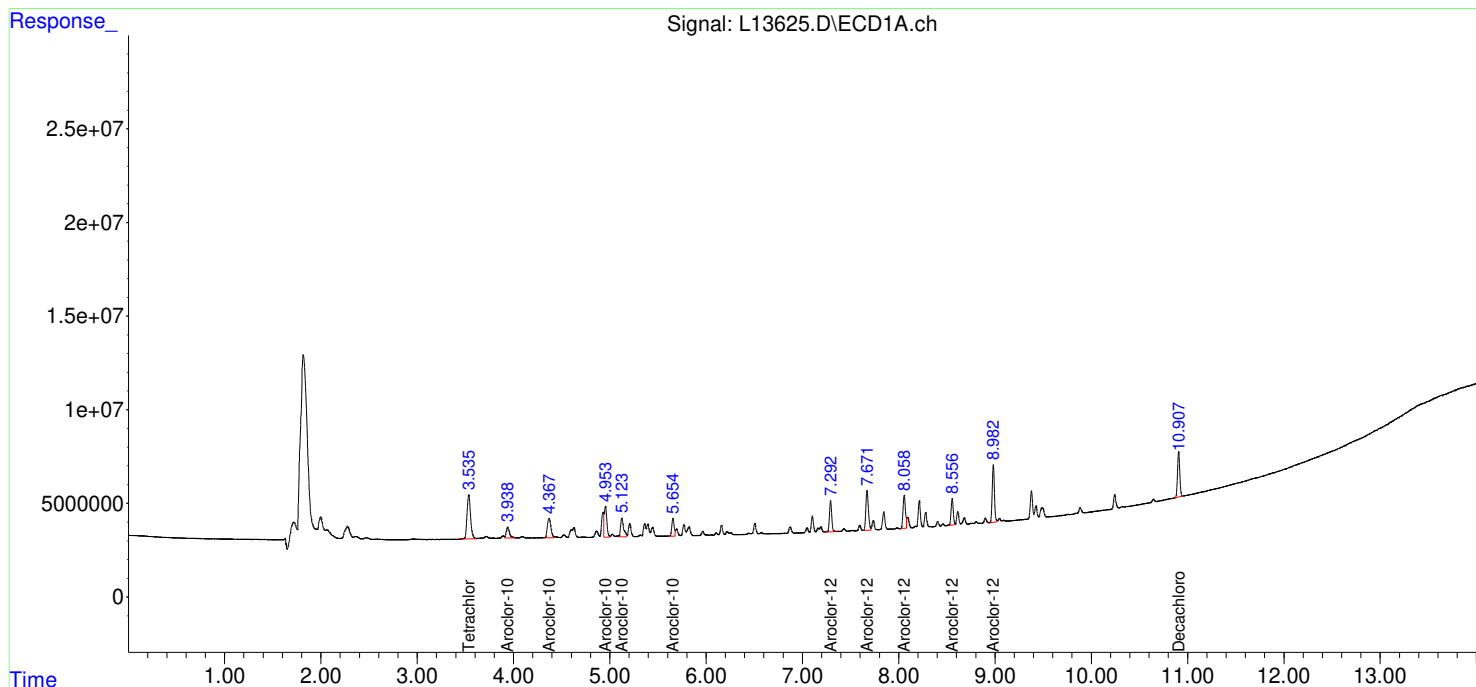
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

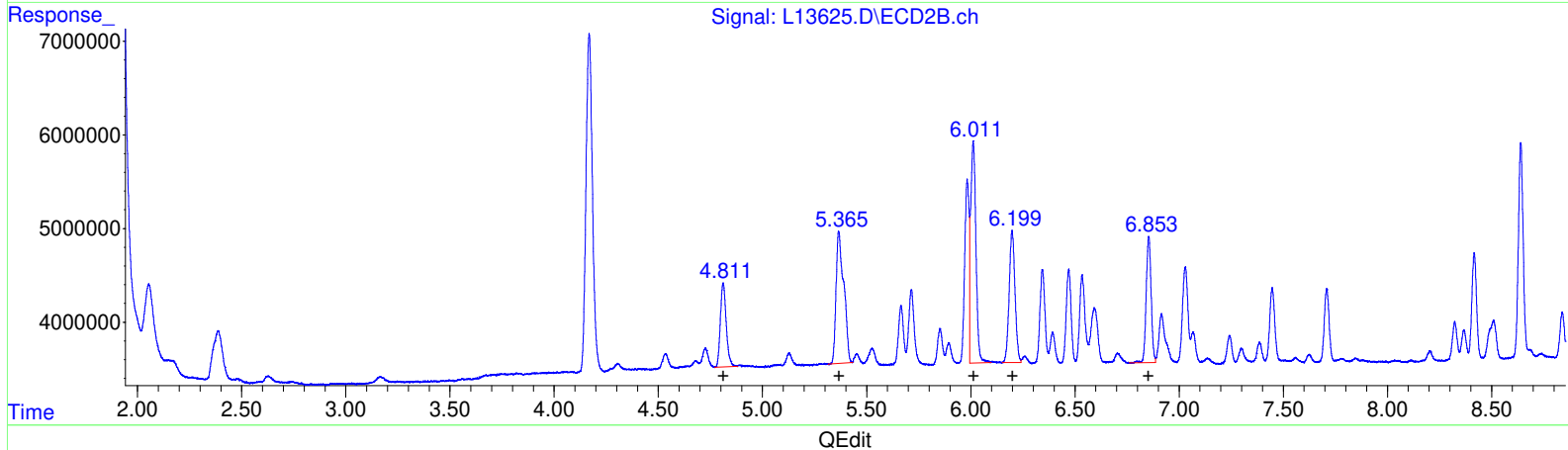
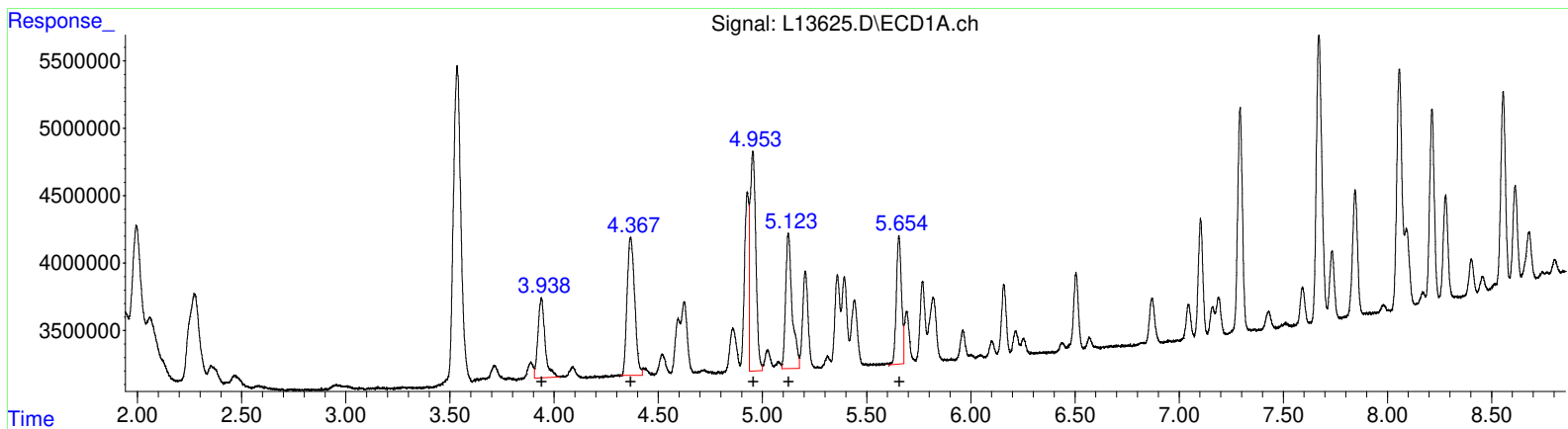
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



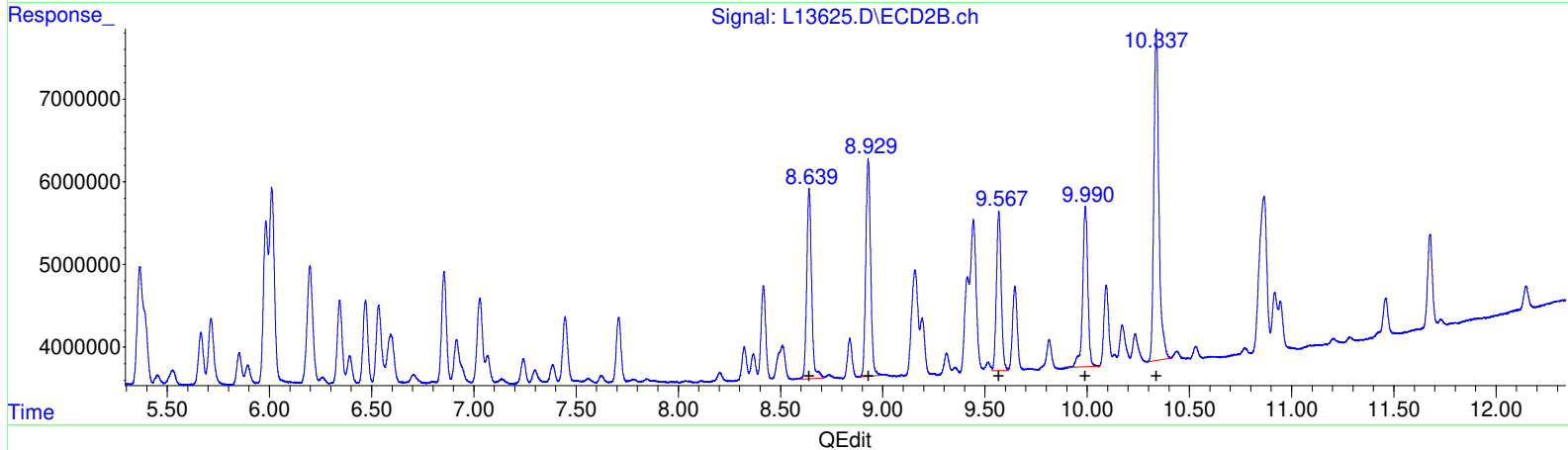
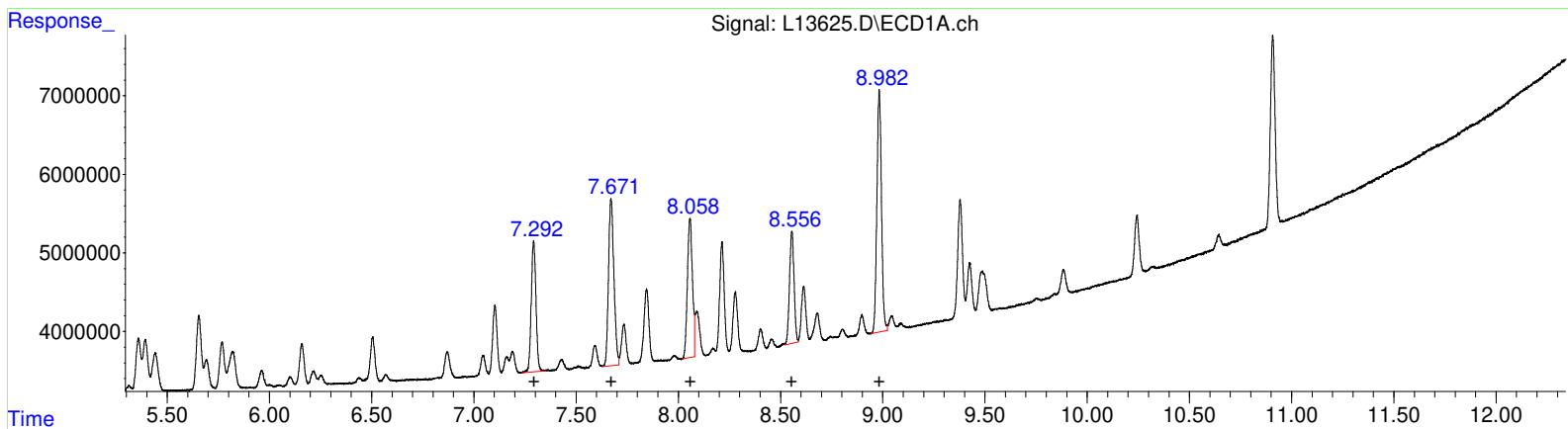
QEdit

(3) Aroclor-1016{1} (L1)			
R.T.	Response	Conc	
3.94	13859686	51.45	
4.37	25883501	48.09	
4.95	31562750	48.20	
5.12	21647523	47.44	
5.65	16465073	47.71	
(3) Aroclor-1016{1} #2 (L1)			
R.T.	Response	Conc	
4.81	17491536	49.50	
5.37	36139906	46.61	
6.01	41331826	46.85	
6.20	27477708	46.52	
6.85	22375890	46.19	

Data Path : Z:\Data\ECD-L\L240116\
 Data File : L13625.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 10:04 pm
 Operator : TL1
 Sample : SEQ-ICV
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:02:57 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:00:01 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I
 Signal #1 Info : 0.25
 Signal #2 Phase: CLPest II
 Signal #2 Info : 0.25



QEdit

(43) Aroclor-1260{1} (L9)			
R.T.	Response	Conc	
7.29	26980059	48.36	
7.67	39091530	46.61	
8.06	30473912	44.36	
8.56	21974952	46.59	
8.98	48281346	47.04	
(43) Aroclor-1260{1} #2 (L9)			
R.T.	Response	Conc	
8.64	38343729	48.67	
8.93	43264591	47.09	
9.57	31481769	47.75	
9.99	33959169	48.84	
10.34	69178793	45.68	

7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15369
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L13632.D	Calibration Date: 01/16/24 00:00
Sequence: SCA0465	Injection Date: 01/16/24
Lab Sample ID: SCA0465-CCV1	Injection Time: 23:57

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1016	A	50.00	48.7	452782.9			-2.6	20
Aroclor-1260	A	50.00	47.1	716308			-5.8	20
Tetrachloro-m-xylene	A	5.000	4.58	1.269474E+07	1.163827E+07		-8.3	20
Decachlorobiphenyl	A	5.000	4.70	8363450	7862736		-6.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13632.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:57 pm
 Operator : TL1
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:32:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:30:51 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

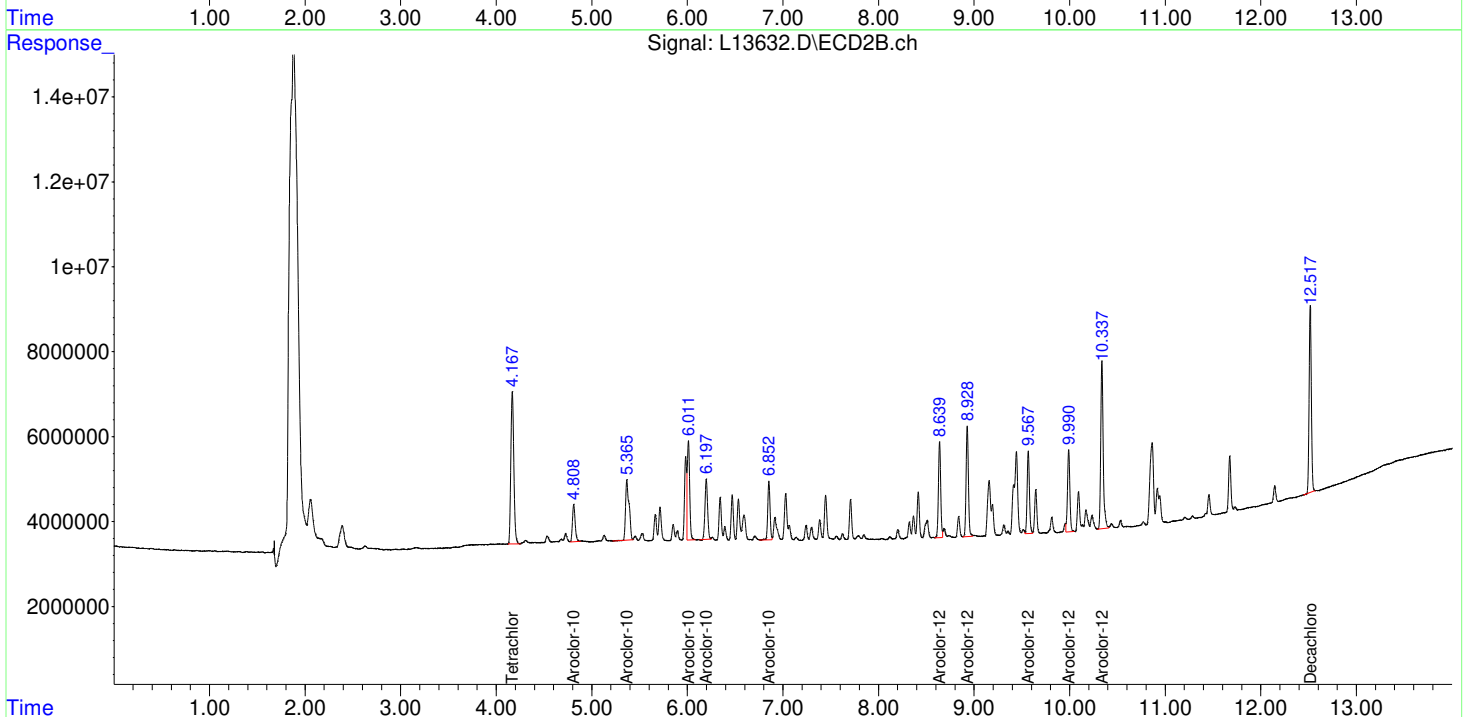
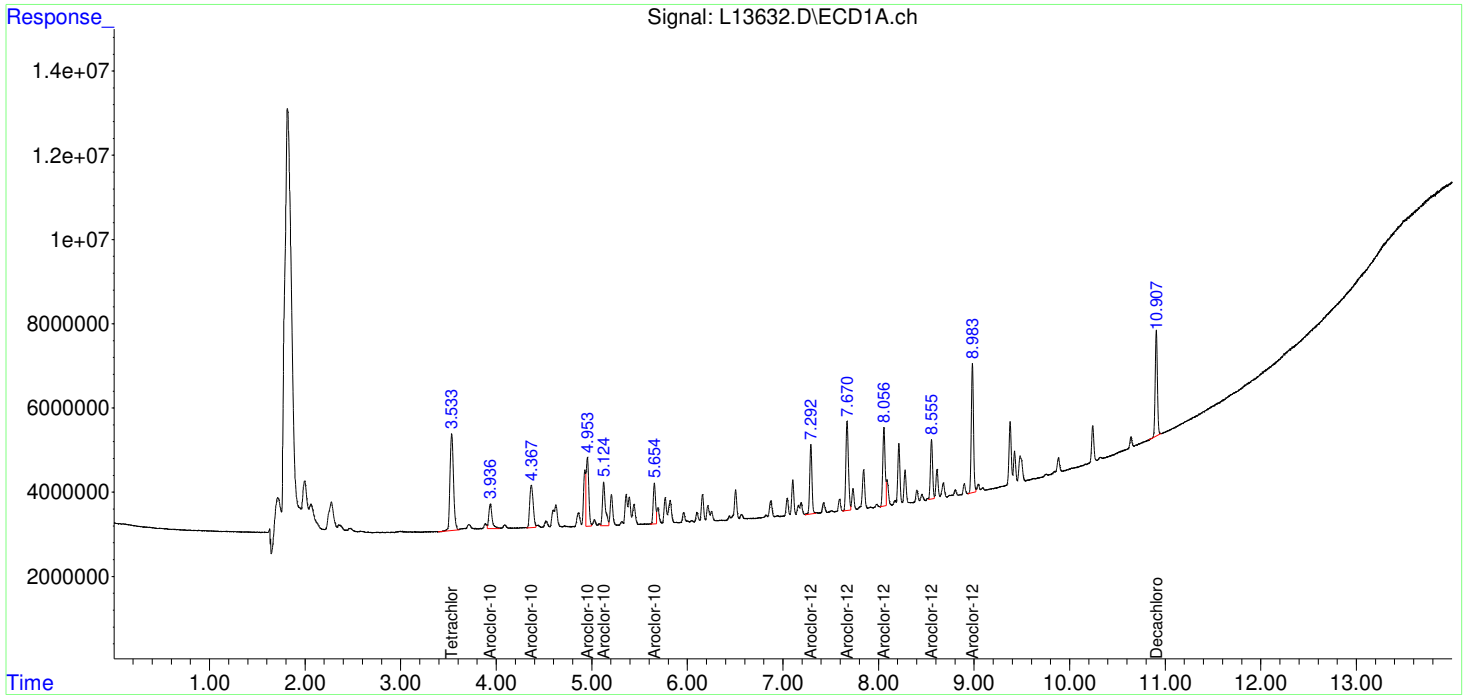
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.534	4.168	58191352	77519653	4.584	4.675
Spiked Amount	10.000 Range	60 - 120	Recovery	=	45.84%#	46.75%#
2) SA Decachlor...	10.908	12.518	39313685	70549863	4.701	4.668
Spiked Amount	10.000 Range	60 - 120	Recovery	=	47.01%#	46.68%#
Target Compounds						
3) L1 Aroclor-1...	3.937	4.810	13772637	17077786	51.123	48.325
4) L1 Aroclor-1...	4.367	5.366	25556144	35973778	47.479m	46.398
5) L1 Aroclor-1...	4.953	6.011	31568117	40580878	48.207	45.999
6) L1 Aroclor-1...	5.124	6.197	22084461	27101717	48.397m	45.887
7) L1 Aroclor-1...	5.654	6.853	16655911	23140638	48.266	47.772
Sum Aroclor-1016			109.6E6	143.9E6	243.472	234.382
Average Aroclor-1016					48.694	46.876
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.292	8.639	26594213	37127005	47.666	47.124m
44) L9 Aroclor-1...	7.671	8.928	39410325	43697290	46.995	47.557m
45) L9 Aroclor-1...	8.056	9.567	31971939	32314798	46.545m	49.010
46) L9 Aroclor-1...	8.555	9.990	22178282	32951533	47.019m	47.389m
47) L9 Aroclor-1...	8.983	10.337	48486988	70504027	47.239m	46.560m
Sum Aroclor-1260			168.6E6	216.6E6	235.464	237.640
Average Aroclor-1260					47.093	47.528

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240116\
 Data File : L13632.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 16 Jan 2024 11:57 pm
 Operator : TL1
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: Jan 17 13:32:38 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Jan 17 13:30:51 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15369
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L14366.D	Calibration Date: 01/16/24 00:00
Sequence: SCE0475	Injection Date: 05/02/24
Lab Sample ID: SCE0475-CCV1	Injection Time: 15:20

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	53.4	452782.9	479704	6.9	20
Aroclor-1260	A	50.00	52.3	716308	747488.2	4.6	20
Tetrachloro-m-xylene	A	5.000	5.07	1.269474E+07	1.288214E+07	1.4	20
Decachlorobiphenyl	A	5.000	5.04	8363450	8430578	0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

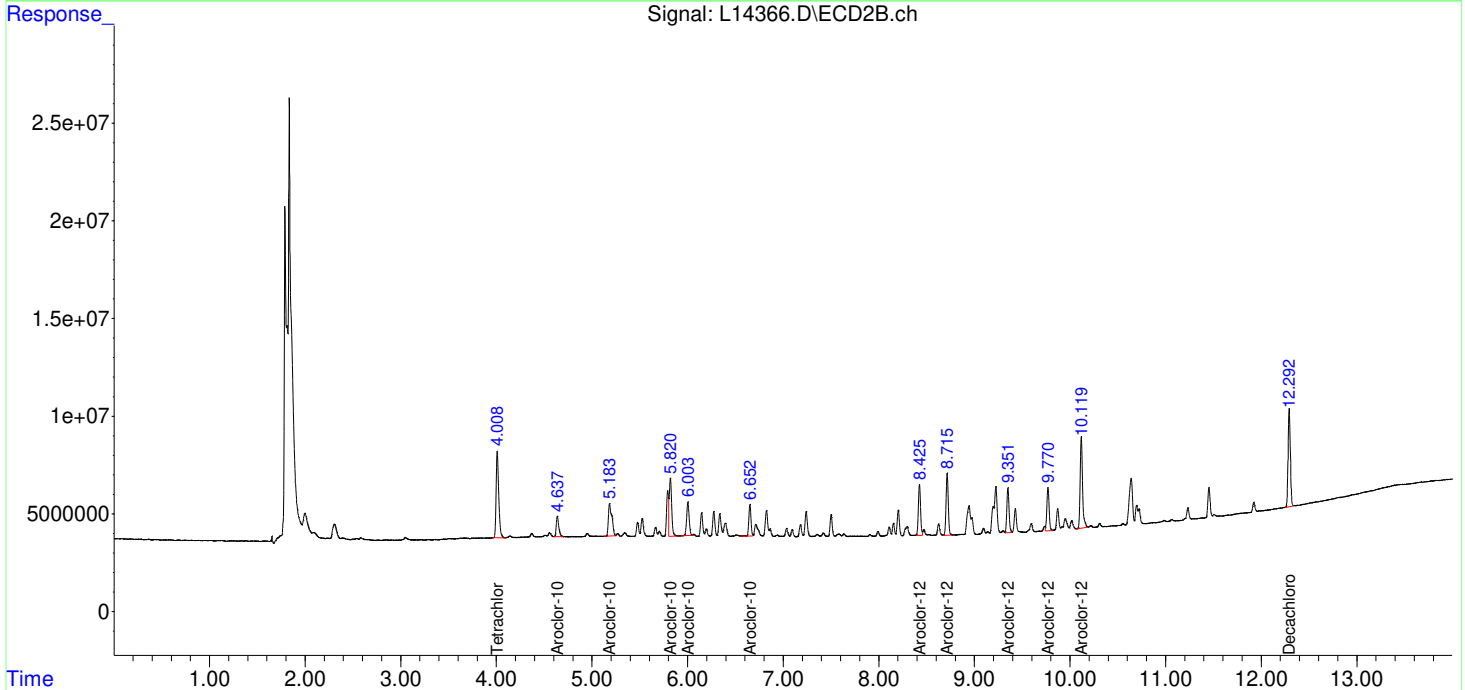
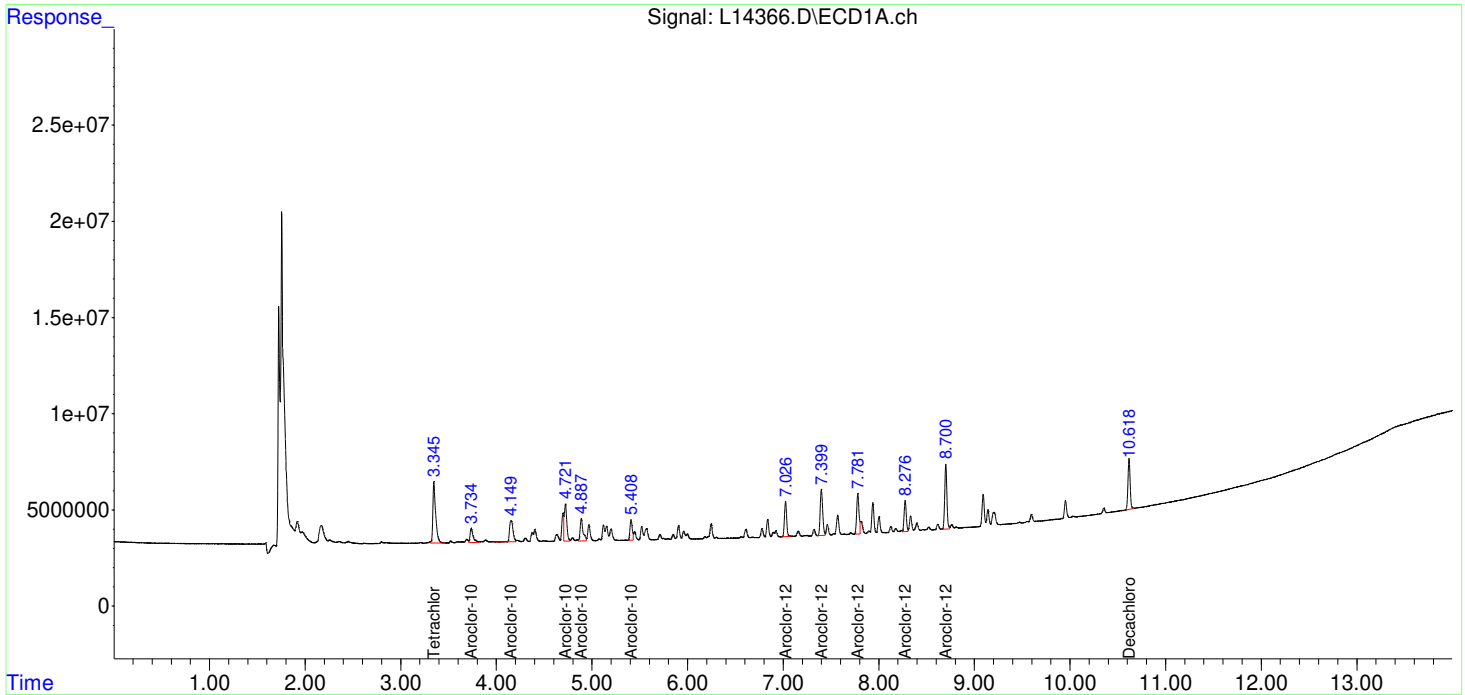
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.345f	4.008f	64410680	83319291	5.074	5.024
Spiked Amount	10.000 Range	60 - 120	Recovery =		50.74%#	50.24%#
2) SA Decachlor...	10.618f	12.292f	42152889	82605077	5.040m	5.466m
Spiked Amount	10.000 Range	60 - 120	Recovery =		50.40%#	54.66%#
Target Compounds						
3) L1 Aroclor-1...	3.735f	4.637f	15896515	18698588	59.007	52.912
4) L1 Aroclor-1...	4.150f	5.183f	27757602	40926399	51.569	52.786
5) L1 Aroclor-1...	4.722f	5.820	34622617	51617755	52.871	58.510
6) L1 Aroclor-1...	4.887f	6.003f	24061332	31275190	52.729	52.953
7) L1 Aroclor-1...	5.408f	6.652	17587940	25398881	50.967m	52.434
Sum Aroclor-1016			119.9E6	167.9E6	267.143	269.595
Average Aroclor-1016					53.429	53.919
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.425	28707878	41307378	51.454	52.431m
44) L9 Aroclor-1...	7.399	8.715	43730577	50365957	52.147	54.815
45) L9 Aroclor-1...	7.781	9.351	35303948	36766763	51.396m	55.762
46) L9 Aroclor-1...	8.276	9.770	25602339	37111230	54.278	53.371
47) L9 Aroclor-1...	8.701f	10.119	53527312	80564019	52.150	53.203
Sum Aroclor-1260			186.9E6	246.1E6	261.425	269.582
Average Aroclor-1260					52.285	53.916

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
Data File : L14366.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 2 May 2024 3:20 pm
Operator : AxJ
Sample : SEQ-CCV
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 06 10:09:13 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Apr 24 13:46:39 2024
Response via : Initial Calibration
Integrator: ChemStation

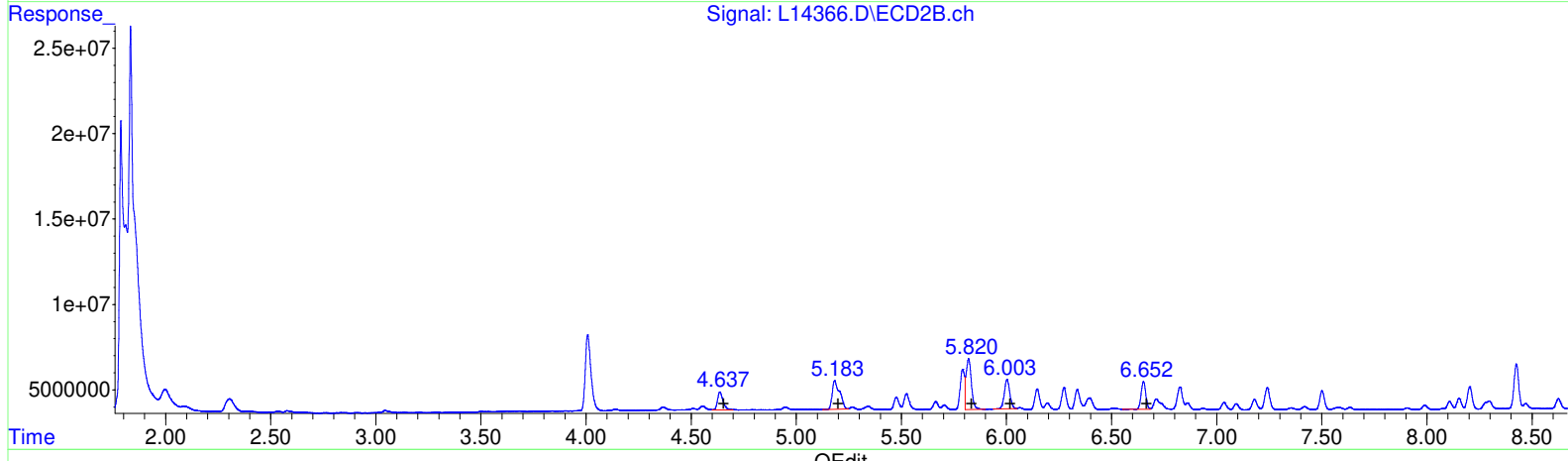
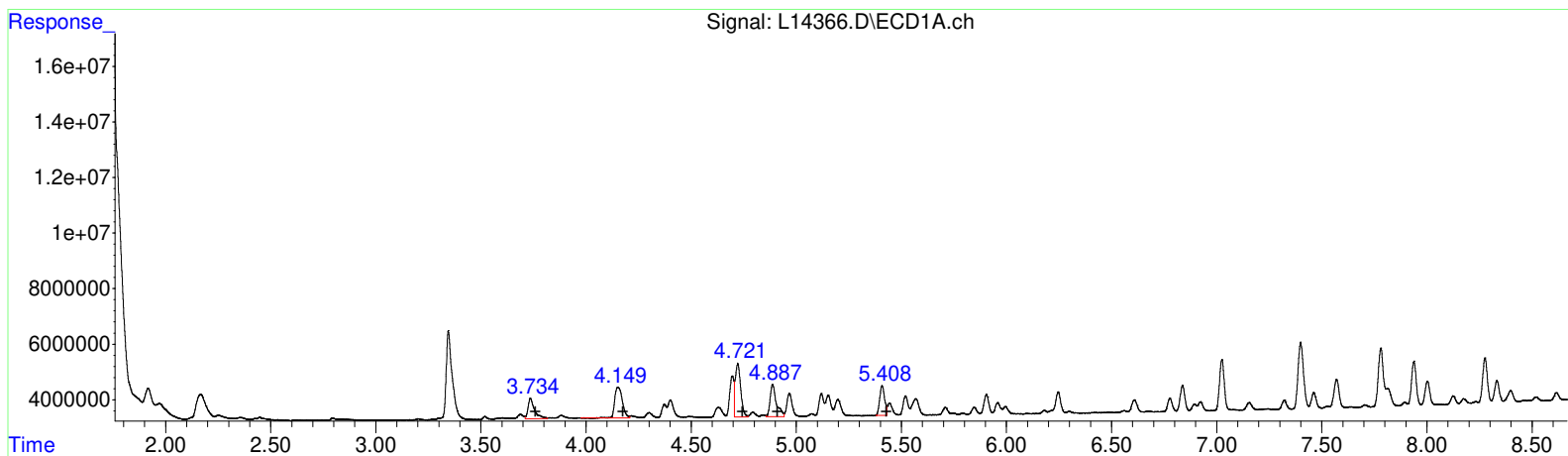
Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

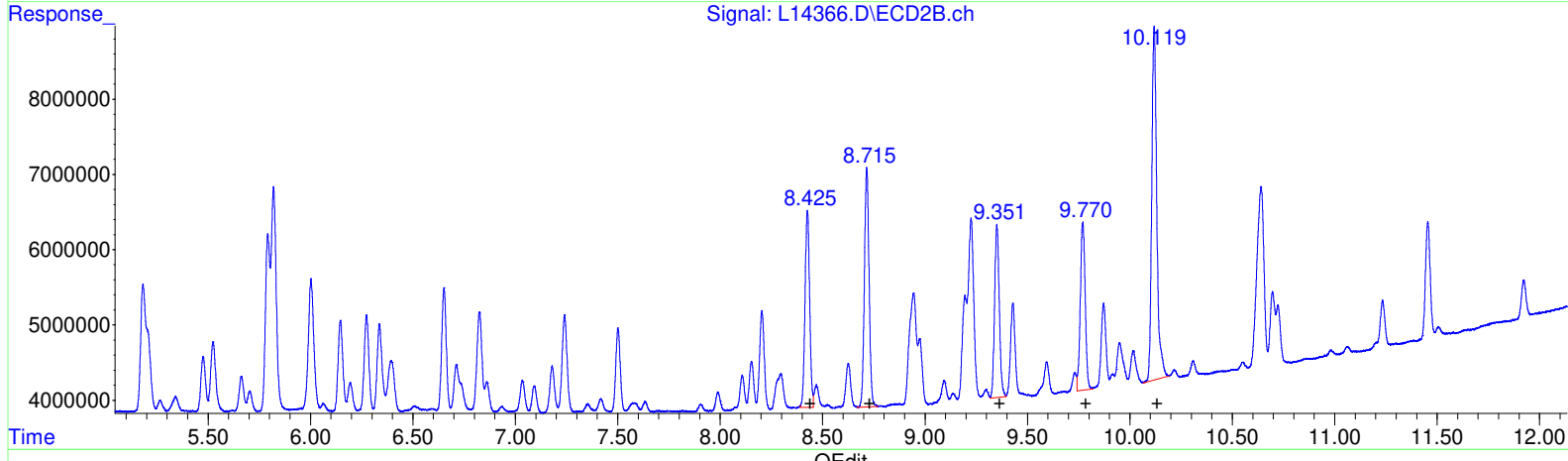
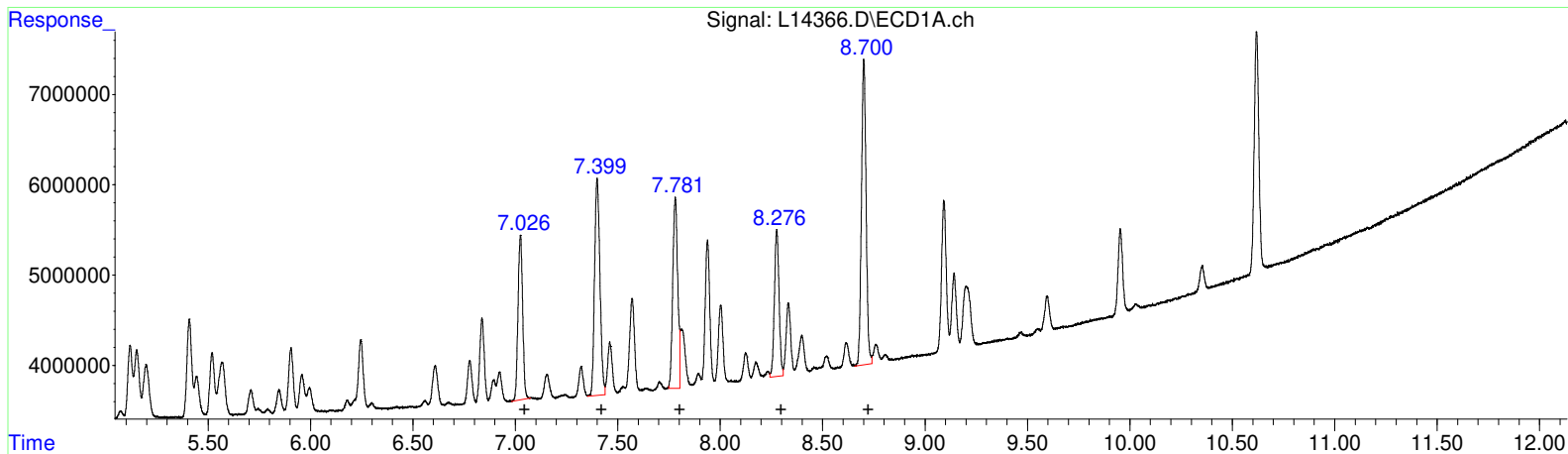


(3) Aroclor-1016{1} (L1)			
R.T.	Response	Conc	
3.73	15896515	59.01	
4.15	27757602	51.57	
4.72	34622617	52.87	
4.89	24061332	52.73	
5.41	17587940	50.97	
(3) Aroclor-1016{1} #2 (L1)			
R.T.	Response	Conc	
4.64	18698588	52.91	
5.18	40926399	52.79	
5.82	51617755	58.51	
6.00	31275190	52.95	
6.65	25398881	52.43	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14366.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 3:20 pm
 Operator : AxJ
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:13 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)		
R.T.	Response	Conc
7.03	28707878	51.45
7.40	43730577	52.15
7.78	35303948	51.40
8.28	25602339	54.28
8.70	53527312	52.15
(43) Aroclor-1260{1} #2 (L9)		
R.T.	Response	Conc
8.43	41307378	52.43
8.72	50365957	54.82
9.35	36766763	55.76
9.77	37111230	53.37
10.12	80564019	53.20

(+) = Expected Retention Time

7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory:	EMSL-CIN-01	Work Order:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Instrument ID:	GCECD-L	Calibration:	AA40009
Lab File ID:	L14377.D	Calibration Date:	01/16/24 00:00
Sequence:	SCE0475	Injection Date:	05/02/24
Lab Sample ID:	SCE0475-CCV2	Injection Time:	19:41

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	51.8	452782.9	466667.4	3.6	20
Aroclor-1260	A	50.00	52.0	716308	741697.6	3.9	20
Tetrachloro-m-xylene	A	5.000	4.97	1.269474E+07	1.262479E+07	-0.6	20
Decachlorobiphenyl	A	5.000	4.92	8363450	8235140	-1.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

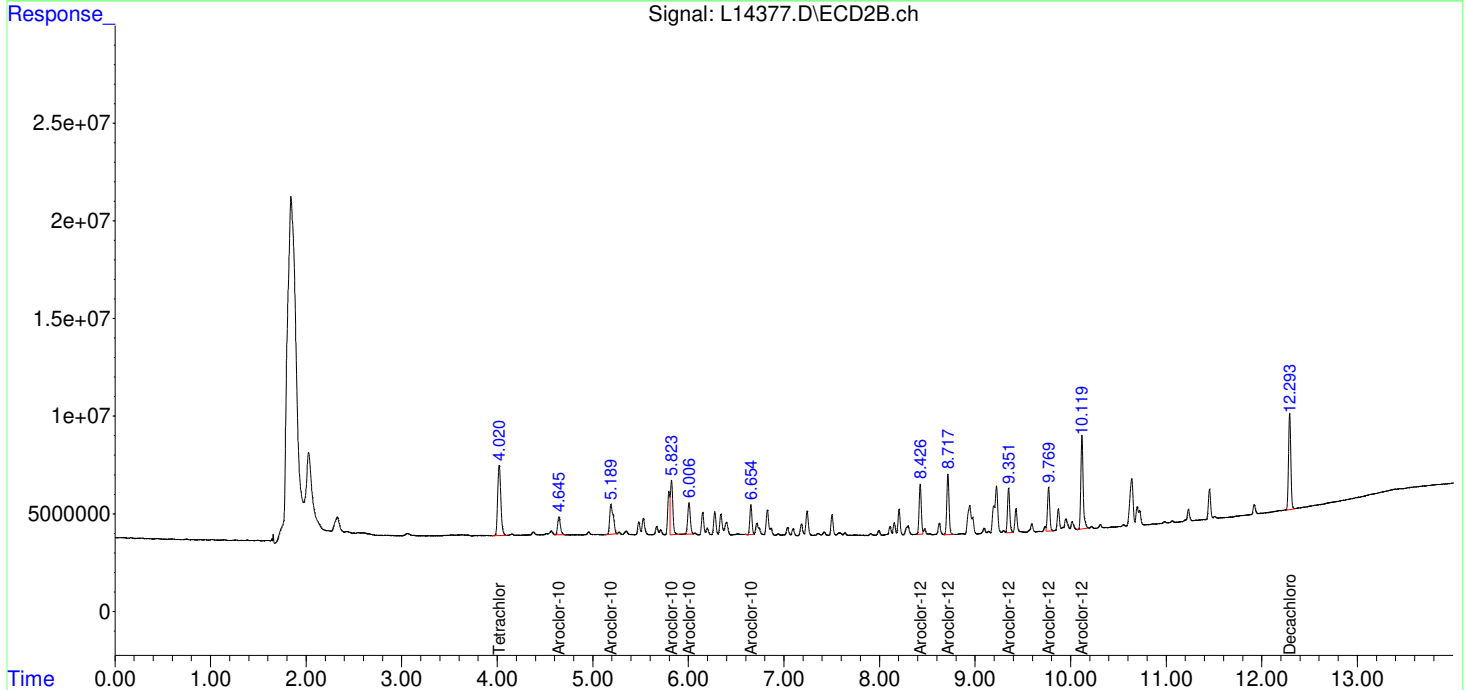
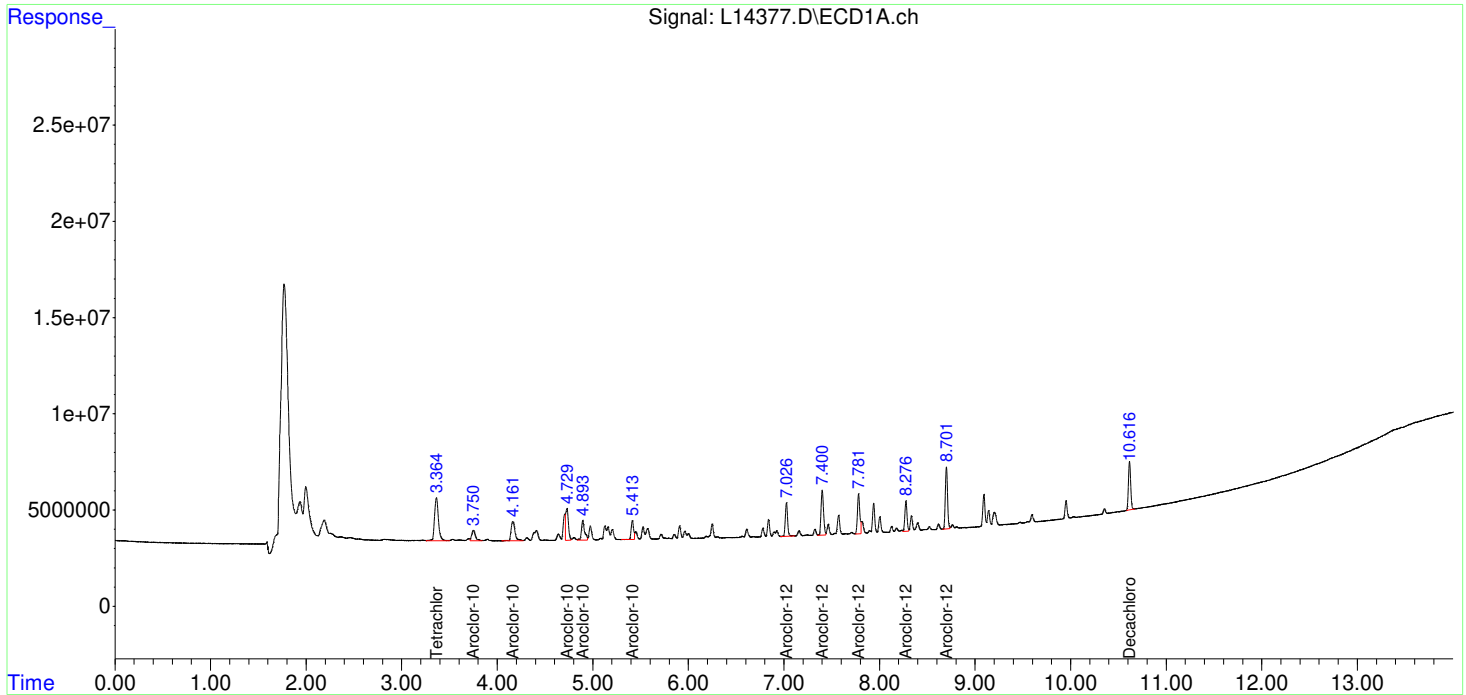
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.363	4.020	63123948	82508139	4.972	4.975
Spiked Amount	10.000 Range	60 - 120	Recovery =		49.72%#	49.75%#
2) SA Decachlor...	10.616f	12.293f	41175700	81513494	4.923m	5.393m
Spiked Amount	10.000 Range	60 - 120	Recovery =		49.23%#	53.93%#
Target Compounds						
3) L1 Aroclor-1...	3.749	4.645	14599265	18565097	54.191	52.534
4) L1 Aroclor-1...	4.162	5.189	27941792	39310158	51.912	50.701
5) L1 Aroclor-1...	4.729	5.824	33072454	49401375	50.504m	55.997
6) L1 Aroclor-1...	4.894f	6.006	23560889	30329977	51.632	51.353
7) L1 Aroclor-1...	5.414f	6.654	17492432	23675623	50.690	48.877
Sum Aroclor-1016			116.7E6	161.3E6	258.929	259.462
Average Aroclor-1016					51.786	51.892
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.027	8.426	28880278	40336838	51.763	51.199m
44) L9 Aroclor-1...	7.401	8.716	42811212	50586973	51.050	55.056
45) L9 Aroclor-1...	7.781	9.351	36014306	36628737	52.430m	55.553
46) L9 Aroclor-1...	8.277	9.770	25176249	36514066	53.375	52.512
47) L9 Aroclor-1...	8.701f	10.119	52542339	80142071	51.190	52.925
Sum Aroclor-1260			185.4E6	244.2E6	259.809	267.244
Average Aroclor-1260					51.962	53.449

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

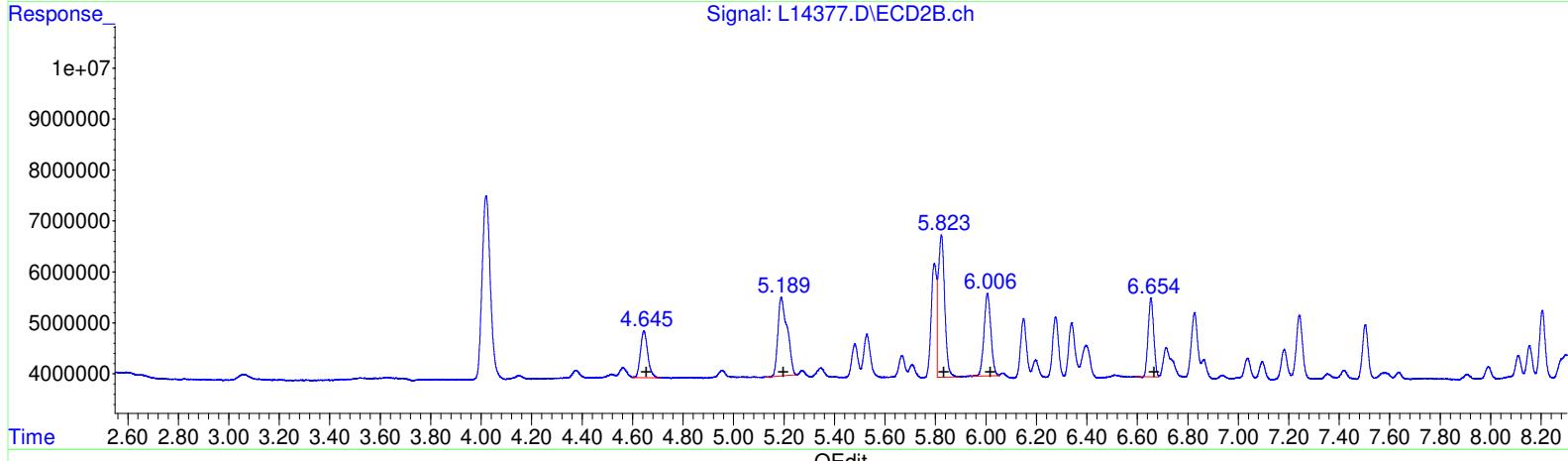
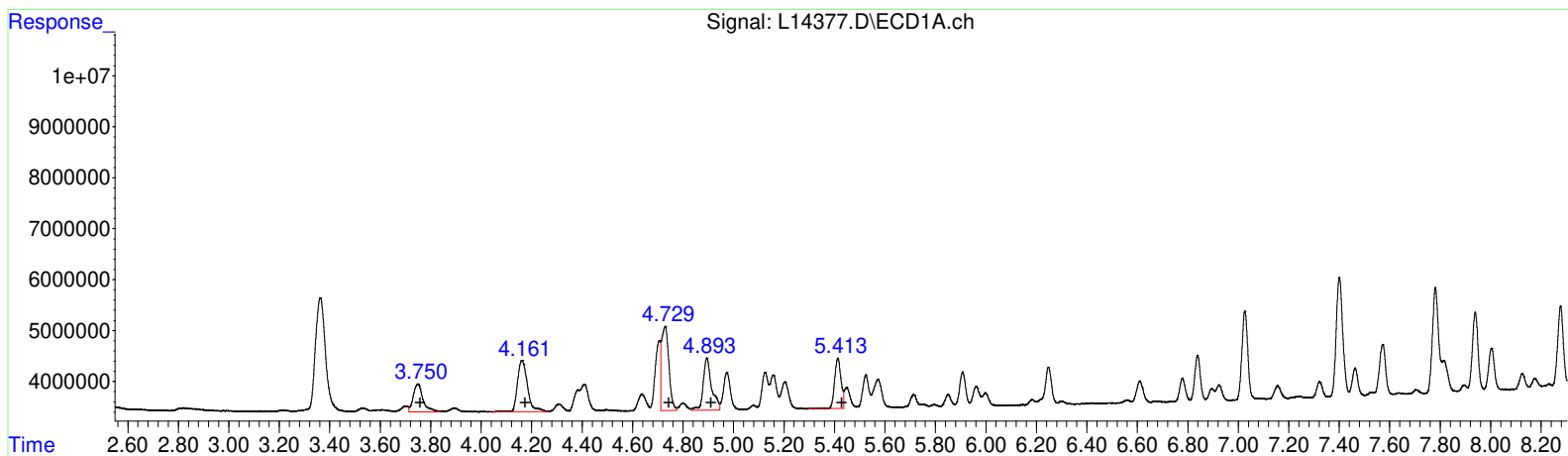
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



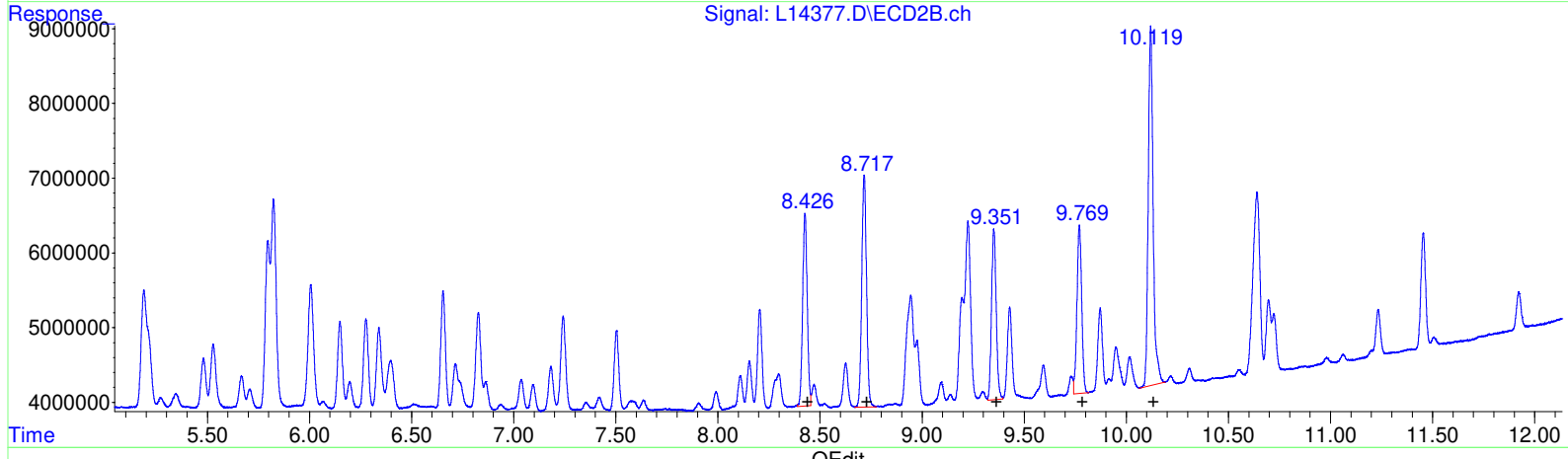
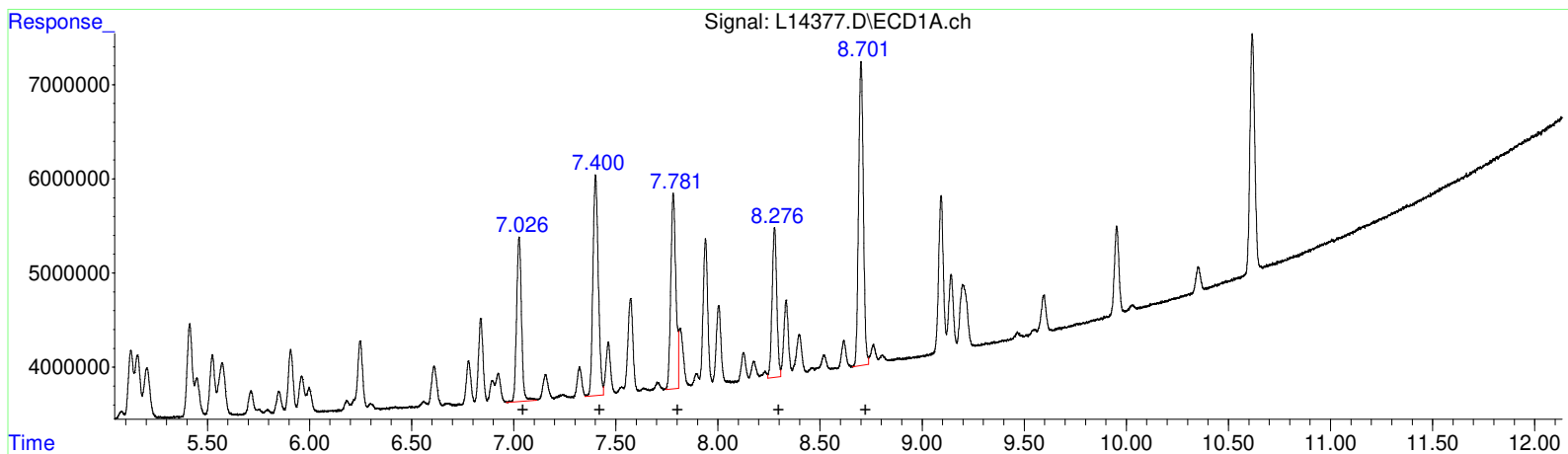
(3) Aroclor-1016{1} (L1)		
R.T.	Response	Conc
3.75	14599265	54.19
4.16	27941792	51.91
4.73	33072454	50.50
4.89	23560889	51.63
5.41	17492432	50.69
(3) Aroclor-1016{1} #2 (L1)		
R.T.	Response	Conc
4.65	18565097	52.53
5.19	39310158	50.70
5.82	49401375	56.00
6.01	30329977	51.35
6.65	23675623	48.88

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14377.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 7:41 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:10:35 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)

R.T.	Response	Conc
7.03	28880278	51.76
7.40	42811212	51.05
7.78	36014306	52.43
8.28	25176249	53.37
8.70	52542339	51.19

(43) Aroclor-1260{1} #2 (L9)

R.T.	Response	Conc
8.43	40336838	51.20
8.72	50586973	55.06
9.35	36628737	55.55
9.77	36514066	52.51
10.12	80142071	52.92

7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory:	EMSL-CIN-01	Work Order:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Instrument ID:	GCECD-L	Calibration:	AA40009
Lab File ID:	L14388.D	Calibration Date:	01/16/24 00:00
Sequence:	SCE0475	Injection Date:	05/02/24
Lab Sample ID:	SCE0475-CCV3	Injection Time:	22:38

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	50.0	452782.9	455670.6	0.05	20
Aroclor-1260	A	50.00	48.6	716308	692917.2	-2.9	20
Tetrachloro-m-xylene	A	5.000	4.83	1.269474E+07	1.227057E+07	-3.4	20
Decachlorobiphenyl	A	5.000	4.57	8363450	7646686	-8.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14388.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:38 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:11:56 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

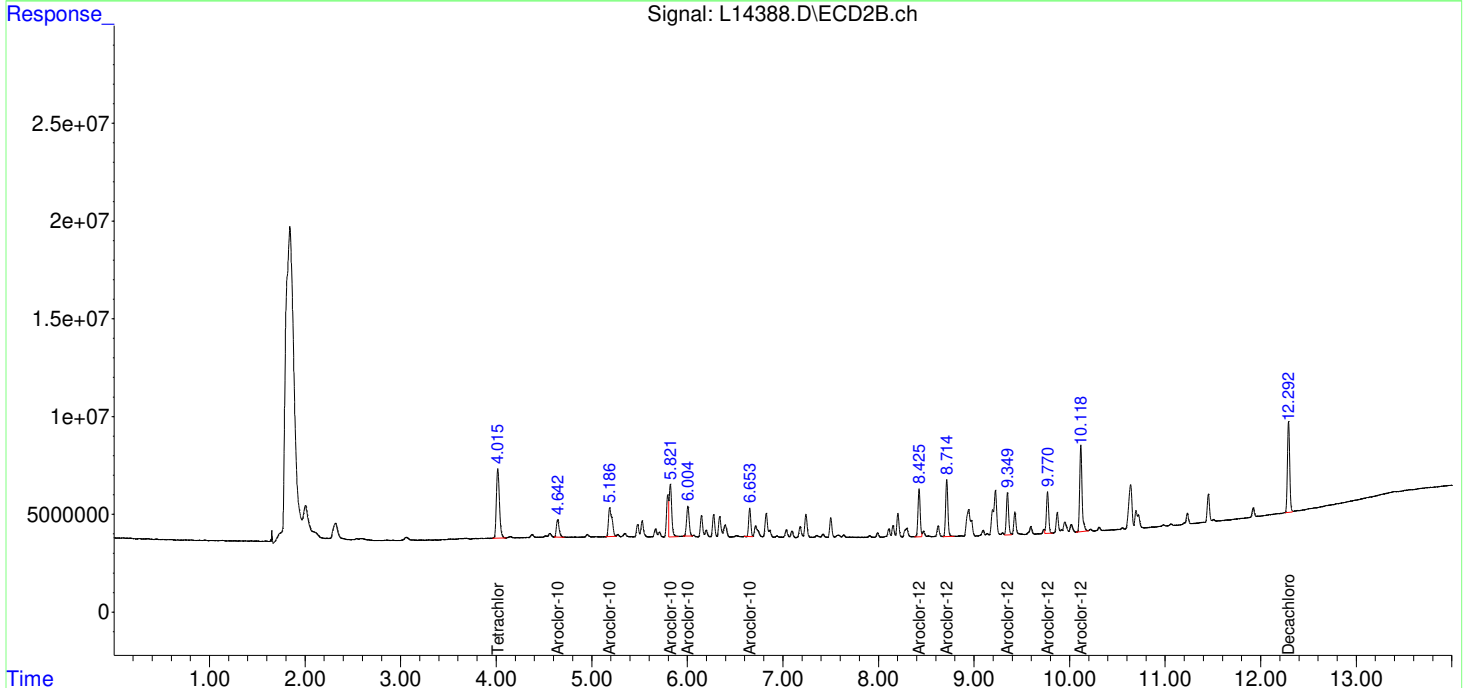
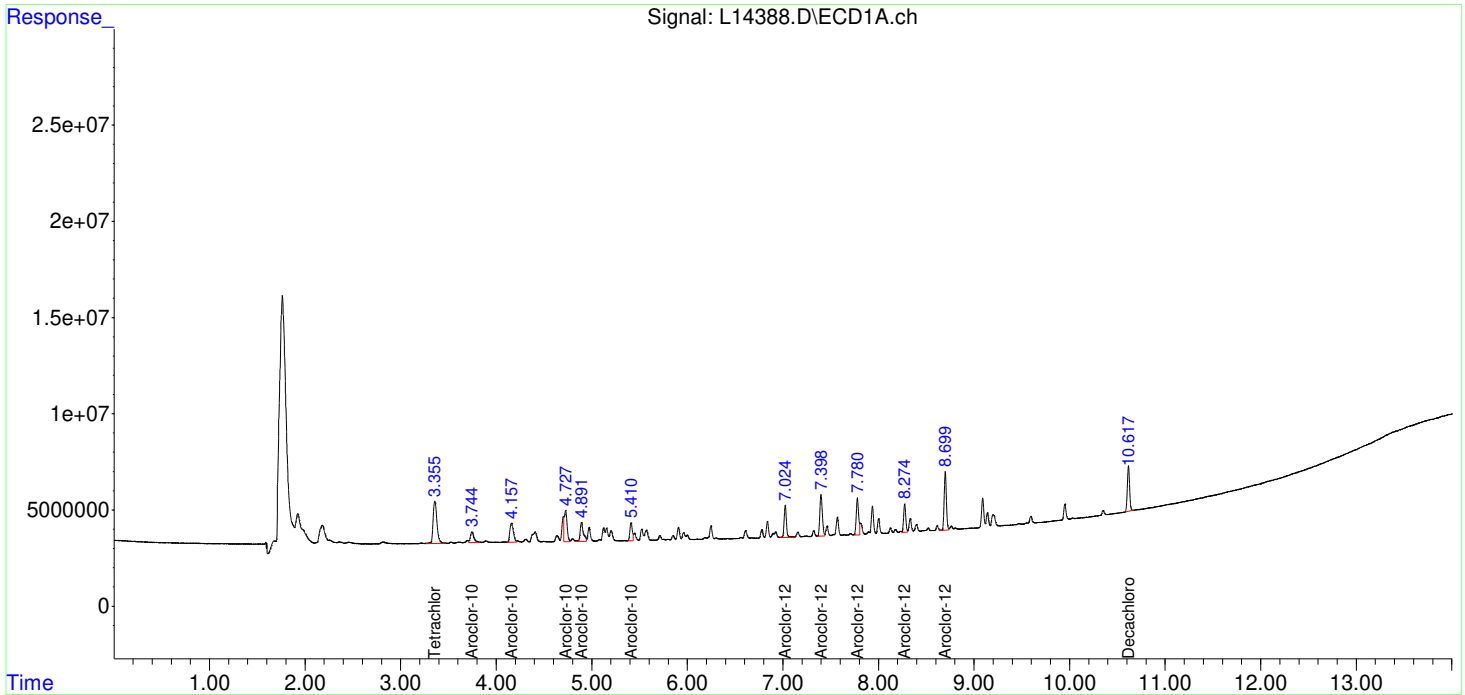
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.356	4.016	61352871	79140391	4.833	4.772
Spiked Amount	10.000 Range	60 - 120	Recovery	=	48.33%#	47.72%#
2) SA Decachlor...	10.617f	12.292f	38233427	76688476	4.571m	5.074m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	45.71%#	50.74%#
Target Compounds						
3) L1 Aroclor-1...	3.745	4.642	13585275	17588531	50.427	49.771
4) L1 Aroclor-1...	4.158f	5.187	25953703	38052821	48.218	49.079
5) L1 Aroclor-1...	4.726f	5.822	34932081	49241370	53.344m	55.816
6) L1 Aroclor-1...	4.892f	6.005	22907282	28710100	50.200	48.610
7) L1 Aroclor-1...	5.410f	6.653	16539320	22755385	47.928m	46.977
Sum Aroclor-1016			113.9E6	156.3E6	250.117	250.254
Average Aroclor-1016					50.023	50.051
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.425	27455564	39274381	49.210	49.850m
44) L9 Aroclor-1...	7.399	8.715	39934559	47175346	47.620	51.343
45) L9 Aroclor-1...	7.780	9.350	33713798	34595522	49.081m	52.469
46) L9 Aroclor-1...	8.275	9.770	23254220	34123596	49.300	49.074
47) L9 Aroclor-1...	8.700f	10.118f	48871156	75584222	47.613	49.915
Sum Aroclor-1260			173.2E6	230.8E6	242.824	252.651
Average Aroclor-1260					48.565	50.530

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14388.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 10:38 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:11:56 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



7 - FORM VII
CONTINUING CALIBRATION VERIFICATION
EPA TO-10A

Laboratory: EMSL-CIN-01	Work Order: AC15369
Client: Geosyntec Consultants of NC [GSCH75]	Project: NCSUPH
Instrument ID: GCECD-L	Calibration: AA40009
Lab File ID: L14393.D	Calibration Date: 01/16/24 00:00
Sequence: SCE0475	Injection Date: 05/02/24
Lab Sample ID: SCE0475-CCV4	Injection Time: 23:59

COMPOUND	TYPE	CONC. (µg/L)		RESPONSE FACTOR		% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV
Aroclor-1016	A	50.00	52.5	452782.9	467197.4	5.1	20
Aroclor-1260	A	50.00	52.0	716308	742328.2	4.0	20
Tetrachloro-m-xylene	A	5.000	5.13	1.269474E+07	1.302373E+07	2.6	20
Decachlorobiphenyl	A	5.000	5.00	8363450	8356972	0.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14393.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:59 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:12:31 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

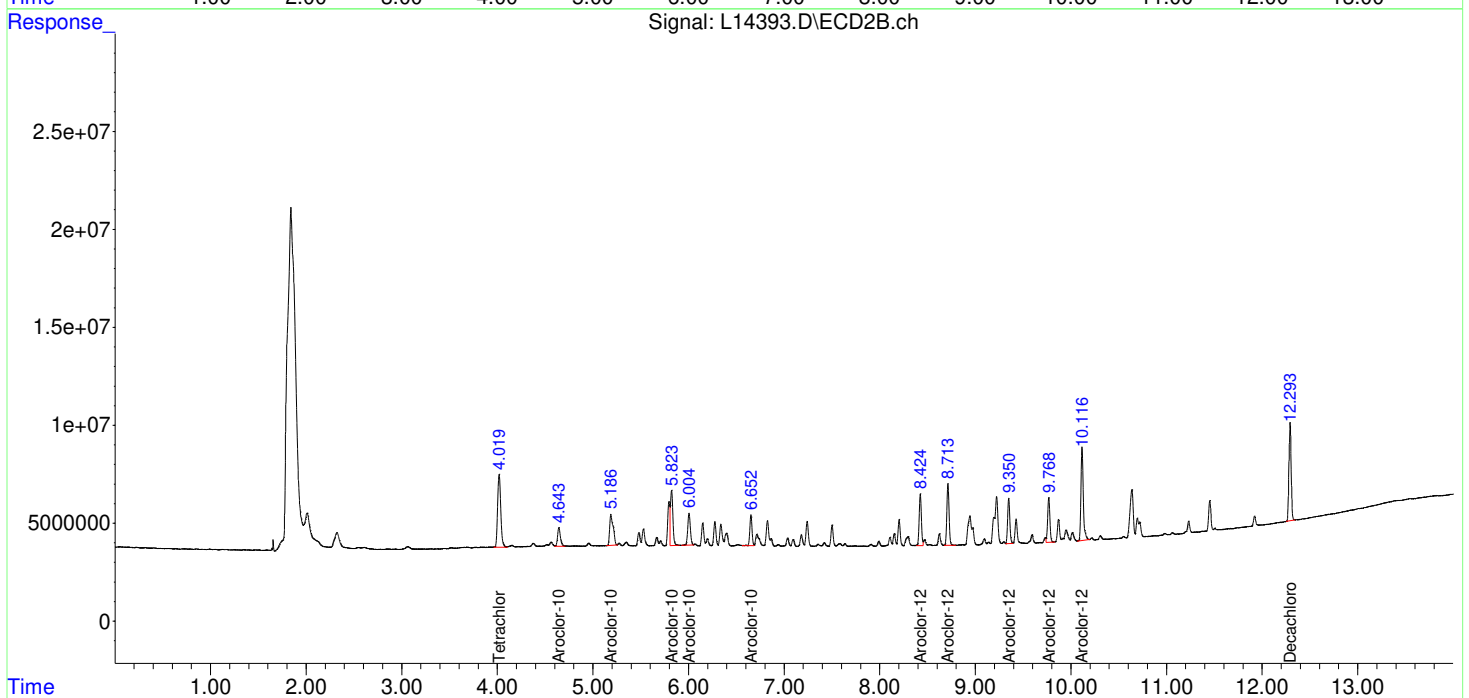
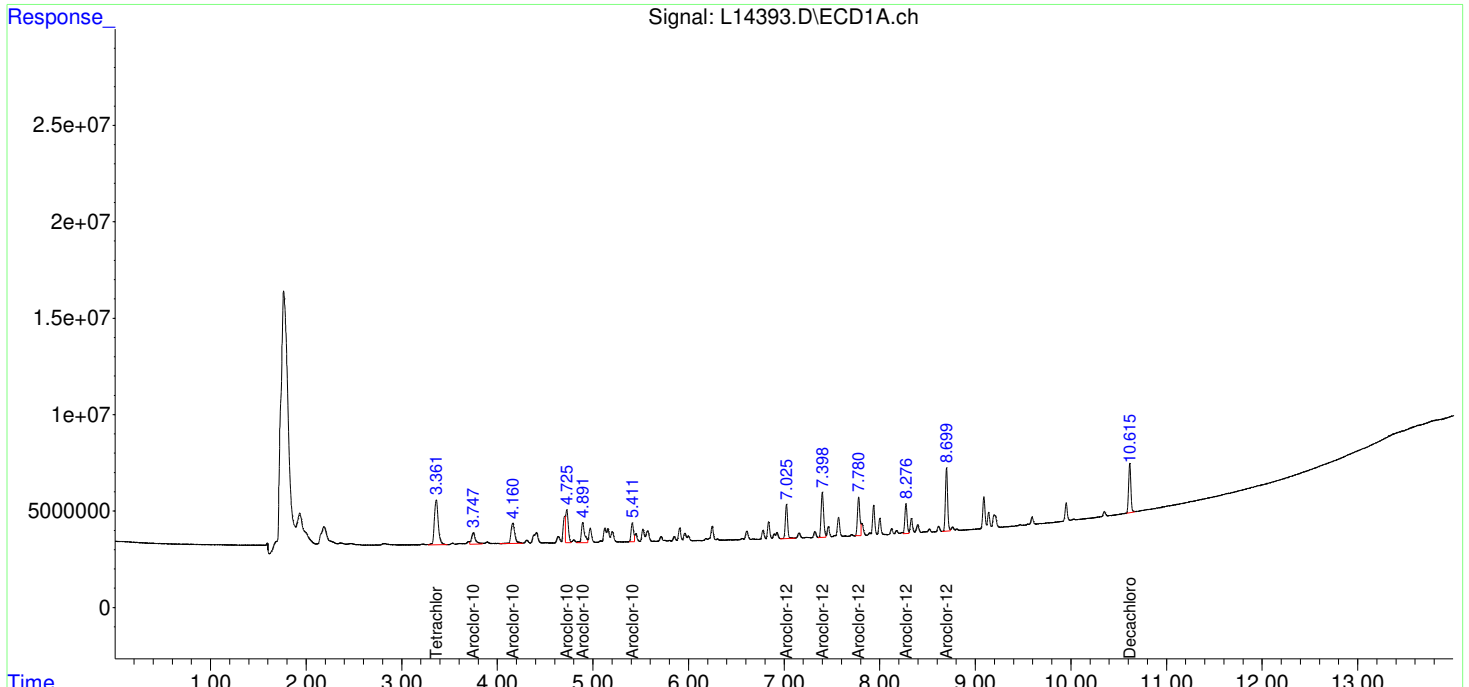
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.361	4.018	65118650	84539073	5.130	5.098
Spiked Amount	10.000 Range	60 - 120	Recovery	=	51.30%#	50.98%#
2) SA Decachlor...	10.615f	12.293f	41784860	82111285	4.996m	5.433m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	49.96%#	54.33%#
Target Compounds						
3) L1 Aroclor-1...	3.747	4.644	16267292	19017760	60.383	53.815
4) L1 Aroclor-1...	4.160f	5.187	28196393	40375742	52.385	52.075
5) L1 Aroclor-1...	4.725f	5.823	31048519	50858697	47.413m	57.649
6) L1 Aroclor-1...	4.893f	6.005	24287037	31067537	53.224	52.602
7) L1 Aroclor-1...	5.411f	6.653	17000092	24618472	49.264m	50.823
Sum Aroclor-1016			116.8E6	165.9E6	262.668	266.965
Average Aroclor-1016					52.534	53.393
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.424	29371168	42291446	52.643	53.680m
44) L9 Aroclor-1...	7.399	8.714	43034791	51039813	51.317	55.549
45) L9 Aroclor-1...	7.780	9.350	35020751	37069474	50.984m	56.221
46) L9 Aroclor-1...	8.275	9.769	25318157	37103085	53.675	53.359
47) L9 Aroclor-1...	8.700f	10.117f	52837175	81659194	51.477	53.927
Sum Aroclor-1260			185.6E6	249.2E6	260.097	272.735
Average Aroclor-1260					52.019	54.547

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14393.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 11:59 pm
 Operator : AxJ/KC
 Sample : SEQ-CCV
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:12:31 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



QC DATA

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-13-106-042424

EPA TO-10A

Lab Sample ID: AC15369-01 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.0766	
	2	8.425	0.000	0.000	0.0785	1.9

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

DUP-01-106-042424

EPA TO-10A

Lab Sample ID: AC15369-02 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.0905	
	2	8.426	0.000	0.000	0.0942	3.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-15-117-042424

EPA TO-10A

Lab Sample ID: AC15369-03

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.104	
	2	8.426	0.000	0.000	0.108	7.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-11-209-042424

EPA TO-10A

Lab Sample ID: AC15369-04

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.125	
	2	8.425	0.000	0.000	0.131	0.8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-12-228-042424

EPA TO-10A

Lab Sample ID: AC15369-05

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.117	
	2	8.425	0.000	0.000	0.122	1.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-01-216-042424

EPA TO-10A

Lab Sample ID: AC15369-06

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.133	
	2	8.426	0.000	0.000	0.140	7.4

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-02-317F-042424

EPA TO-10A

Lab Sample ID: AC15369-07

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.024	0.000	0.000	0.109	
	2	8.425	0.000	0.000	0.112	1.8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

A-09-402G-042424

EPA TO-10A

Lab Sample ID: AC15369-08

Date(s) Analyzed: 05/02/2024 05/02/2024

Instrument ID (1): GCECD-L

Instrument ID (2): GCECD-L

GC Column (1): RTX-CLP1 ID: .32 mm (mm)

GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.025	0.000	0.000	0.155	
	2	8.425	0.000	0.000	0.161	0.6

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

DUP-02-402G-042424

EPA TO-10A

Lab Sample ID: AC15369-09 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1262	1	7.026	0.000	0.000	0.145	
	2	8.426	0.000	0.000	0.151	0.7

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

EPA TO-10A

LCS

Lab Sample ID: BCD2253-BS1 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	3.750	0.000	0.000	941	
Aroclor-1260	1	7.027	0.000	0.000	955	

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES**

EPA TO-10A

LCS Dup

Lab Sample ID: BCD2253-BSD1 Date(s) Analyzed: 05/02/2024 05/02/2024
 Instrument ID (1): GCECD-L Instrument ID (2): GCECD-L
 GC Column (1): RTX-CLP1 ID: .32 mm (mm) GC Column (2): RTX-CLP 2 ID: .32 mm (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	3.742	0.000	0.000	856	
Aroclor-1260	1	7.025	0.000	0.000	872	

1 - FORM I ANALYSIS DATA SHEET

Blank

Laboratory:	EMSL-CIN-01	Work Order:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Laboratory ID:	BCD2253-BLK1
		File ID:	L14367.D
Sampled:		Prepared:	04/30/24 15:23
		Analyzed:	05/02/24 16:42
Solids:		Preparation:	EPA TO-10A
		Dilution:	
Batch:	BCD2253	Sequence:	SCE0475
		Calibration:	AA40009
		Instrument:	GCECD-L
Column:	1		

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016		36.2	50.0	
11104-28-2	Aroclor-1221		36.2	50.0	
11141-16-5	Aroclor-1232		36.2	50.0	
53469-21-9	Aroclor-1242		36.2	50.0	
12672-29-6	Aroclor-1248		9.53	50.0	
11097-69-1	Aroclor-1254		9.53	50.0	
11096-82-5	Aroclor-1260		9.53	50.0	
37324-23-5	Aroclor-1262		9.53	50.0	
11100-14-4	Aroclor-1268		9.53	50.0	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14367.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 4:42 pm
 Operator : AxJ/KC
 Sample : BCD2253-BLK1
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:20 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

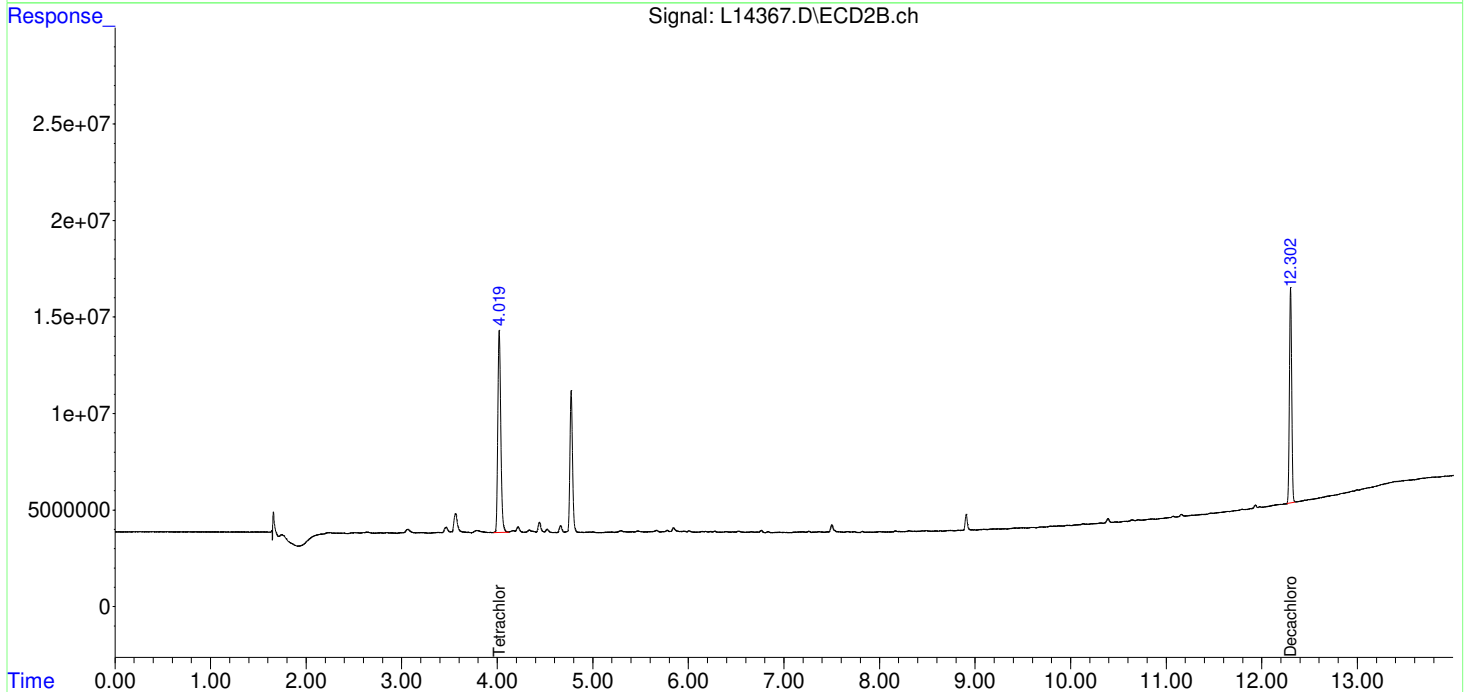
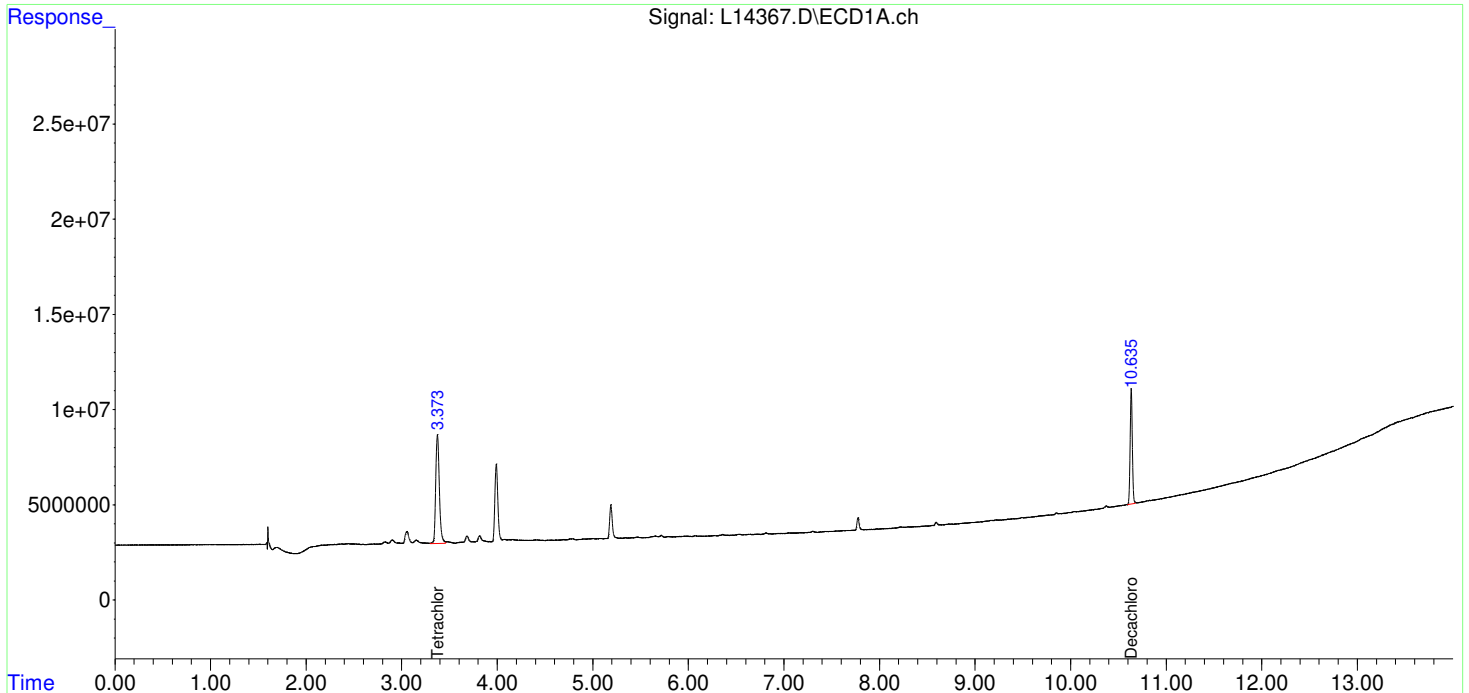
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.373	4.020	151.7E6	225.2E6	11.952	13.582
Spiked Amount	10.000 Range	60 - 120	Recovery	=	119.52%	135.82%#
2) SA Decachlor...	10.635	12.302	95610953	183.0E6	11.432m	12.109m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	114.32%	121.09%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
Data File : L14367.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 2 May 2024 4:42 pm
Operator : AxJ/KC
Sample : BCD2253-BLK1
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 06 10:09:20 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Apr 24 13:46:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14368.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:16 pm
 Operator : AxJ/KC
 Sample : BCD2253-BLK2
 Misc :
 ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:27 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

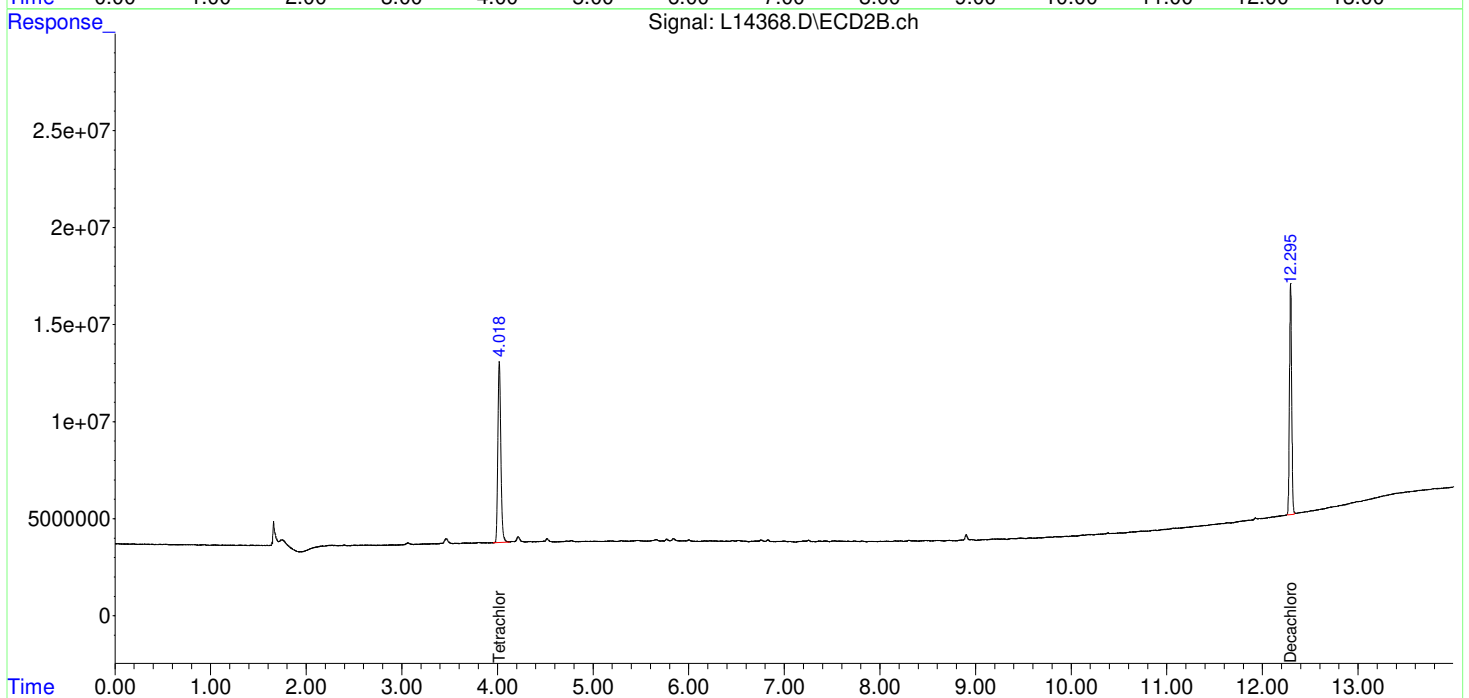
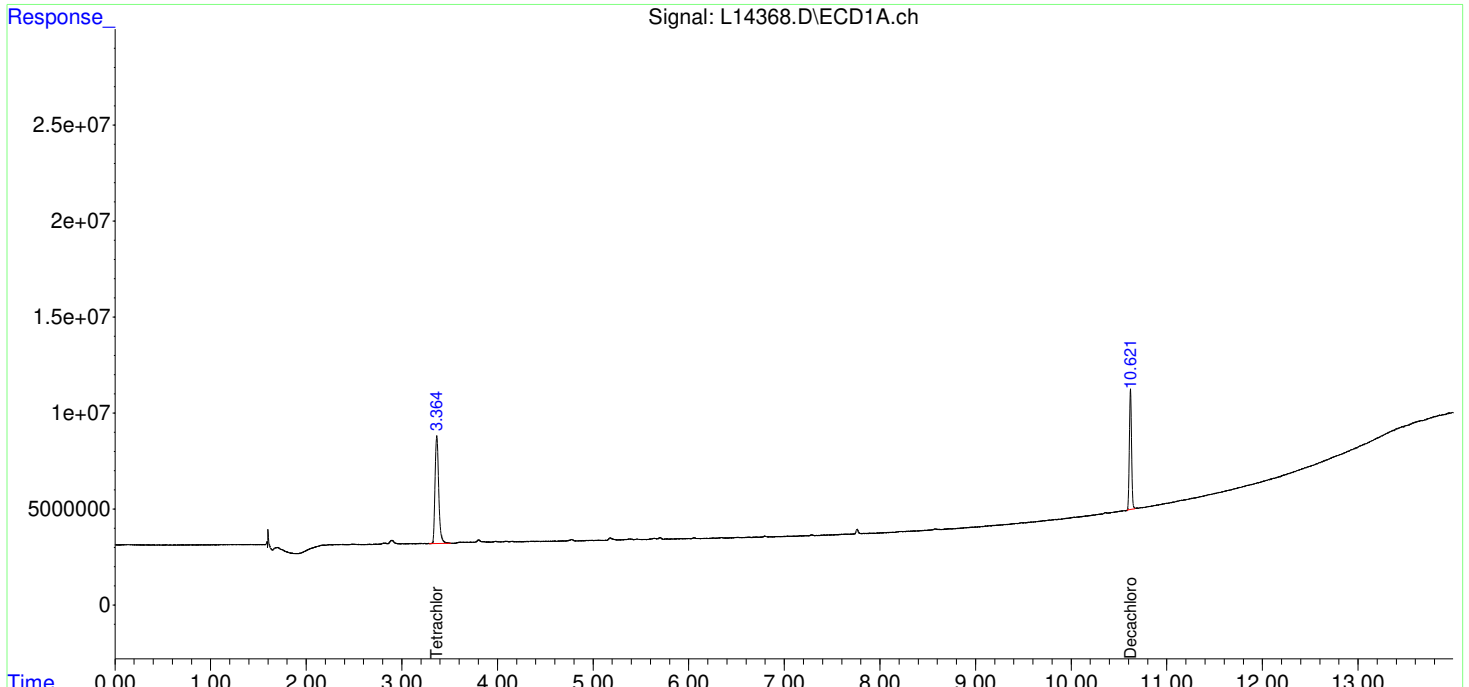
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.365	4.018	149.2E6	201.7E6	11.755	12.164
Spiked Amount	10.000 Range	60 - 120	Recovery	=	117.55%	121.64%#
2) SA Decachlor...	10.621f	12.295	98963032	191.9E6	11.833m	12.699m
Spiked Amount	10.000 Range	60 - 120	Recovery	=	118.33%	126.99%#
Target Compounds						
Sum Aroclor-1016			0	0	N.D.	N.D.
Average Aroclor-1016					0.000	0.000
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
Sum Aroclor-1260			0	0	N.D.	N.D.
Average Aroclor-1260					0.000	0.000

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
Data File : L14368.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 2 May 2024 5:16 pm
Operator : AxJ/KC
Sample : BCD2253-BLK2
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: May 06 10:09:27 2024
Quant Method : T:\METHODS\ECD-L\PCB240116L.M
Quant Title : 8082a PCB
QLast Update : Wed Apr 24 13:46:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1.0
Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
Signal #1 Info : 0.25 Signal #2 Info : 0.25



1 - FORM I ANALYSIS DATA SHEET

LCS

Laboratory:	EMSL-CIN-01	Work Order:	AC15369
Client:	Geosyntec Consultants of NC [GSCH75]	Project:	NCSUPH
Matrix:	Tubes	Laboratory ID:	BCD2253-BS1
		File ID:	L14369.D
Sampled:		Prepared:	04/30/24 15:23
		Analyzed:	05/02/24 17:32
Solids:		Preparation:	EPA TO-10A
		Dilution:	
Batch:	BCD2253	Sequence:	SCE0475
		Calibration:	AA40009
		Instrument:	GCECD-L
Column:	1		

CAS NO.	COMPOUND	CONC. ($\mu\text{g}/\text{m}^3$)	MDL	RL	Q
12674-11-2	Aroclor-1016	941	36.2	50.0	
11096-82-5	Aroclor-1260	955	9.53	50.0	

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

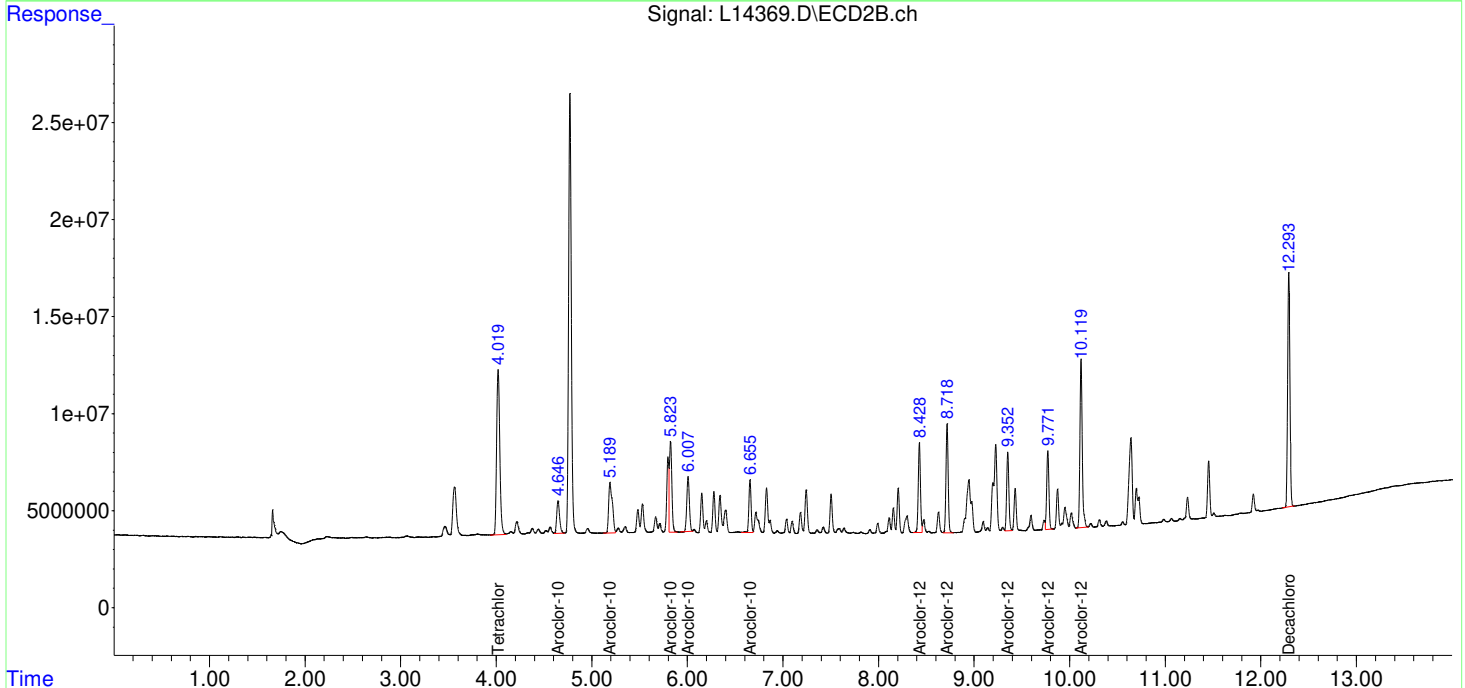
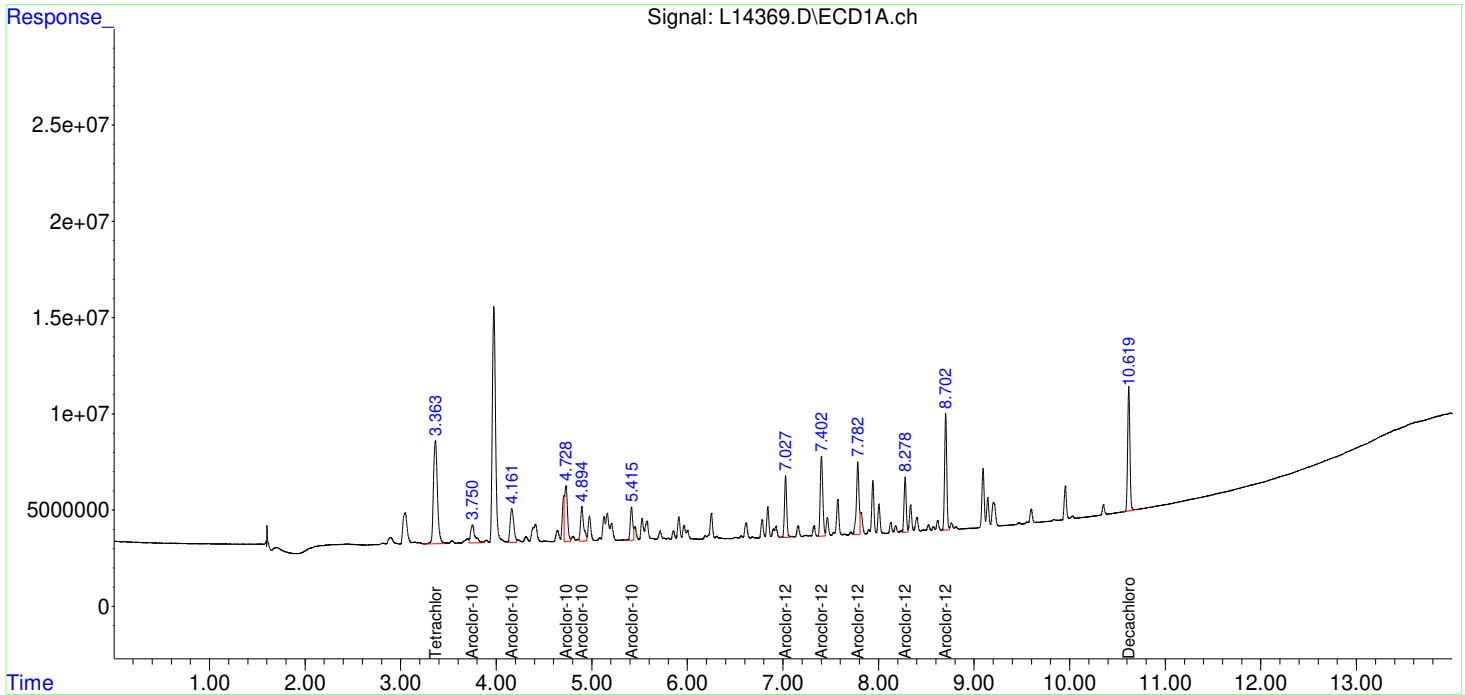
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
1) SA Tetrachlo...	3.363	4.019	154.8E6	197.7E6	12.195	11.923
Spiked Amount	10.000 Range	60 - 120	Recovery	=	121.95%#	119.23%
2) SA Decachlor...	10.619f	12.294f	105.4E6	200.8E6	12.606	13.284
Spiked Amount	10.000 Range	60 - 120	Recovery	=	126.06%#	132.84%#
Target Compounds						
3) L1 Aroclor-1...	3.750	4.646	29726475	35069466	110.342	99.237
4) L1 Aroclor-1...	4.161	5.189	46664119	69405359	86.695m	89.517
5) L1 Aroclor-1...	4.728f	5.824	62600795	82184210	95.596m	93.157
6) L1 Aroclor-1...	4.894f	6.007	40296046	53744693	88.306m	90.998
7) L1 Aroclor-1...	5.415f	6.655	30914400	44181971	89.585	91.211
Sum Aroclor-1016			210.2E6	284.6E6	470.524	464.120
Average Aroclor-1016					94.105	92.824
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.027	8.428	50858648	73788988	91.156	93.659
44) L9 Aroclor-1...	7.402	8.718	76660054	89916992	91.414	97.860
45) L9 Aroclor-1...	7.782	9.353	72251941	66021324	105.186m	100.130
46) L9 Aroclor-1...	8.279	9.772	45393871	65615320	96.237	94.364
47) L9 Aroclor-1...	8.703f	10.119	95781624	146.7E6	93.317	96.901
Sum Aroclor-1260			340.9E6	442.1E6	477.309	482.914
Average Aroclor-1260					95.462	96.583

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

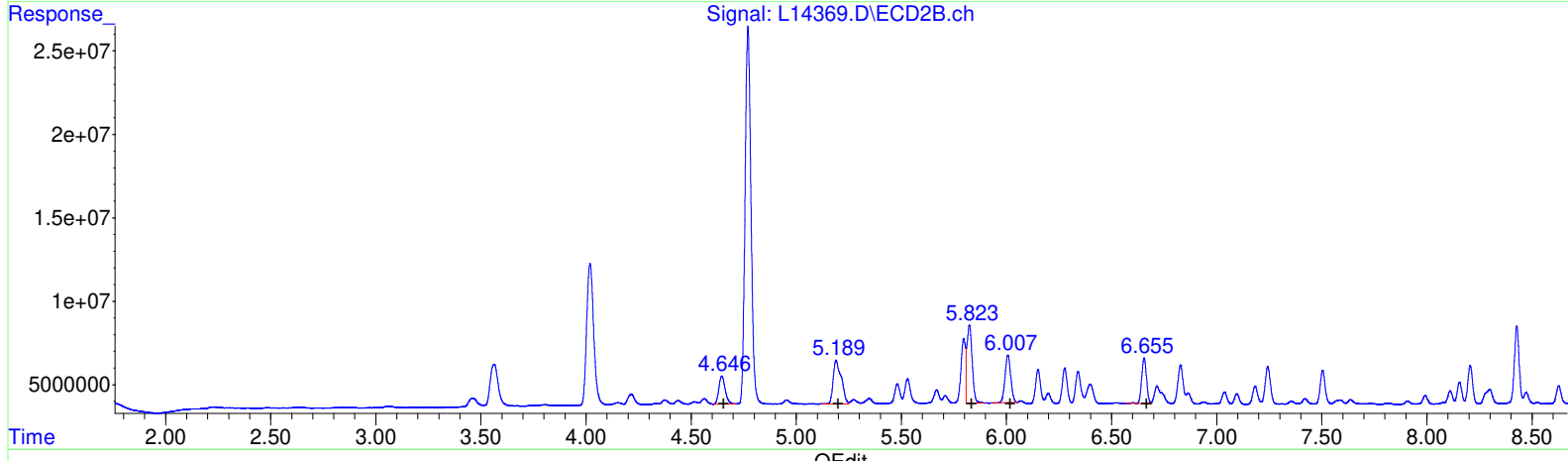
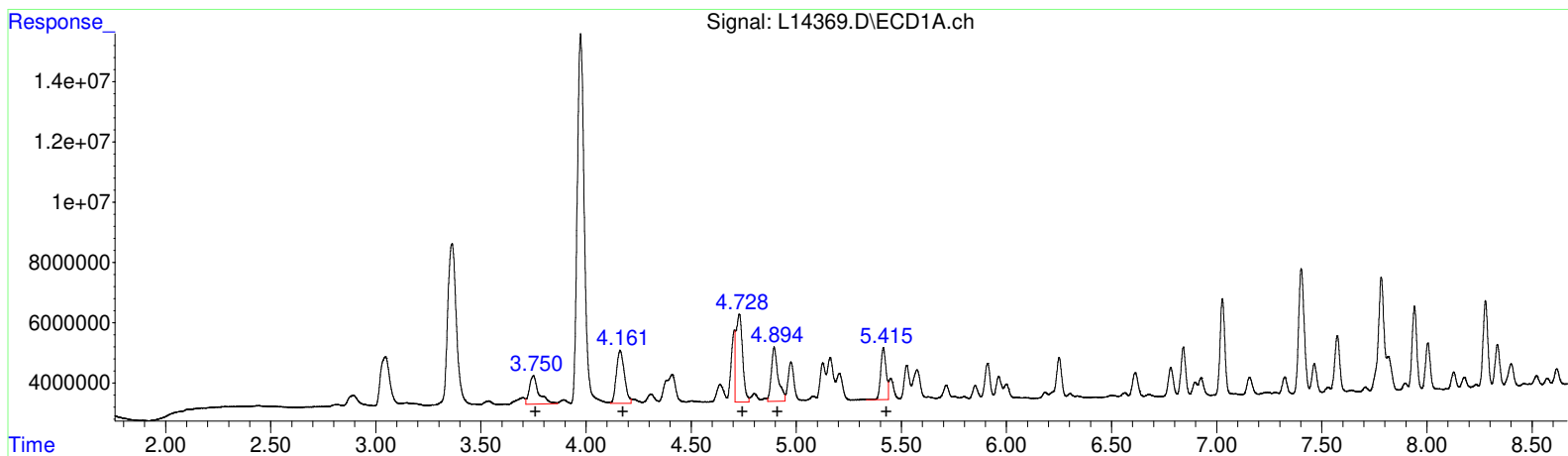
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



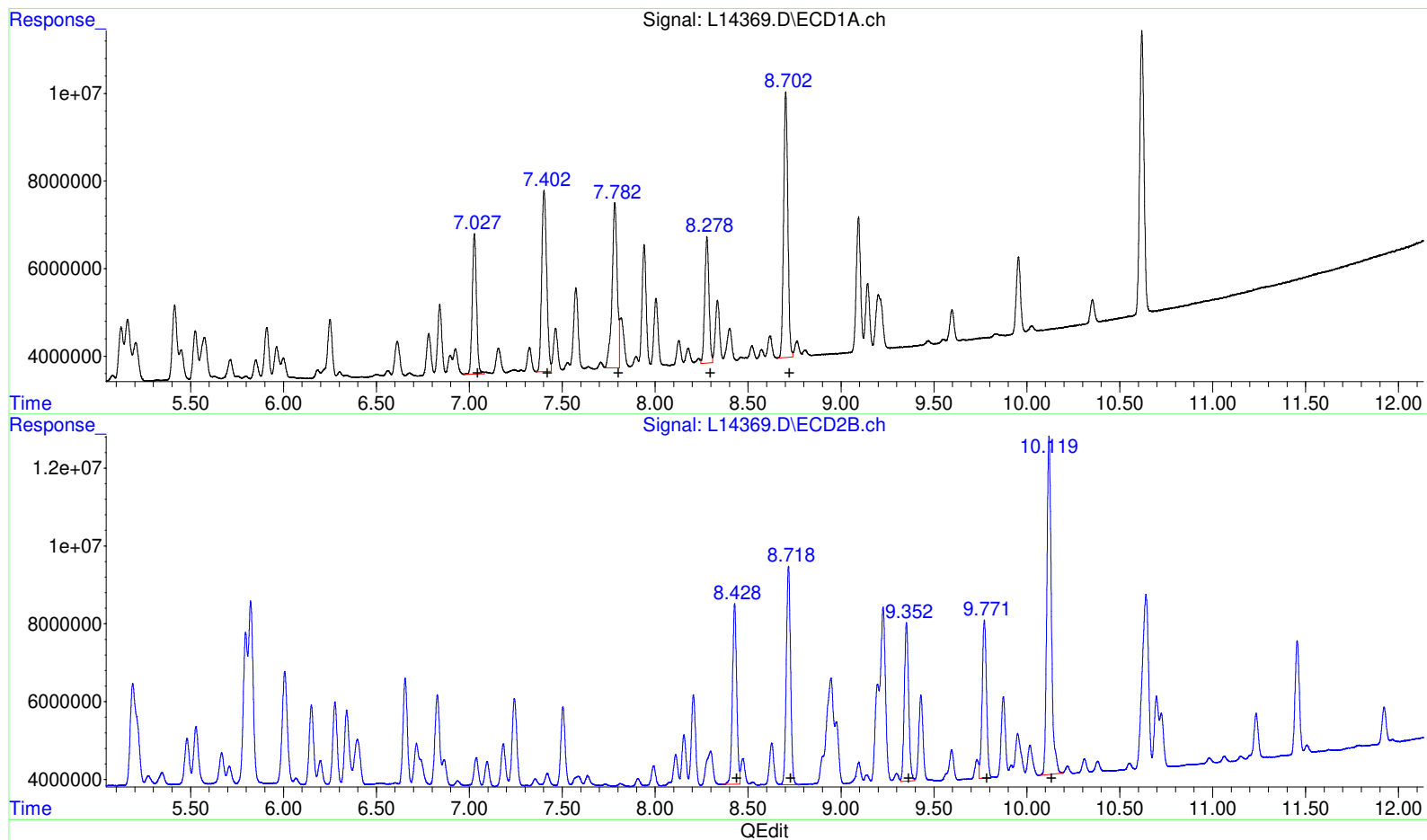
(3) Aroclor-1016{1} (L1)		
R.T.	Response	Conc
3.75	29726475	110.34
4.16	46664119	86.69
4.73	62600795	95.60
4.89	40296046	88.31
5.41	30914400	89.59
(3) Aroclor-1016{1} #2 (L1)		
R.T.	Response	Conc
4.65	35069466	99.24
5.19	69405359	89.52
5.82	82184210	93.16
6.01	53744693	91.00
6.66	44181971	91.21

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14369.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:32 pm
 Operator : AxJ/KC
 Sample : BCD2253-BS1
 Misc :
 ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:34 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)

R.T.	Response	Conc
7.03	50858648	91.16
7.40	76660054	91.41
7.78	72251941	105.19
8.28	45393871	96.24
8.70	95781624	93.32

(43) Aroclor-1260{1} #2 (L9)

R.T.	Response	Conc
8.43	73788988	93.66
8.72	89916992	97.86
9.35	66021324	100.13
9.77	65615320	94.36
10.12	146733960	96.90

(+) = Expected Retention Time

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
----------	------	------	--------	--------	------	------

System Monitoring Compounds

1) SA Tetrachlo...	3.350f	4.013	121.1E6	150.0E6	9.536	9.046
Spiked Amount	10.000 Range	60 - 120	Recovery	=	95.36%	90.46%
2) SA Decachlor...	10.618f	12.294f	86854723	166.1E6	10.385m	10.993
Spiked Amount	10.000 Range	60 - 120	Recovery	=	103.85%	109.93%

Target Compounds

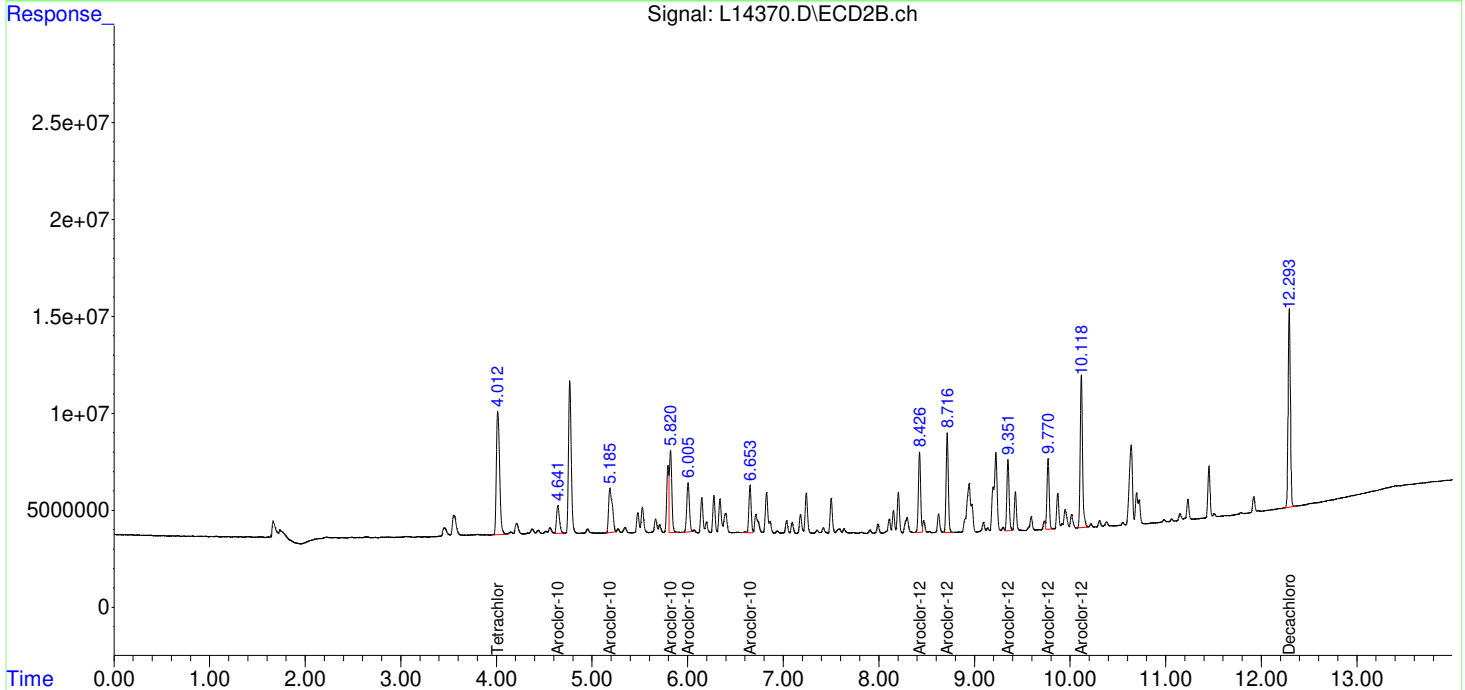
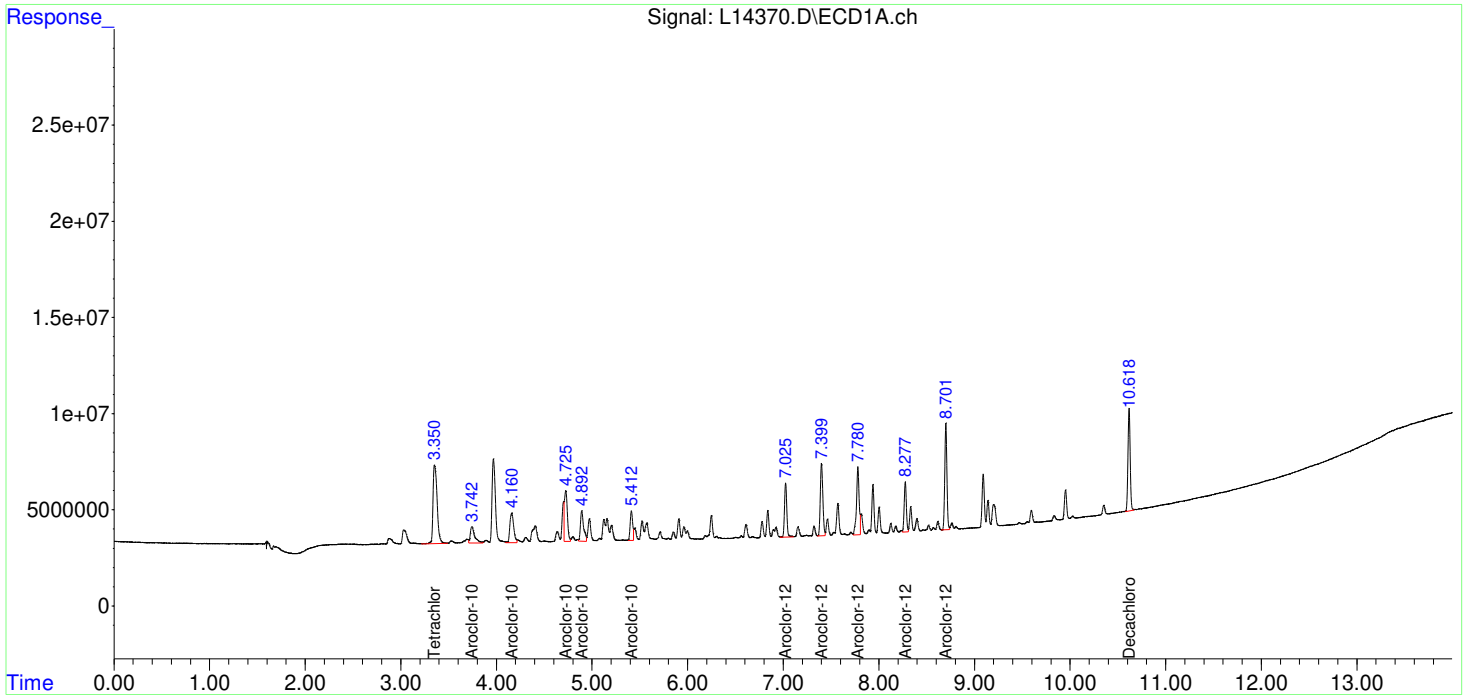
3) L1 Aroclor-1...	3.742f	4.642	26560543	30008405	98.591	84.915
4) L1 Aroclor-1...	4.160f	5.187	43427764	61135915	80.682m	78.851
5) L1 Aroclor-1...	4.725f	5.821	57068883	74662152	87.148m	84.631
6) L1 Aroclor-1...	4.892f	6.005	36505741	48798837	80.000m	82.623
7) L1 Aroclor-1...	5.412f	6.653	28086002	40340544	81.389m	83.281
Sum Aroclor-1016			191.6E6	254.9E6	427.810	414.302
Average Aroclor-1016					85.562	82.860
Sum Aroclor-1221			0	0	N.D.	N.D.
Average Aroclor-1221					0.000	0.000
Sum Aroclor-1232			0	0	N.D.	N.D.
Average Aroclor-1232					0.000	0.000
Sum Aroclor-1242			0	0	N.D.	N.D.
Average Aroclor-1242					0.000	0.000
Sum Aroclor-1248			0	0	N.D.	N.D.
Average Aroclor-1248					0.000	0.000
Sum Aroclor-1254			0	0	N.D.	N.D.
Average Aroclor-1254					0.000	0.000
Sum Aroclor-1262			0	0	N.D.	N.D.
Average Aroclor-1262					0.000	0.000
Sum Aroclor-1268			0	0	N.D.	N.D.
Average Aroclor-1268					0.000	0.000
43) L9 Aroclor-1...	7.025	8.426	46680777	66886699	83.668	84.898
44) L9 Aroclor-1...	7.400	8.716	69529362	81219754	82.911	88.395
45) L9 Aroclor-1...	7.780	9.351	67244147	59712319	97.896m	90.562
46) L9 Aroclor-1...	8.277	9.771	41037952	59304372	87.002	85.288
47) L9 Aroclor-1...	8.702f	10.119	86563524	132.3E6	84.336	87.352
Sum Aroclor-1260			311.1E6	399.4E6	435.811	436.494
Average Aroclor-1260					87.162	87.299

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

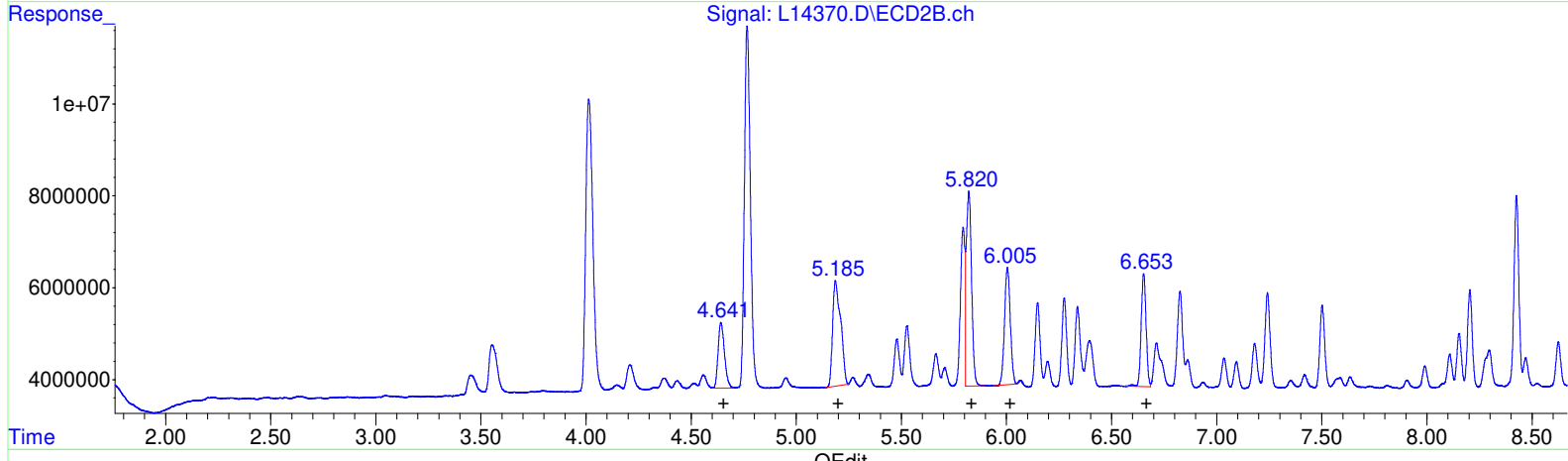
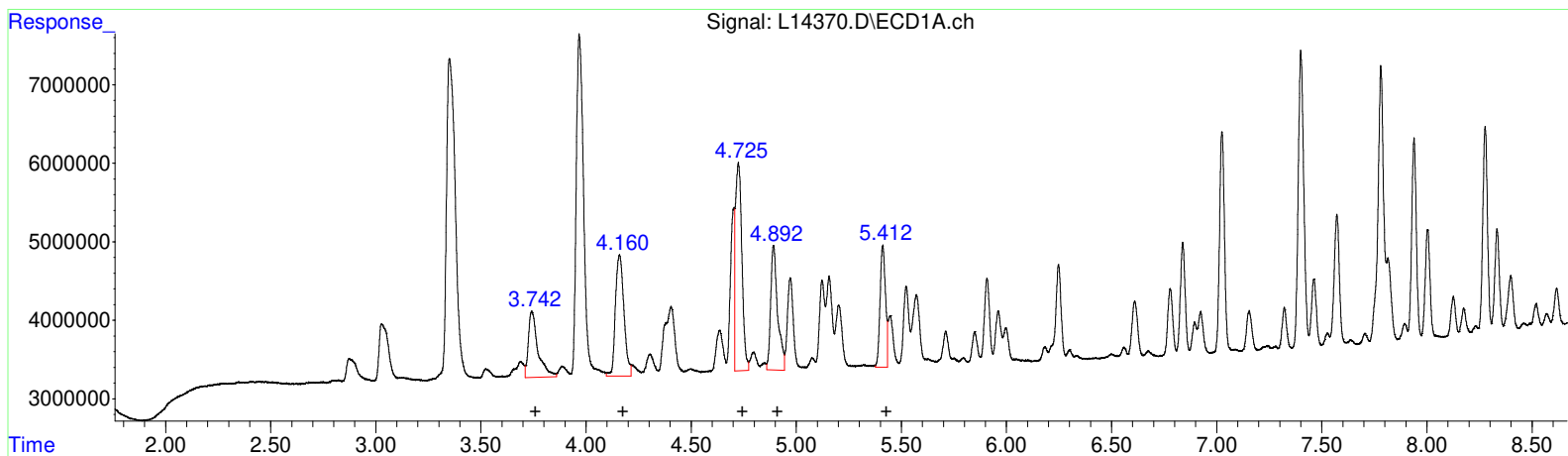
Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25

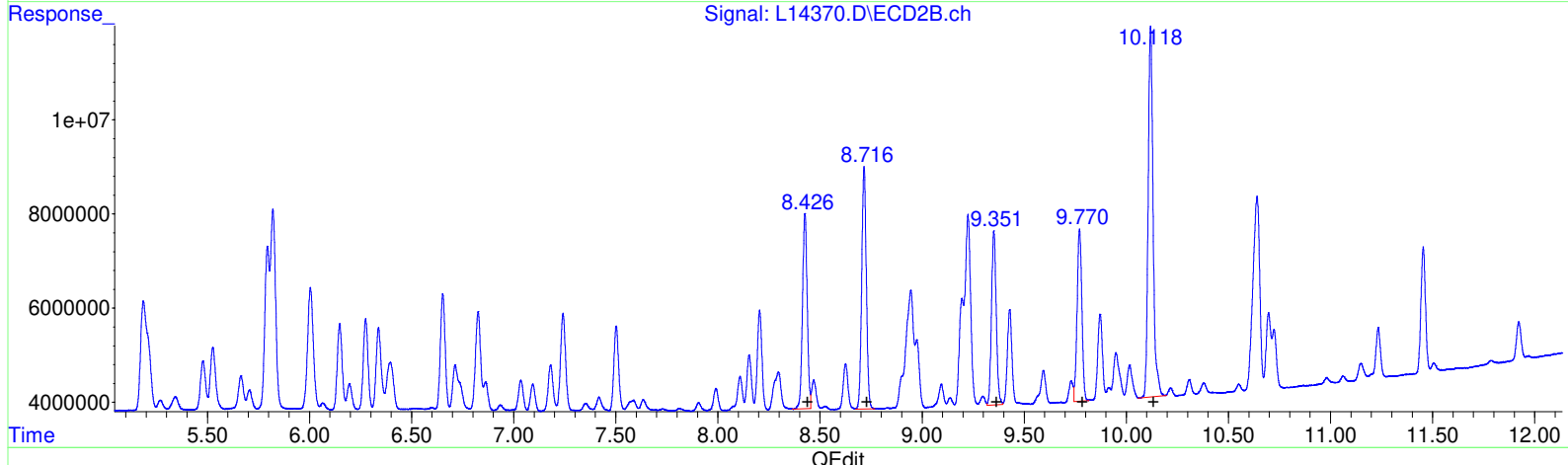
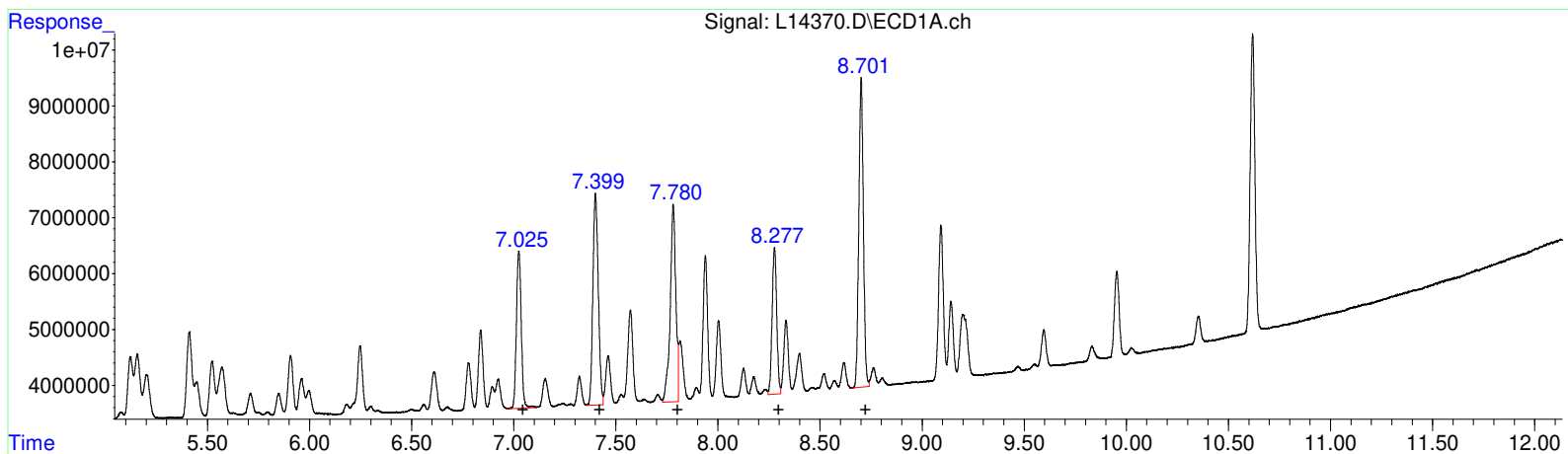


(3) Aroclor-1016{1} (L1)		
R.T.	Response	Conc
3.74	26560543	98.59
4.16	43427764	80.68
4.72	57068883	87.15
4.89	36505741	80.00
5.41	28086002	81.39
(3) Aroclor-1016{1} #2 (L1)		
R.T.	Response	Conc
4.64	30008405	84.92
5.19	61135915	78.85
5.82	74662152	84.63
6.00	48798837	82.62
6.65	40340544	83.28

Data Path : T:\Data\ECD-L\L240502\
 Data File : L14370.D
 Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
 Acq On : 2 May 2024 5:48 pm
 Operator : AxJ/KC
 Sample : BCD2253-BSD1
 Misc :
 ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: autoint1.e
 Integration File signal 2: autoint2.e
 Quant Time: May 06 10:09:42 2024
 Quant Method : T:\METHODS\ECD-L\PCB240116L.M
 Quant Title : 8082a PCB
 QLast Update : Wed Apr 24 13:46:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1.0
 Signal #1 Phase : CLPest I Signal #2 Phase: CLPest II
 Signal #1 Info : 0.25 Signal #2 Info : 0.25



(43) Aroclor-1260{1} (L9)		
R.T.	Response	Conc
7.03	46680777	83.67
7.40	69529362	82.91
7.78	67244147	97.90
8.28	41037952	87.00
8.70	86563524	84.34
(43) Aroclor-1260{1} #2 (L9)		
R.T.	Response	Conc
8.43	66886699	84.90
8.72	81219754	88.39
9.35	59712319	90.56
9.77	59304372	85.29
10.12	132273858	87.35

(+) = Expected Retention Time

PREPARATION BENCH SHEET

Organics

Print Date/Time: 05/14/2024 4:44 pm

BCD2253

Matrix: Tubes

Prepared using: GC-SVOA - EPA TO-10A

Analyses		Spiking Solution(s)				Surrogate Solution(s)			
01-PCB-TO-10A		24A1093 608 Spike				24A1129 PCB/ Pest Surrogate			
Lab Number	Sample and Source ID	Date Due	Extract by	Prepared	Initial (L)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
AC15369-04	A-11-209-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7344	10		100	
AC15354-02	A-07-510E-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7488	10		100	
AC15354-03	A-08-526-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7502.4	10		100	
AC15354-04	A-05-608J-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7394.4	10		100	
AC15354-05	A-06-635-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7358.4	10		100	
AC15354-06	A-04-714B-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7416	10		100	
AC15354-07	DUP-03-742-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7387.2	10		100	
AC15354-08	A-03-742-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7516.8	10		100	
AC15354-09	A-14-ROOF-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7567.2	10		100	
AC15369-01	A-13-106-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7142.4	10		100	
AC15354-01	A-10-400-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7466.4	10		100	
AC15369-03	A-15-117-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7480.8	10		100	
BCD2253-BSD1	LCS Dup			4/30/2024 3:23:00PM	1	10	1000	100	
AC15369-05	A-12-228-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7473.6	10		100	
AC15369-06	A-01-216-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7473.6	10		100	
AC15369-07	A-02-317F-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	7588.8	10		100	
AC15369-08	A-09-402G-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7387.2	10		100	
AC15369-09	DUP-02-402G-042424	05/14/2024	05/03/2024	4/30/2024 3:23:00PM	7516.8	10		100	
AC15369-10	Blank-01-117-042424	05/14/2024	05/02/2024	4/30/2024 3:23:00PM	1	10		100	
BCD2253-BLK1	Blank			4/30/2024 3:23:00PM	1	10		100	
BCD2253-BLK2	Blank			4/30/2024 3:23:00PM	1	10		100	srb
BCD2253-BS1	LCS			4/30/2024 3:23:00PM	1	10	1000	100	

Spiking Witnessed By _____ Date _____ Preparation Reviewed By _____ Date _____ Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

Organics

Print Date/Time: 05/14/2024 4:44 pm

BCD2253

(Continued)

Matrix: Tubes

Prepared using: GC-SVOA - EPA TO-10A

Analyses	DUP-01-106-042424	05/14/2024	Spiking Solution(s)	608 Spike	4/30/2024 3:23:00PM	7358.4	10	Surrogate Solution(s)	PCB/ Pest Surrogate	100
01-PCB-TO-10A			24A1093					24A1129		

Start Date/Time _____

Stop Date/Time _____

Standard	Description	LotNum
24B0920	Sulfuric Acid	20230818557
24C0733	Baked Sodium Sulfate	218622
24D0523	Hexane	224102
24D0525	PUF Cartridge, TO-10A	14223

Spiking Witnessed By _____

Date _____

Preparation Reviewed By _____

Date _____

Extracts Received By _____

Date _____

Analysis Sequence

SCA0465

Printed: 05/14/2024 5:39 pm

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 01/16/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
SCA0465-CAL1	Cal Standard	1		24A0635		
SCA0465-CAL2	Cal Standard	2		24A0634		
SCA0465-CAL3	Cal Standard	3		24A0633		
SCA0465-CAL4	Cal Standard	4		24A0056		
SCA0465-CAL5	Cal Standard	5		24A0055		
SCA0465-CAL6	Cal Standard	6		24A0054		
SCA0465-ICV1	Initial Cal Check	7		24A0636		
SCA0465-CAL7	Cal Standard	8		23I0241		
SCA0465-CAL8	Cal Standard	9		23I0242		
SCA0465-CAL9	Cal Standard	10		23I0243		
SCA0465-CALA	Cal Standard	11		23I0244		
SCA0465-CALB	Cal Standard	12		23I0245		
SCA0465-CALC	Cal Standard	13		23I0246		
SCA0465-CCV1	23F0359	14		23J0124		
BCA0475-BLK1	Blank	15				
BCA0475-BLK2	Blank	16				
BCA0475-BS1	LCS	17				
BCA0475-BSD1	LCS Dup	18				
AC05562-01	SH-PCBA01-01	19				
AC05562-02	SH-PCBA02-01	20				
AC05562-03	SH-PCBA03-01	21				

Analysis Sequence

SCA0465

(Continued)

Department: GC-SVOA
 Instrument: GCECD-L
 Calibration ID: AA40009

Sequence Date: 01/16/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
AC05562-04	SH-PCBA04-01	22				
AC05562-05	SH-PCBA05-01	23				
AC05562-06	SH-PCBA06-01	24				
SCA0465-CCV2	Calibration Check	25		23J0124		
AC05562-07	SH-PCBA07-01	26				
AC05562-08	SH-PCBA08-01	27				
AC05562-09	SH-PCBA09-01	28				
AC05562-10	SH-PCBA10-01	29				
AC05562-11	SH-PCBA11-01	30				
AC05562-12	SH-PCBA12-01	31				
AC05562-13	SH-PCBA13-01	32				
AC05562-14	SH-PCBA14-01	33				
BCA0476-MRL1	MRL Check	34				
SCA0465-CCV3	500	35		23J0124		

Analysis Sequence

SCE0475

Printed: 05/14/2024 5:37 pm

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 05/02/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
SCE0475-CCV1	Calibration Check	1		24B1163		
BCD2253-BLK1	Blank	2				
BCD2253-BLK2	Blank	3				
BCD2253-BS1	LCS	4				
BCD2253-BSD1	LCS Dup	5				
BCD2254-MRL1	MRL Check	6				
AC15354-01	A-10-400-042424	7				
AC15354-02	A-07-510E-042424	8				
AC15354-03	A-08-526-042424	9				
AC15354-04	A-05-608J-042424	10				
AC15354-05	A-06-635-042424	11				
SCE0475-CCV2	Calibration Check	12		24B1163		
AC15354-06	A-04-714B-042424	13				
AC15354-07	DUP-03-742-042424	14				
AC15354-08	A-03-742-042424	15				
AC15354-09	A-14-ROOF-042424	16				
AC15369-01	A-13-106-042424	17				
AC15369-02	DUP-01-106-042424	18				
AC15369-03	A-15-117-042424	19				
AC15369-04	A-11-209-042424	20				
AC15369-05	A-12-228-042424	21				

Analysis Sequence

SCE0475

(Continued)

Department: GC-SVOA
Instrument: GCECD-L
Calibration ID: AA40009

Sequence Date: 05/02/2024

Lab Number	Sample Name	Order	Position	STD ID	ISTD ID	Comments
AC15369-06	A-01-216-042424	22				
SCE0475-CCV3	500	23		24B1163		
AC15369-07	A-02-317F-042424	24				
AC15369-08	A-09-402G-042424	25				
AC15369-09	DUP-02-402G-042424	26				
AC15369-10	Blank-01-117-042424	27				
SCE0475-CCV4	Calibration Check	28		24B1163		

Standard Traceability

LABORATORY STANDARD SUMMARY

Standard ID: 23G0224
Description: PCB 608 Spike
Solvent: acetone 23F0418 C
Lot Number: na

Date Prepared: 07/13/2023
Date Expires: 01/13/2024
Prepared by: Roseann Giordano
Vendor: In House
Final Volume (mL:s): 200.0000

Comments: test element 22g0357
~~1016/1260 23D0297 A~~

23G0224 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23D0297	A0191718	0.2000

Analyte	Concentration	Units
Aroclor-1016	1.0000	ug/mL
Aroclor-1016 [2C]	1.0000	ug/mL
Aroclor-1260	1.0000	ug/mL
Aroclor-1260 [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0241
Description: Aroclor 2154 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0755B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0241 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0755	na	2.5000

Analyte	Concentration	Units
Aroclor-1221	0.0500	ug/g
Aroclor-1221 [2C]	0.0500	ug/g
Aroclor-1221{1}	0.0500	ug/g
Aroclor-1221{1} [2C]	0.0500	ug/g
Aroclor-1221{2}	0.0500	ug/g
Aroclor-1221{2} [2C]	0.0500	ug/g
Aroclor-1221{3}	0.0500	ug/g
Aroclor-1221{3} [2C]	0.0500	ug/g
Aroclor-1221{4}	0.0500	ug/g
Aroclor-1221{4} [2C]	0.0500	ug/g
Aroclor-1221{5}	0.0500	ug/g
Aroclor-1221{5} [2C]	0.0500	ug/g
Aroclor-1254	0.0500	ug/g
Aroclor-1254 [2C]	0.0500	ug/g
Aroclor-1254{1}	0.0500	ug/g
Aroclor-1254{1} [2C]	0.0500	ug/g
Aroclor-1254{2}	0.0500	ug/g
Aroclor-1254{2} [2C]	0.0500	ug/g
Aroclor-1254{3}	0.0500	ug/g
Aroclor-1254{3} [2C]	0.0500	ug/g
Aroclor-1254{4}	0.0500	ug/g
Aroclor-1254{4} [2C]	0.0500	ug/g
Aroclor-1254{5}	0.0500	ug/g
Aroclor-1254{5} [2C]	0.0500	ug/g
Aroclor-1254{6}	0.0500	ug/g
Aroclor-1254{6} [2C]	0.0500	ug/g
Decachlorobiphenyl	0.0050	ug/g
Decachlorobiphenyl [2C]	0.0050	ug/g
Tetrachloro-m-xylene	0.0050	ug/g
Tetrachloro-m-xylene [2C]	0.0050	ug/g

LABORATORY STANDARD SUMMARY

Standard ID: 23I0242
Description: Aroclor 1232 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0757B

Date Prepared: 09/13/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0242 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0757	na	2.5000

Analyte	Concentration	Units
Aroclor-1232	0.0500	ug/mL
Aroclor-1232 [2C]	0.0500	ug/mL
Aroclor-1232{1}	0.0500	ug/mL
Aroclor-1232{1} [2C]	0.0500	ug/mL
Aroclor-1232{2}	0.0500	ug/mL
Aroclor-1232{2} [2C]	0.0500	ug/mL
Aroclor-1232{3}	0.0500	ug/mL
Aroclor-1232{3} [2C]	0.0500	ug/mL
Aroclor-1232{4}	0.0500	ug/mL
Aroclor-1232{4} [2C]	0.0500	ug/mL
Aroclor-1232{5}	0.0500	ug/mL
Aroclor-1232{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0243
Description: Aroclor 1242 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0758B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0243 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0758	na	2.5000

Analyte	Concentration	Units
Aroclor-1242	0.0500	ug/mL
Aroclor-1242 [2C]	0.0500	ug/mL
Aroclor-1242{1}	0.0500	ug/mL
Aroclor-1242{1} [2C]	0.0500	ug/mL
Aroclor-1242{2}	0.0500	ug/mL
Aroclor-1242{2} [2C]	0.0500	ug/mL
Aroclor-1242{3}	0.0500	ug/mL
Aroclor-1242{3} [2C]	0.0500	ug/mL
Aroclor-1242{4}	0.0500	ug/mL
Aroclor-1242{4} [2C]	0.0500	ug/mL
Aroclor-1242{5}	0.0500	ug/mL
Aroclor-1242{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0244
Description: Aroclor 1248 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0759B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0244 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0759	na	2.5000

Analyte	Concentration	Units
Aroclor-1248	0.0500	ug/mL
Aroclor-1248 [2C]	0.0500	ug/mL
Aroclor-1248{1}	0.0500	ug/mL
Aroclor-1248{1} [2C]	0.0500	ug/mL
Aroclor-1248{2}	0.0500	ug/mL
Aroclor-1248{2} [2C]	0.0500	ug/mL
Aroclor-1248{3}	0.0500	ug/mL
Aroclor-1248{3} [2C]	0.0500	ug/mL
Aroclor-1248{4}	0.0500	ug/mL
Aroclor-1248{4} [2C]	0.0500	ug/mL
Aroclor-1248{5}	0.0500	ug/mL
Aroclor-1248{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0245
Description: Aroclor 1262 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na
Comments: 23H0761B

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

23I0245 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0761	na	2.5000

Analyte	Concentration	Units
Aroclor-1262	0.0500	ug/mL
Aroclor-1262 [2C]	0.0500	ug/mL
Aroclor-1262{1}	0.0500	ug/mL
Aroclor-1262{1} [2C]	0.0500	ug/mL
Aroclor-1262{2}	0.0500	ug/mL
Aroclor-1262{2} [2C]	0.0500	ug/mL
Aroclor-1262{3}	0.0500	ug/mL
Aroclor-1262{3} [2C]	0.0500	ug/mL
Aroclor-1262{4}	0.0500	ug/mL
Aroclor-1262{4} [2C]	0.0500	ug/mL
Aroclor-1262{5}	0.0500	ug/mL
Aroclor-1262{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23I0246
Description: Aroclor 1268 50 ug/L
Solvent: Hexane 23H0198O
Lot Number: na

Date Prepared: 09/14/2023
Date Expires: 02/29/2024
Prepared by: Averyl John
Vendor: In-House
Final Volume (mL:s): 25.0000

Comments: 23H0762B
 2.5ml of 1268 500ug/l standard into a 25ml flask.

23I0246 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23H0762	na	2.5000

Analyte	Concentration	Units
Aroclor-1268	0.0500	ug/mL
Aroclor-1268 [2C]	0.0500	ug/mL
Aroclor-1268{1}	0.0500	ug/mL
Aroclor-1268{1} [2C]	0.0500	ug/mL
Aroclor-1268{2}	0.0500	ug/mL
Aroclor-1268{2} [2C]	0.0500	ug/mL
Aroclor-1268{3}	0.0500	ug/mL
Aroclor-1268{3} [2C]	0.0500	ug/mL
Aroclor-1268{4}	0.0500	ug/mL
Aroclor-1268{4} [2C]	0.0500	ug/mL
Aroclor-1268{5}	0.0500	ug/mL
Aroclor-1268{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 23J0124
Description: 1660 CCV 50
Solvent: Hexane 23H0198N
Lot Number: 231763
Comments: 2 and the half ml of 1660 CCV 500 standard in 25ml flask of Hexane.

Date Prepared: 10/05/2023
Date Expires: 02/29/2024
Prepared by: Thomas Lindsay
Vendor: Fisher
Final Volume (mL:s): 25.0000

23J0124 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23I0544	NA	2.5000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0054
Description: 1660 Cal Std 250ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 11/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0054 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0053	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.2500	ug/mL
Aroclor-1016 [2C]	0.2500	ug/mL
Aroclor-1016{1}	0.2500	ug/mL
Aroclor-1016{1} [2C]	0.2500	ug/mL
Aroclor-1016{2}	0.2500	ug/mL
Aroclor-1016{2} [2C]	0.2500	ug/mL
Aroclor-1016{3}	0.2500	ug/mL
Aroclor-1016{3} [2C]	0.2500	ug/mL
Aroclor-1016{4}	0.2500	ug/mL
Aroclor-1016{4} [2C]	0.2500	ug/mL
Aroclor-1016{5}	0.2500	ug/mL
Aroclor-1016{5} [2C]	0.2500	ug/mL
Aroclor-1260	0.2500	ug/mL
Aroclor-1260 [2C]	0.2500	ug/mL
Aroclor-1260{1}	0.2500	ug/mL
Aroclor-1260{1} [2C]	0.2500	ug/mL
Aroclor-1260{2}	0.2500	ug/mL
Aroclor-1260{2} [2C]	0.2500	ug/mL
Aroclor-1260{3}	0.2500	ug/mL
Aroclor-1260{3} [2C]	0.2500	ug/mL
Aroclor-1260{4}	0.2500	ug/mL
Aroclor-1260{4} [2C]	0.2500	ug/mL
Aroclor-1260{5}	0.2500	ug/mL
Aroclor-1260{5} [2C]	0.2500	ug/mL
Decachlorobiphenyl	0.0250	ug/mL
Decachlorobiphenyl [2C]	0.0250	ug/mL
Tetrachloro-m-xylene	0.0250	ug/mL
Tetrachloro-m-xylene [2C]	0.0250	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0055
Description: 1660 Cal Std 100ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 12/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0055 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0054	na	40.0000

Analyte	Concentration	Units
Aroclor-1016	0.1000	ug/mL
Aroclor-1016 [2C]	0.1000	ug/mL
Aroclor-1016{1}	0.1000	ug/mL
Aroclor-1016{1} [2C]	0.1000	ug/mL
Aroclor-1016{2}	0.1000	ug/mL
Aroclor-1016{2} [2C]	0.1000	ug/mL
Aroclor-1016{3}	0.1000	ug/mL
Aroclor-1016{3} [2C]	0.1000	ug/mL
Aroclor-1016{4}	0.1000	ug/mL
Aroclor-1016{4} [2C]	0.1000	ug/mL
Aroclor-1016{5}	0.1000	ug/mL
Aroclor-1016{5} [2C]	0.1000	ug/mL
Aroclor-1260	0.1000	ug/mL
Aroclor-1260 [2C]	0.1000	ug/mL
Aroclor-1260{1}	0.1000	ug/mL
Aroclor-1260{1} [2C]	0.1000	ug/mL
Aroclor-1260{2}	0.1000	ug/mL
Aroclor-1260{2} [2C]	0.1000	ug/mL
Aroclor-1260{3}	0.1000	ug/mL
Aroclor-1260{3} [2C]	0.1000	ug/mL
Aroclor-1260{4}	0.1000	ug/mL
Aroclor-1260{4} [2C]	0.1000	ug/mL
Aroclor-1260{5}	0.1000	ug/mL
Aroclor-1260{5} [2C]	0.1000	ug/mL
Decachlorobiphenyl	0.0100	ug/mL
Decachlorobiphenyl [2C]	0.0100	ug/mL
Tetrachloro-m-xylene	0.0100	ug/mL
Tetrachloro-m-xylene [2C]	0.0100	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0056
Description: 1660 Cal Std 50ug/L
Solvent: Hexane 23J0201L
Lot Number: na

Date Prepared: 12/28/2023
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0056 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0055	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0633
Description: 1660 Cal Std 25ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0633 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0056	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0250	ug/mL
Aroclor-1016 [2C]	0.0250	ug/mL
Aroclor-1016{1}	0.0250	ug/mL
Aroclor-1016{1} [2C]	0.0250	ug/mL
Aroclor-1016{2}	0.0250	ug/mL
Aroclor-1016{2} [2C]	0.0250	ug/mL
Aroclor-1016{3}	0.0250	ug/mL
Aroclor-1016{3} [2C]	0.0250	ug/mL
Aroclor-1016{4}	0.0250	ug/mL
Aroclor-1016{4} [2C]	0.0250	ug/mL
Aroclor-1016{5}	0.0250	ug/mL
Aroclor-1016{5} [2C]	0.0250	ug/mL
Aroclor-1260	0.0250	ug/mL
Aroclor-1260 [2C]	0.0250	ug/mL
Aroclor-1260{1}	0.0250	ug/mL
Aroclor-1260{1} [2C]	0.0250	ug/mL
Aroclor-1260{2}	0.0250	ug/mL
Aroclor-1260{2} [2C]	0.0250	ug/mL
Aroclor-1260{3}	0.0250	ug/mL
Aroclor-1260{3} [2C]	0.0250	ug/mL
Aroclor-1260{4}	0.0250	ug/mL
Aroclor-1260{4} [2C]	0.0250	ug/mL
Aroclor-1260{5}	0.0250	ug/mL
Aroclor-1260{5} [2C]	0.0250	ug/mL
Decachlorobiphenyl	0.0025	ug/mL
Decachlorobiphenyl [2C]	0.0025	ug/mL
Tetrachloro-m-xylene	0.0025	ug/mL
Tetrachloro-m-xylene [2C]	0.0025	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0634
Description: 1660 Cal Std 10ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0634 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0633	na	40.0000

Analyte	Concentration	Units
Aroclor-1016	0.0100	ug/mL
Aroclor-1016 [2C]	0.0100	ug/mL
Aroclor-1016{1}	0.0100	ug/mL
Aroclor-1016{1} [2C]	0.0100	ug/mL
Aroclor-1016{2}	0.0100	ug/mL
Aroclor-1016{2} [2C]	0.0100	ug/mL
Aroclor-1016{3}	0.0100	ug/mL
Aroclor-1016{3} [2C]	0.0100	ug/mL
Aroclor-1016{4}	0.0100	ug/mL
Aroclor-1016{4} [2C]	0.0100	ug/mL
Aroclor-1016{5}	0.0100	ug/mL
Aroclor-1016{5} [2C]	0.0100	ug/mL
Aroclor-1260	0.0100	ug/mL
Aroclor-1260 [2C]	0.0100	ug/mL
Aroclor-1260{1}	0.0100	ug/mL
Aroclor-1260{1} [2C]	0.0100	ug/mL
Aroclor-1260{2}	0.0100	ug/mL
Aroclor-1260{2} [2C]	0.0100	ug/mL
Aroclor-1260{3}	0.0100	ug/mL
Aroclor-1260{3} [2C]	0.0100	ug/mL
Aroclor-1260{4}	0.0100	ug/mL
Aroclor-1260{4} [2C]	0.0100	ug/mL
Aroclor-1260{5}	0.0100	ug/mL
Aroclor-1260{5} [2C]	0.0100	ug/mL
Decachlorobiphenyl	0.0010	ug/mL
Decachlorobiphenyl [2C]	0.0010	ug/mL
Tetrachloro-m-xylene	0.0010	ug/mL
Tetrachloro-m-xylene [2C]	0.0010	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0635
Description: 1660 Cal Std 5ug/L
Solvent: Hexane 23J0201Q
Lot Number: na

Date Prepared: 01/16/2024
Date Expires: 06/28/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 100.0000

Comments: Used aliquot A. Created aliquot A, B, C.

24A0635 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0634	na	50.0000

Analyte	Concentration	Units
Aroclor-1016	0.0050	ug/mL
Aroclor-1016 [2C]	0.0050	ug/mL
Aroclor-1016{1}	0.0050	ug/mL
Aroclor-1016{1} [2C]	0.0050	ug/mL
Aroclor-1016{2}	0.0050	ug/mL
Aroclor-1016{2} [2C]	0.0050	ug/mL
Aroclor-1016{3}	0.0050	ug/mL
Aroclor-1016{3} [2C]	0.0050	ug/mL
Aroclor-1016{4}	0.0050	ug/mL
Aroclor-1016{4} [2C]	0.0050	ug/mL
Aroclor-1016{5}	0.0050	ug/mL
Aroclor-1016{5} [2C]	0.0050	ug/mL
Aroclor-1260	0.0050	ug/mL
Aroclor-1260 [2C]	0.0050	ug/mL
Aroclor-1260{1}	0.0050	ug/mL
Aroclor-1260{1} [2C]	0.0050	ug/mL
Aroclor-1260{2}	0.0050	ug/mL
Aroclor-1260{2} [2C]	0.0050	ug/mL
Aroclor-1260{3}	0.0050	ug/mL
Aroclor-1260{3} [2C]	0.0050	ug/mL
Aroclor-1260{4}	0.0050	ug/mL
Aroclor-1260{4} [2C]	0.0050	ug/mL
Aroclor-1260{5}	0.0050	ug/mL
Aroclor-1260{5} [2C]	0.0050	ug/mL
Decachlorobiphenyl	0.0005	ug/mL
Decachlorobiphenyl [2C]	0.0005	ug/mL
Tetrachloro-m-xylene	0.0005	ug/mL
Tetrachloro-m-xylene [2C]	0.0005	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A0636
Description: 1660 ICV 50ug/L
Solvent: Hexane 23J0201Q
Lot Number: na
Comments: Used vial A Created vails a and B

Date Prepared: 01/16/2024
Date Expires: 05/02/2024
Prepared by: Thomas Lindsay
Vendor: In-House
Final Volume (mL:s): 50.0000

24A0636 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
23K0081	na	5.0000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A1093
Description: 608 Spike
Solvent: Acetone 23I0253
Lot Number: A0198397

Date Prepared: 01/30/2024
Date Expires: 07/28/2024
Prepared by: Maxwell Baier
Vendor: In-House
Final Volume (mL:s): 200.0000

Comments: 100 mL Acetone
~~Aroclor 1016/1260 24A0123A~~

24A1093 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24A0123	A0198397	0.2000

Analyte	Concentration	Units
Aroclor-1016	1.0000	ug/mL
Aroclor-1016 [2C]	1.0000	ug/mL
Aroclor-1260	1.0000	ug/mL
Aroclor-1260 [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24A1129
Description: PCB/ Pest Surrogate
Solvent: Acetone 23I0253
Lot Number: N/A

Date Prepared: 01/31/2024
Date Expires: 07/29/2024
Prepared by: Maxwell Baier
Vendor: In-House
Final Volume (mL:s): 200.0000

Comments: Pest Surrogate Mix: 24A0112 C
Lot # A0203741

24A1129 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
22H0064	A0185124	1.0000

Analyte	Concentration	Units
Decachlorobiphenyl	1.0000	ug/mL
Decachlorobiphenyl [2C]	1.0000	ug/mL
Tetrachloro-m-xylene	1.0000	ug/mL
Tetrachloro-m-xylene [2C]	1.0000	ug/mL

LABORATORY STANDARD SUMMARY

Standard ID: 24B1163
Description: 1660 CCV 50
Solvent: Hexane 24B0290
Lot Number: 23L1861094
Comments: 2 and the half ml of 1660 CCV 500 standard in 25ml flask of Hexane.

Date Prepared: 02/29/2024
Date Expires: 06/12/2024
Prepared by: Thomas Lindsay
Vendor: VWR
Final Volume (mL:s): 25.0000

24B1163 Prepared from the following standards:

<i>Parent Std ID</i>	<i>Lot #</i>	<i>Vol (mLs)</i>
24B0367	NA	2.5000

Analyte	Concentration	Units
Aroclor-1016	0.0500	ug/mL
Aroclor-1016 [2C]	0.0500	ug/mL
Aroclor-1016{1}	0.0500	ug/mL
Aroclor-1016{1} [2C]	0.0500	ug/mL
Aroclor-1016{2}	0.0500	ug/mL
Aroclor-1016{2} [2C]	0.0500	ug/mL
Aroclor-1016{3}	0.0500	ug/mL
Aroclor-1016{3} [2C]	0.0500	ug/mL
Aroclor-1016{4}	0.0500	ug/mL
Aroclor-1016{4} [2C]	0.0500	ug/mL
Aroclor-1016{5}	0.0500	ug/mL
Aroclor-1016{5} [2C]	0.0500	ug/mL
Aroclor-1260	0.0500	ug/mL
Aroclor-1260 [2C]	0.0500	ug/mL
Aroclor-1260{1}	0.0500	ug/mL
Aroclor-1260{1} [2C]	0.0500	ug/mL
Aroclor-1260{2}	0.0500	ug/mL
Aroclor-1260{2} [2C]	0.0500	ug/mL
Aroclor-1260{3}	0.0500	ug/mL
Aroclor-1260{3} [2C]	0.0500	ug/mL
Aroclor-1260{4}	0.0500	ug/mL
Aroclor-1260{4} [2C]	0.0500	ug/mL
Aroclor-1260{5}	0.0500	ug/mL
Aroclor-1260{5} [2C]	0.0500	ug/mL
Decachlorobiphenyl	0.0050	ug/mL
Decachlorobiphenyl [2C]	0.0050	ug/mL
Tetrachloro-m-xylene	0.0050	ug/mL
Tetrachloro-m-xylene [2C]	0.0050	ug/mL



110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: 1-814-353-1300
 Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis
chromatographic plus

23GC0148 A-L
 TR 7/10/23



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0197094
Description : Pesticide Surrogate Mix
Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : July 31, 2029 **Storage:** 10°C or colder
Handling: Contains PCBs - sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty* (95% C.L.; K=2)
1	2,4,5,6-Tetrachloro-m-xylene	877-09-8	RP220407	99%	201.2 µg/mL	+/- 11.1631
2	Decachlorobiphenyl (BZ# 209)	2051-24-3	30638	99%	201.7 µg/mL	+/- 11.1898

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Quality Confirmation Test

Column:

30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

300°C

Det. Type:

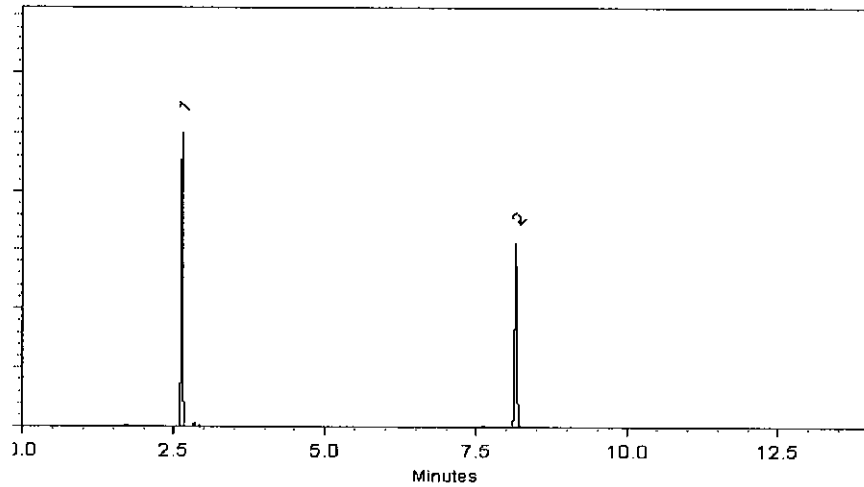
ECD

Split Vent:

10 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Jess Hoy - Operations Tech I

Date Mixed: 17-Apr-2023

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: (800)356-1688
 Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

23G0149 A-F
 7/10/23



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 Lot No.: A0191718
 Description : Aroclor® 1016/1260 Mix
Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul
 Container Size : 2 mL Pkg Amt: > 1 mL
 Expiration Date : February 28, 2029 Storage: 25°C nominal
 Handling: This product contains PCBs. Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016	1,001.0 µg/mL	+/- 5.8332	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 4)		+/- 31.7173	µg/mL	Unstressed
	Purity ----%		+/- 41.4374	µg/mL	Stressed
2	Aroclor 1260	1,001.1 µg/mL	+/- 5.8336	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 1294610)		+/- 31.7197	µg/mL	Unstressed
	Purity ----%		+/- 41.4405	µg/mL	Stressed

Solvent: Hexane
 CAS # 110-54-3
 Purity 99%

Column:

30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

Carrier Gas:

helium-constant pressure 20 psi.

Temp. Program:

200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:

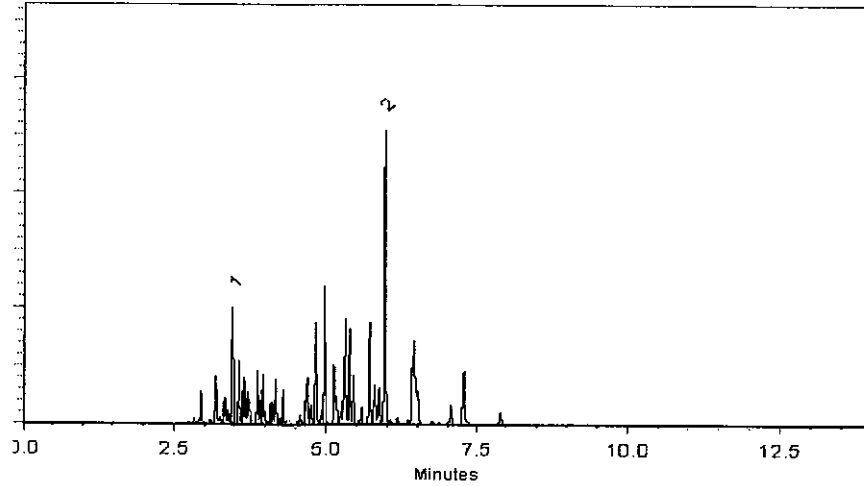
250°C

Det. Temp:

300°C

Det. Type:

ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Riglin - Operations Tech I

Date Mixed: 15-Nov-2022 Balance: 1128360905

Marlina Cowan - Operations Tech II ARM QC

Date Passed: 17-Nov-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

2360152 A, B
✓ 7/10/23



ISO 17034

Reference Material Certificate
Product Information Sheet

Product Name: Calibration Standard

Lot Number: 0006740524

Product Number: PPM-8082-1

Lot Issue Date: 17-Apr-2023

Storage Conditions: Store at Room Temperature (15° to 30°C).

Expiration Date: 30-Nov-2029

Component Name	Concentration	Uncertainty	CAS#	Analyte Lot
Aroclor 1016	1004 ±	5 µg/mL	012674-11-2	NT01016
Aroclor 1260	1004 ±	5 µg/mL	011096-82-5	NT01023

Matrix: isooctane (2,2,4-trimethylpentane)

Description:

This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:

This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:

The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.



Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative



ISO 17034
Cert No. AR-1936

RM was produced in accordance with the TUV/SUD registered ISO 9001:2015 Quality Management System. Cert# 951215321

Page: 2 of 2

www.agilent.com/quality/
CSD-QA-015.2

ISO 17025
Cert No. AT-1937

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

24A0123
 1/3/24

Catalog No. : 32039 **Lot No.:** A0198397
Description : Aroclor® 1016/1260 Mix
 Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **Storage:** 25°C nominal
Handling: This product contains PCBs. **Ship:** Ambient

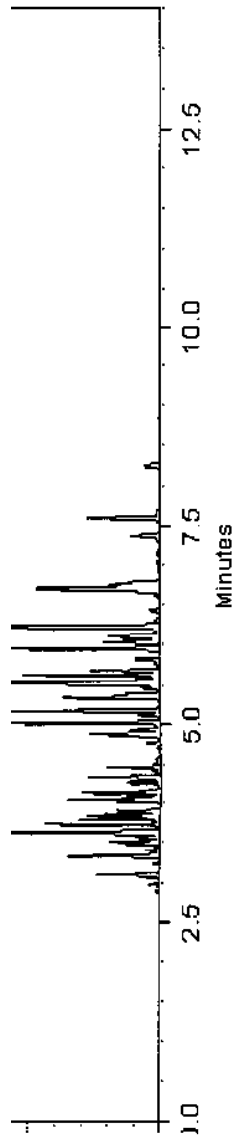
CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Aroclor 1016	12674-11-2	07	----%	1,001.0 µg/mL	+/- 55.5375
2	Aroclor 1260	11096-82-5	1348808	----%	1,005.4 µg/mL	+/- 55.7789

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Det. type:
ECD
Split Vent:
10 ml/min.
Inj. Vol
0.2µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Penelope Rigin - Operations Tech I

Date Mixed: 23-May-2023 **Balance Serial #** B442140311

Jennifer Pollino - Operations Tech III - ARM-QC

Date Passed: 01-Jun-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Appendix E2
Air Sample Field Data Sheets

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24 - 4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 117 (Blank) OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: NA CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: N/A RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, R/F</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>029607</u>	_____	_____	_____
Sample No.:	<u>Blank-01-117-048424</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>029607</u>	<u>117</u>	<u>71.0</u>	<u>30.04</u>	<u>N/A</u>	<u>N/A</u>	<u>0655</u>	<u>1855</u>	<u>720</u>	
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0643</u>	<u>1843</u>	<u>720</u>	

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	pre- _____	pre- _____	pre- _____	pre- _____
	post- _____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 1060 OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 30 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20180820124 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>	_____	_____	_____
Adsorbent:	<u>polyurethane</u>	_____	_____	_____
Serial No.:	<u>0216107</u>	_____	_____	_____
Sample No.:	<u>A-13-106-011111</u>	_____	_____	<u>(12)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>0216107</u>	<u>1060</u>	<u>67.6</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0638</u>	<u>1843</u>	<u>720</u>	<u>3571</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>5.0</u>	<u>N/A</u>	<u>0638</u>	<u>1842</u>	<u>720</u>	<u>3571</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.00</u>	_____	_____	<u>(pu)</u>
pre-	<u>4.92</u>	pre-	pre-	pre- <u>(pu)</u>
post-	post-	post-	post-	post-

CHECKED BY: _____
 DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 04/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hours
 LOCATION: 106 (Dup) OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 90 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20141130105 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>	_____	_____	_____
Adsorbent:	<u>polyurethane</u>	_____	_____	_____
Serial No.:	<u>021667</u>	_____	_____	_____
Sample No.:	<u>NP-02-400-042424</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>106</u>	<u>67.6</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0639</u>	<u>1843</u>	<u>720</u>	<u>3679</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0638</u>	<u>1842</u>	<u>720</u>	<u>3679</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.15</u>	_____	_____	_____
pre-	pre-	pre-	pre-	pre-
post-	<u>5.07</u>	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24 - 4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 117 OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 64 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20140120055 RAIN: ___ YES ___ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, PAF</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>021667</u>	_____	_____	_____
Sample No.:	<u>A-15-117-04742024</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{lpm} ml/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>117</u>	<u>71.0</u>	<u>30.04</u>	<u>5.0</u>	<u>MIA</u>	<u>0647</u>	<u>1850</u>	<u>720</u>	<u>3740</u>
<u>..</u>	<u>..</u>	<u>..</u>	<u>..</u>	<u>..</u>	<u>..</u>	<u>0643</u>	<u>1848</u>	<u>720</u>	<u>3740</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.22</u>	_____	_____	_____
pre-	<u>5.17</u>	pre-	pre-	pre-
post-	post-	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24-4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 209 OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 15 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20180820079 RAIN: ___ YES ___ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, PUF</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>021067</u>	_____	_____	_____
Sample No.:	<u>A-11-209-04242024</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021067</u>	<u>209</u>	<u>68.8</u>	<u>36.04</u>	<u>5.0</u>	<u>N/A</u>	<u>871</u>	<u>1917</u>	<u>720</u>	<u>3672</u>
<u>~</u>	<u>-</u>	<u>~</u>	<u>~</u>	<u>~</u>	<u>~</u>	<u>8648</u>	<u>1853</u>	<u>720</u>	<u>3672</u>

III. FIELD AUDIT

	<u>Cartridge 1</u>	<u>Cartridge 2</u>	<u>Cartridge 3</u>	<u>Cartridge 4</u>
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.12</u>	_____	_____	_____
pre-	<u>5.08</u>	pre- _____	pre- _____	pre- _____
post-	_____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24 - 4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 216 (Auditorium) OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 127 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 2015030216 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

Type: _____ Cartridge 1 _____ Cartridge 2 ~~_____~~ Cartridge 3 ~~_____~~ Cartridge 4 (M)
 Adsorbent: Tube PEF _____
Polyurethane _____
 Serial No.: 021667 _____
 Sample No.: A-01-216-042424 _____ (M)

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} ft³/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>216</u>	<u>70.0</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0720</u>	<u>1924</u>	<u>720</u>	<u>3737</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0653</u>	<u>0658</u>	<u>720</u>	<u>3737</u>

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?

	<u>5.21</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
pre-	<u>5.17</u>	pre-	pre-	pre-
post-		post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24 - 4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 228 OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 33 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20180820107 RAIN: NO

ADSORBENT CARTRIDGE INFORMATION:

Type: Tube Ref Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ Cartridge 4 (2)
 Adsorbent: Polyurethane
 Serial No.: 021667
 Sample No.: 1A-12-228-042424 (2)

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q) ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>228</u>	<u>69.2</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0733</u>	<u>1937</u>	<u>720</u>	<u>3737</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>0658</u>	<u>0702</u>	<u>720</u>	<u>3737</u>

III. FIELD AUDIT

Audit Flow Check Within 5.21 Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ Cartridge 4 (2)
 10% of Set Point (Y/N)? pre- 5/17 pre- pre- pre- pre- (2)
 post- post- post- post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24/24 - 4/25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 3MF OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 76 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20141130193 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube Rif</u>			
Adsorbent:	<u>Polysorbone</u>			
Serial No.:	<u>2010 021667</u>			
Sample No.:	<u>A-02-317F-04/24/2024</u>			<u>(12)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q) ^{LPM} _{ml/min}		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>317F</u>	<u>69.5</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0743</u>	<u>1948</u>	<u>720</u>	<u>3704</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0703</u>	<u>1908</u>	<u>720</u>	<u>3704</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.30</u>	<u> </u>	<u> </u>	<u> </u>
pre-	<u>5.24</u>	pre-	pre-	pre-
post-		post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hr
 LOCATION: 400 OPERATOR: Marc webb
 INSTRUMENT MODEL NO.: 134 CALIBRATED BY: Marc webb
 PUMP SERIAL NO.: 20171030045 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, PUF</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>021667</u>	_____	_____	_____
Sample No.:	<u>A-10-400-04247024</u> <u>A-400</u>	_____	_____	_____ <u>(2)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LRM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
				<u>021667</u>	<u>400</u>	<u>69.9</u>	<u>30.04</u>		
						<u>0708</u>	<u>0712</u>	<u>720</u>	<u>3733</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.20</u>	_____	_____	_____ <u>(2)</u>
pre-	<u>5.17</u>	pre- _____	pre- _____	pre- _____ <u>(2)</u>
post-	_____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/26/24-4/27/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24hrs
 LOCATION: 4026 OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 113 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20141130270 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>			
Adsorbent:	<u>PUF/XAD</u>			
Serial No.:	<u>021667</u>			
Sample No.:	<u>A-09-4026-04767024</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} L/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>4026</u>	<u>68.4</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0915</u>	<u>2300</u>	<u>819</u>	<u>4258</u>
						<u>0607</u>	<u>1642</u>	<u>1440</u>	<u>3027</u>
								<u>581</u>	<u>4201</u>
									<u>2980</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.16</u>			
pre-				
post-	<u>5.10</u>			

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSUPH DATE(S) SAMPLED: 04/26-27/24
 SITE: NCSU Raleigh, NC TIME PERIOD SAMPLED: 24 hours
 LOCATION: 4026 (DUP) OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 124 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 2015030202 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>			
Adsorbent:	<u>PUF/XAD</u>			
Serial No.:	<u>021667</u>			
Sample No.:	<u>DUP-20-4026-042624</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>4026</u>	<u>68.4</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0915</u>	<u>2300</u>	<u>818</u>	<u>4270</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0607</u>	<u>1643</u>	<u>4440</u>	<u>3247</u>
								<u>622</u>	

III. FIELD AUDIT

	<u>Cartridge 1</u>	<u>Cartridge 2</u>	<u>Cartridge 3</u>	<u>Cartridge 4</u>
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.24</u>			
	pre-	pre-	pre-	pre-
	<u>5.20</u>			
	post-	post-	post-	post-

CHECKED BY: _____
 DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-26/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hours
 LOCATION: 510E OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 37 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20180820131 RAIN: ___ YES ___ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>	_____	_____	_____
Adsorbent:	<u>polyurethane</u>	_____	_____	_____
Serial No.:	<u>021667</u>	_____	_____	_____
Sample No.:	<u>A-07-510E-042424</u>			

MW

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021667</u>	<u>510E</u>	<u>68.3</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0757</u>	<u>1524</u>	<u>447</u>	<u>2324</u>
"	"	"	"	"	"	<u>2003</u>	<u>2056</u>	<u>53</u>	<u>276</u>
"	"	"	"	"	"	<u>0757</u>	<u>1109</u>	<u>192</u>	<u>998</u>
"	"	"	"	"	"	<u>1203</u>	<u>2130</u>	<u>562</u>	<u>2922</u>
"	"	"	"	"	"	<u>0817</u>	<u>1124</u>	<u>186</u>	<u>967</u>

MW

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.21</u>	_____	_____	_____
pre-	<u>5.19</u>	pre- _____	pre- _____	pre- _____
post-	_____	post- _____	post- _____	post- _____

MW
MW

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hr
 LOCATION: 526 OPERATOR: Daniel Meyer
 INSTRUMENT MODEL NO.: 153 CALIBRATED BY: Daniel Meyer
 PUMP SERIAL NO.: 20111220090 RAIN: NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, R/F</u>			
Adsorbent:	<u>Polyurethane</u>			
Serial No.:	<u>071607</u>			
Sample No.:	<u>A-05-526-047404</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>071607</u>	<u>526</u>	<u>69.6</u>	<u>30.03</u>	<u>5.0</u>	<u>N/A</u>	<u>0813</u>	<u>2020</u>	<u>720</u>	<u>375</u>
"	"	"	"	"	"	<u>0707</u>	<u>1911</u>	<u>770</u>	<u>375</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.25</u>			<u>(N)</u>
pre-	<u>5.17</u>	pre-	pre-	pre-
post-		post-	post-	post- <u>(N)</u>

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU DH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hr
 LOCATION: 608J OPERATOR: Danille Meyer
 INSTRUMENT MODEL NO.: 58 CALIBRATED BY: Danille Meyer
 PUMP SERIAL NO.: 610-092-02R RAIN: YES X NO
20140320220

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, at</u>			
Adsorbent:	<u>Polyurethane</u>			
Serial No.:	<u>021027</u>			
Sample No.:	<u>A-05-608J-042424</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021027</u>	<u>608J</u>	<u>67.9</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0740</u>	<u>1916</u>	<u>720</u>	<u>3697</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0657</u>	<u>1900</u>	<u>720</u>	<u>3697</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.18</u>	<u>5.09</u>		
	pre-	pre-	pre-	pre-
	post-	post-	post-	post-

CHECKED BY: _____
 DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4-24-24-4/25/24
 SITE: NCSU Raleigh, NC TIME PERIOD SAMPLED: 24 hrs
 LOCATION: 635 OPERATOR: Douglas Meyer
 INSTRUMENT MODEL NO.: 40 CALIBRATED BY: Douglas Meyer
 PUMP SERIAL NO.: 20180820134 RAIN: YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube Pak</u>			
Adsorbent:	<u>Polyurethane</u>			
Serial No.:	<u>021127</u>			
Sample No.:	<u>A-010-635-042474</u>			<u>(m)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021127</u>	<u>635</u>	<u>69.1</u>	<u>30.04</u>	<u>5.04</u>	<u>N/A</u>	<u>0750</u>	<u>1953</u>	<u>720</u>	<u>3670</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0702</u>	<u>1906</u>	<u>720</u>	<u>3670</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.13 LPM</u>	<u>pre-</u>	<u>pre-</u>	<u>pre-</u>
	<u>5.09</u>	<u>post-</u>	<u>post-</u>	<u>post-</u>

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSUPH DATE(S) SAMPLED: 04/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hours
 LOCATION: 714B OPERATOR: Marc Webb
 INSTRUMENT MODEL NO.: 77 CALIBRATED BY: Marc Webb
 PUMP SERIAL NO.: 20141130194 RAIN: ___ YES ___ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube PUF</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>02667</u>	_____	_____	_____
Sample No.:	<u>A-04-714B-042424</u>			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} mL/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>02667</u>	<u>714B</u>	<u>67.5</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0700</u>	<u>1906</u>	<u>720</u>	<u>3708</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0647</u>	<u>1852</u>	<u>720</u>	<u>3708</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.14</u>	_____	_____	_____
pre-	<u>5.16</u>	pre- _____	pre- _____	pre- _____
post-	_____	post- _____	post- _____	post- _____

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 0713 @ 24 hrs
 LOCATION: 742 OPERATOR: Danielle Meyer
 INSTRUMENT MODEL NO.: 124 CALIBRATED BY: Danielle Meyer
 PUMP SERIAL NO.: 20151030202 RAIN: YES YES NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, Pk</u>			
Adsorbent:	<u>Polyurethane</u>			
Serial No.:	<u>0211017</u>			
Sample No.:	<u>A-03-742-041124</u>			<u>(12)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{2.8m} L/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>0211017</u>	<u>742</u>	<u>70.2</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0713</u>	<u>1910</u>	<u>720</u>	<u>7758</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0852</u>	<u>1857</u>	<u>720</u>	<u>3753</u>

III. FIELD AUDIT

	<u>Cartridge 1</u>	<u>Cartridge 2</u>	<u>Cartridge 3</u>	<u>Cartridge 4</u>
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.24</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
pre-	<u>5.20</u>	pre-	pre-	pre-
post-		post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

**COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)**

I. GENERAL INFORMATION

PROJECT: NCSU PH DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 0712[Ⓜ] 24hr
 LOCATION: 742 (D4) OPERATOR: Darrell Meyer
 INSTRUMENT MODEL NO.: 113 CALIBRATED BY: Darrell Meyer
 PUMP SERIAL NO.: 20141130230 RAIN: YES X NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube, Ref</u>	_____	_____	_____
Adsorbent:	<u>Polyurethane</u>	_____	_____	_____
Serial No.:	<u>081617</u>	_____	_____	_____
Sample No.:	<u>DSP-03-742-041474</u> (12)			

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q), ^{LPM} ml/min		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>081617</u>	<u>742</u>	<u>70.2</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0712</u>	<u>1916</u>	<u>720</u>	<u>3694</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>0652</u>	<u>1857</u>	<u>720</u>	<u>3694</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.16</u>	_____	_____	_____
pre-	pre-	pre-	pre-	pre-
post-	<u>5.10</u>	_____	_____	_____
	post-	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

COMPENDIUM METHOD TO-10A
FIELD TEST DATA SHEET (FTDS)

I. GENERAL INFORMATION

PROJECT: NCSU DM DATE(S) SAMPLED: 4/24-25/24
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 0725
 LOCATION: Roof OPERATOR: Danielle Meyer
 INSTRUMENT MODEL NO.: 36 CALIBRATED BY: Danielle Meyer
 PUMP SERIAL NO.: 20180820130 RAIN: X YES ___ NO

ADSORBENT CARTRIDGE INFORMATION:

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>RF Tube</u>	_____	_____	_____
Adsorbent:	<u>Polyx-trane</u>	_____	_____	_____
Serial No.:	<u>021067</u>	_____	_____	_____
Sample No.:	<u>A-14-ROOF-042424</u>	_____	_____	<u>(M)</u>

II. SAMPLING DATA

Cartridge Identification	Sampling Location	Ambient Temp., °F	Ambient Pressure, in Hg	Flow Rate (Q) ^{LPM} _{ml/min}		Sampling Period		Total Sampling Time, min.	Total Sample Volume, L
				Cartridge 1	Cartridge 2	Start	Stop		
<u>021067</u>	<u>Roof</u>	<u>60-70</u>	<u>30.04</u>	<u>5.0</u>	<u>N/A</u>	<u>0725</u>	<u>2052</u>	<u>720</u>	<u>3784</u>
<u>''</u>	<u>''</u>	<u>''</u>	<u>''</u>	<u>''</u>	<u>''</u>	<u>0642</u>	<u>1842</u>	<u>720</u>	<u>3784</u>

III. FIELD AUDIT

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Audit Flow Check Within 10% of Set Point (Y/N)?	<u>5.26</u>	_____	_____	_____
pre-	<u>5.25</u>	pre-	pre-	pre-
post-	post-	post-	post-	post-

CHECKED BY: _____

DATE: _____

Figure 5. Compendium Method TO-10A field test data sheet.

Appendix F1
Summary of Other Relevant Data

Summary of Other Relevant Data

Other relevant datasets are included in this report as follows:

- Surficial wipe samples collected by NCSU in November 2023
- Bulk samples collected by NCSU in April 2018, and October and November 2023
- NCSU historical records on removal of a transformer (1991 and 2012) and on electrical light ballast replacements (2010)

Surficial wipe and bulk sample data collected by NCSU were analyzed for the nine common PCB Aroclors by USEPA method SW846 3546/8082A. NCSU also collected two air samples which were analyzed for eight of the common PCB Aroclors. Results are shown in **Tables F1-3** in **Appendices F2-4**. Bulk samples included window caulk (1 sample) from room 602M and caulk from a joint in exterior façade panels were collected and sent to EMSL for analysis. The window caulk had reported Aroclor-1254 concentrations of 6,000 ppm and Aroclor-1268 concentrations of 17,000 ppm. The exterior panel caulk had reported Aroclor-1254 concentrations of 2,700 ppm and Aroclor-1268 concentrations of 12,000 ppm.

On October 11, 2023, NCSU collected one bulk sample of insulation facing and on October 30, 2023, collected ten bulk samples consisting of insulation facing, insulation sealant, insulation fibers, and dust from inside an air duct were collected for laboratory (EMSL) analysis. A window surface sample was collected but was not able to be analyzed. Insulation facing was collected from two offices (520E and 526) AHU room P1003, and from AHU room 100. Concentrations of Aroclor-1262 ranged from 52–1,900 ppm with an average of 754 ppm. Insulation sealant was collected from office 520E and AHU room 100 with Aroclor-1262 concentrations of 810 ppm and 89 ppm, respectively. Insulation fibers were collected from office 520E with Aroclor-1262 concentrations of 810 ppm. Air duct dust was collected from office 310P and reported as bulk material with an Aroclor-1262 concentration of 170 ppm.

An additional six bulk samples were collected on November 7, 2023, and sent to Teklab, Inc. for analysis consisting of insulation facing, insulation fibers, and air duct dust. Insulation facing was collected from offices 417 and 520E with reported Aroclor-1262 concentrations of 592 ppm and 423 ppm, respectively. Insulation fibers were also collected from offices 417 and 520E with reported Aroclor-1262 concentrations of 9.82 ppm and 8.45 ppm, respectively. Dust from inside of a duct dust was collected from offices 310P and 730 and reported as bulk material with Aroclor-1262 concentrations of 194 ppm and 46.3 ppm, respectively.

On November 7, 2023, NCSU collected ten surficial wipe samples from seven offices and two laboratories. Concentrations of Aroclor-1262 were detected in six offices (310P, 310Q, 417A, 417B, 730, and 732C). The concentrations ranged from 1.1–12 micrograms per 100 square centimeters ($\mu\text{g}/100\text{ cm}^2$) with an average of $4.6\ \mu\text{g}/100\text{ cm}^2$. Aroclor-1254 was reported at a concentration of $2.3\ \mu\text{g}/100\text{ cm}^2$ in office 730.

On November 9, 2023, NCSU collected indoor air samples from rooms 310P and 520E. The laboratory could not report Aroclor-1262 and the remaining 8 PCB Aroclors were not detected. In July 2012, the transformer serving Poe Hall failed. In June 1991, this preexisting transformer had been retro-filled with oil, and on September 30, 1991, its PCB-oil content tested at 18 ppm. Following the transformer failure in 2012, a new transformer was installed that was manufactured in 2008. The date of manufacture indicates it is a non-PCB transformer.

As set forth in the Building Energy Performance Contract received by the State Construction Office March 23, 2012, all lights in Poe Hall had been replaced or retrofitted by December 1, 2010. Pursuant to its Management of Building Demolition Debris policy, (i) NC State considers a light ballast to be a PCB ballast if the label says it is or if the label does not say at all; (ii) NC State only considers light ballasts to be Non-PCB Ballasts if “No-PCBs” is written on the ballasts; and (iii) PCB Ballasts are to be placed in 55-gallon drums for disposal and shipped on a Hazardous Waste Manifest.

Appendix F2

Table F1 – Analytical Results for Various
Materials Collected by NCSU, 2018 and 2023

Table F1. Analytical Results for Various Materials Collected by NCSU, 2018 and 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample Date	Building Location	Room	Type of Material Sampled	Aroclor-1262 (mg/kg)	Aroclor-1254 (mg/kg)	Aroclor-1268 (mg/kg)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1260 & Aroclor-1248 (mg/kg)	TSCA "PCB Bulk Product Waste" criterion (mg/kg)	Comments
Bulk Samples - EMSL Lab											
6	4	4/2/2018	Perimeter	602M	Window Caulk	ND	6,000	17,000	ND	50	--
	4	4/2/2018	Perimeter	602M	Exterior Panel Caulk	ND	2,700	12,000	ND	50	--
5	3	10/11/2023	Perimeter	520E	Insulation Facing	790	ND	ND	ND	50	--
	3	10/30/2023	Perimeter	520E	Insulation Facing	940	ND	ND	ND	50	--
	3	10/30/2023	Perimeter	520E	Insulation Sealant	810	ND	ND	ND	50	--
	3	10/30/2023	Perimeter	520E	Insulation Fibers	160	ND	ND	ND	50	--
	3	10/30/2023	Interior	526	Insulation Facing	1,900	ND	ND	ND	50	--
3	4	10/30/2023	Perimeter	310P	Air Duct Dust	170	ND	ND	ND	50	Dust analysis reported as bulk
	4	10/30/2023	Perimeter	310P	Window Surface	Lab could not analyze				50	--
Roof	5	10/30/2023	Penthouse	P1003	Insulation Facing	52	ND	ND	ND	50	--
	5	10/30/2023	Penthouse	P1003	Insulation Sealant	89	ND	ND	ND	50	--
	6	10/30/2023	Penthouse	P1003	Insulation Facing	750	ND	ND	ND	50	--
1	1	10/30/2023	Perimeter	100	Insulation Facing	89	25	ND	ND	50	--
Bulk Samples - Teklab Lab											
3	4	11/7/2023	Perimeter	310P	Air Duct Dust	194	ND	ND	ND	50	Dust analysis reported as bulk
4	3	11/7/2023	Perimeter	417	Insulation Facing	592	ND	ND	ND	50	--
	3	11/7/2023	Perimeter	417	Insulation Fibers	9.82	ND	ND	ND	50	--
5	3	11/7/2023	Perimeter	520E	Insulation Facing	423	ND	ND	ND	50	--
	3	11/7/2023	Perimeter	520E	Insulation Fibers	8.45	ND	ND	ND	50	--
7	4	11/7/2023	Perimeter	730	Air Duct Dust	46.3	ND	ND	ND	50	Dust analysis reported as bulk

¹<https://geosyntec.sharepoint.com/:b:/r/sites/NCSU-PoeHall/Shared%20Documents/General/Client%20Provided%20Files/Sample%20Data/Repeat%20Bulk%20Samples%20Teklabs.pdf?csf=1&web=1&e=ab3agC>

Notes:

- TSCA - Toxic Substances Control Act
- Values in bold exceed TSCA criterion for bulk PCBs
- HVAC - Heating, Ventilation, and Air Conditioning
- PCB - Polychlorinated Biphenyls
- mg/kg - Milligrams of PCBs per kilogram of material
- ND - No Detection
- HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 + 6.

Appendix F3

Table F2 – Analytical Results for Surface
Wipe Samples Collected by NCSU, 2023

Table F2. NCSU Collected Analytical Results for Surface Wipe Samples Collected by NCSU, 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample Date	Room #	Room Type	Surface Wiped	Aroclor-1262 (ng/100 cm ²)	Aroclor-1254 (µg/100 cm ²)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1248, Aroclor-1254, & Aroclor-1268 (µg/ 100 cm ²)	USEPA PCB threshold for non-porous surfaces in high occupancy areas (µg/ 100 cm ²)
3	4	11/7/2023	310P	Office	Window Sill	1.3	< RL	< RL	10
	4	11/7/2023	310P	Office	Wall	1.3	< RL	< RL	10
	4	11/7/2023	310Q	Office	Window Sill	1.1	< RL	< RL	10
4	3	11/7/2023	417A	Laboratory	Window Sill	8.5	< RL	< RL	10
	3	11/7/2023	417B	Laboratory	Window Sill	6.2	< RL	< RL	10
5	3	11/7/2023	519E	Office	Window Sill	ND	< RL	< RL	10
	3	11/7/2023	528	Office	Window Sill	ND	< RL	< RL	10
	3	11/7/2023	520E	Office	Window Sill	ND	< RL	< RL	10
7	4	11/7/2023	730	Office	Window Sill	12	2.3	< RL	10
	4	11/7/2023	732C	Office	Window Sill	1.8	< RL	< RL	10

¹<https://geosyntec.sharepoint.com/:b/r/sites/NCSU-PoeHall/Shared%20Documents/General/Client%20Provided%20Files/Sample%20Data/Repeat%20Bulk%20Samples%20Teklabs.pdf?csf=1&web=1&e=ab3agC>

Notes:

Values in bold exceed USEPA PCB threshold

HVAC - Heating, Ventilation, and Air Conditioning

PCB - Polychlorinated Biphenyls

mg/kg - Miliigrams of PCBs per kilogram of material

The method reporting limit (RL) is 0.50 µg/m³

< RL: analyte was not detected at or above the reporting limit

HVAC Zone 1 = AHU 1, HVAC Zone 2 = AHU 2, HVAC Zone 3 = AHU 3 & AHU 4, HVAC Zone 4 = AHU 5 +6.

Appendix F4

Table F3 – Analytical Results for Indoor
Air Samples Collected by NCSU, 2023

Table F3. Analytical Results for Indoor Air Samples Collected by NCSU, 2023
Indoor Environmental Investigation Report – Second Phase
Poe Hall, NCSU - Raleigh, NC

Floor	HVAC Circulation Zone	Sample Date	Room	Type of Material Sampled	Aroclor-1262 (µg/m ³)	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1260, Aroclor-1254, Aroclor-1268, & Aroclor-1248 (µg/m ³)	US EPA Exposure Levels for Evaluating PCBs in School Indoor Air (µg/m ³) ^{1,2}						
							Age: 1 - <2 yr	Age: 2 - <3 yr	Age: 3 - <6 yr	Age: 6 - <12 yr	Age: 12 - <15 yr	Age: 15 - <19 yr	Adult >19 yr
3	3	11/9/2023	310P	Indoor Air	Not Tested	< RL	0.1	0.1	0.2	0.3	0.5	0.6	0.5
5	3	11/9/2023	520E	Indoor Air	Not Tested	< RL	0.1	0.1	0.2	0.3	0.5	0.6	0.5

¹ <https://www.epa.gov/pcbs/exposure-levels-evaluating-polychlorinated-biphenyls-pcbs-indoor-school-air>

² The reporting limit (RL) is greater than US EPA Exposure levels for all age groups besides age: 15- <19.

Notes:

HVAC - Heating, Ventilation, and Air Conditioning

US EPA: United States Environmental Protection Agency

PCB - Polychlorinated Biphenyls

µg/m³ - micrograms per cubic meter

The method reporting limit (RL) is 0.50 µg/m³

< RL: analyte was not detected at or above the reporting limit

HVAC Zone 3 = AHU 3 & AHU 4

Appendix G
Memorandum on PCB Toxicological and
Epidemiological Literature

Memorandum

Date: February 26, 2024

To: North Carolina State University

From: Chris Saranko, Ph.D., DABT, Geosyntec Consultants of NC, P.C.

Subject: National PCB Environmental Occurrence and Health Effects Overview

Introduction

This memorandum summarizes information about poly-chlorinated biphenyl (PCB) use, presence in the built and natural environments, pathways to human exposure, and adverse health effects that have been reported to be associated with exposures to PCBs in scientific literature. This information comes primarily from publicly available reports prepared by regulatory or public health agencies including the United States Environmental Protection Agency (EPA), the Agency for Toxic Substances and Disease Registry (ATSDR), and the National Toxicology Program (NTP). These documents include:

- [*PCBs in Building Materials—Questions & Answers*](#) (USEPA, 2015)
- [*Polychlorinated Biphenyls – ToxFAQs*](#) (ATSDR, 2014)
- [*Report on Carcinogens, 15th Edition – PCBs Substance Profile*](#) (NTP, 2015)

What are PCBs?

PCBs are a class of synthetic chemicals that were manufactured in the U.S. from the late 1920s to 1977 and used in a wide range of commercial and industrial applications. There are 209 different PCB compounds, called congeners, each of which contains from 1 to 10 chlorine atoms. Most of the PCBs manufactured in the United States were marketed as complex mixtures of congeners under the trade name Aroclor. Aroclors are generally identified by a four-digit numbering code in which the first two digits indicate the type of mixture and the last two digits indicate the approximate percentage of chlorine by weight in the mixture (for example, Aroclor-1262 is 62% chlorine by weight). PCB congeners with higher molecular weights, such as those comprising Aroclor-1260, Aroclor-1262 and Aroclor-1268, have very low volatility and therefore, are not

expected to be present in air as a gas. Their presence in an air sample would most likely be tied to dust particles. PCBs were predominantly used as coolants and lubricants in electrical equipment such as capacitors and transformers due to their non-flammability, chemical stability, high boiling point, and electrical insulation properties. PCB manufacturing was discontinued in the U.S. in 1977 because of concerns about environmental persistence and potential carcinogenicity (ATSDR, 2014), and they were banned in the U.S. in 1979.

During their period of production, PCBs entered the environment via accidental spills, leaks, fires, disposal of PCB-containing products, and manufacturing processes. PCBs are still entering the environment today through runoff from urban areas where residual PCB contamination is more prevalent, as well as improper land disposal of PCB-containing products. PCBs do not readily break down in the environment and can accumulate in aquatic and terrestrial food chains.

How Were PCBs Used in Building Materials?

Common materials that contained PCBs used in schools and other buildings built or renovated between about 1950 and 1979 include caulking, paints, mastics and other adhesives, fireproofing materials, and in the manufacture of some ceiling tiles and acoustic boards, and a variety of other products. PCBs may also be present in fluorescent light ballasts manufactured before 1979 (EPA, 2014).

How Do People Get Exposed to PCBs?

PCBs are persistent in the environment and can migrate between soil, water, and air (ATSDR, 2000). Once in the environment, PCBs can accumulate in aquatic and terrestrial food chains. Fish and marine mammals, particularly top predators, can accumulate PCBs at concentrations thousands of times greater than environmental concentrations. The ability of PCBs to accumulate in the food chain makes dietary sources a predominant route of exposure to humans. Common food items such as fish, meat and dairy products are the main dietary sources of PCBs, while drinking water is generally not considered to be a significant pathway for exposure. Some dietary supplements containing fish oils have also been identified as containing PCBs (ATSDR, 2000).

Dietary intake and inhalation are generally considered to be the most significant pathways of exposure to PCBs in the general population, although PCB concentrations in food have decreased over time. In a study published in 2021, EPA scientists estimated population-level exposures to PCBs via indoor and outdoor air, indoor dust, soil, and total dietary intake. The results suggested that dietary intake contributed 88% of total PCB exposures, while indoor inhalation contributed 11% of total PCB exposures (Weitekamp et al. 2021).

Together, these sources of PCBs generally result in background exposures that are measurable but below the EPA's "reference dose" – or the amount of PCB exposure that EPA does not believe will cause harm (EPA, 2015). Indoor and outdoor air typically contain small amounts of PCBs. Most of the dietary intake comes from consumption of fish/seafood, meat, and dairy products. Some population groups or individuals with high fish/seafood consumption may experience higher dietary intake of PCBs than the general public. The U.S. Food and Drug Administration (FDA) recognizes PCBs as an unavoidable, widespread, environmental contaminant and has set temporary food tolerances for PCBs ranging from 0.2 to 3.0 ppm and a tolerance of 10 ppm in paper packaging in direct contact with food. 21 C.F.R. § 109.30(a).

PCB Health Effects

The health effects of exposure to PCBs have been studied in epidemiological and animal studies. Some studies of workers indicate that exposure to high concentrations of PCBs were associated with certain kinds of cancer in humans. The strength of evidence for such associations is stronger for melanoma and cancers of the liver and biliary tract, and weaker for breast cancer and non-Hodgkins lymphoma (AIHA, 2013). Rats that were fed diets containing high levels of PCBs for two years developed liver cancer. The NTP and EPA have concluded that PCBs may be human carcinogens based on sufficient evidence of carcinogenicity in studies with experimental animals and limited evidence of carcinogenicity in humans (NTP, 2015).

With respect to non-cancer health effects, workers exposed to high concentrations of PCBs in occupational settings have been shown to lead to possible liver damage, dermal lesions, and respiratory problems, while low level environmental exposures still need further research (ATSDR, 2014). Animal studies have found PCBs to induce a wide range of adverse health outcomes including, body weight loss, immunosuppressive effects, neurotoxicity, and reproductive and developmental toxicity (ATSDR, 2014). A more detailed summary of the health effects from PCB exposures is provided in ATSDR's *Toxicological Profile for Polychlorinated Biphenyls (PCBs)*, which compiles human and animal studies and reviews the toxicological mechanisms of PCBs (ATSDR, 2000).

References

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Weitekamp CA, Phillips LJ, Carlson LM, DeLuca NM, Cohen Hubal EA, Lehmann GM. A state-of-the-science review of polychlorinated biphenyl exposures at background levels: relative contributions of exposure routes. *Sci Total Environ.* 2021 Jul 1;776:145912.

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