

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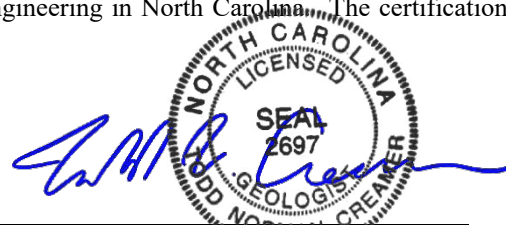
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I, Todd N. Creamer, a Licensed Professional Geologist for Geosyntec Consultants of NC, P.C., do certify that the information in this report is correct and accurate to the best of my knowledge.

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 ($\mu\text{g}/100\text{ cm}^2$)	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	
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

$\mu\text{g}/100\text{ cm}^2$ = 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 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

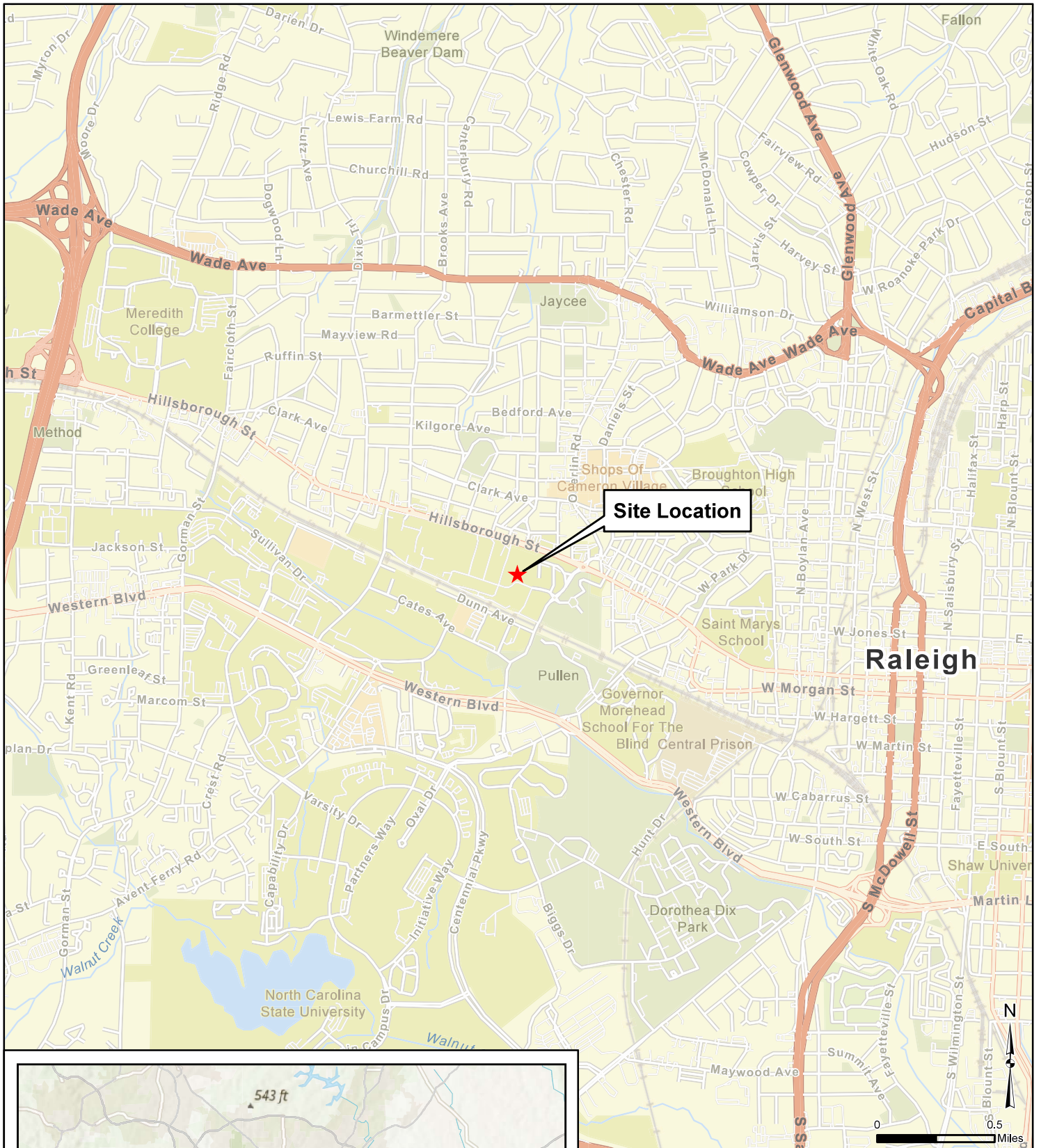
% = percentage

US EPA: United States Environmental Protection Agency

PCB: Polychlorinated Biphenyls

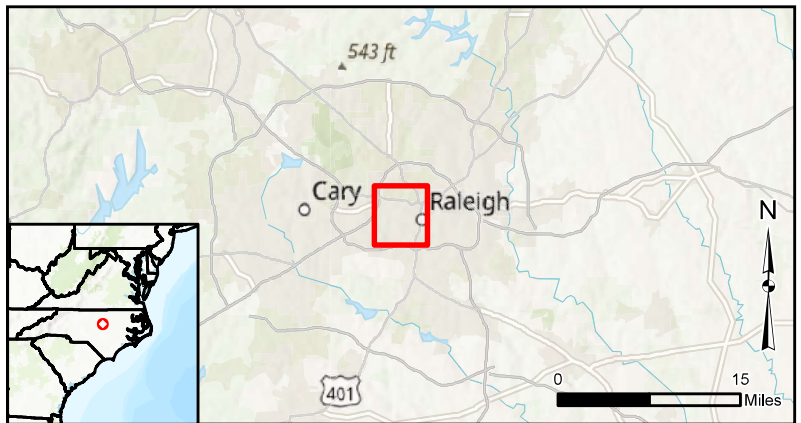
< RL: analyte was not detected at or above the reporting limit.

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

**EMSL Analytical, Inc.**

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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]
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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

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/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 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]
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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 (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/m ³	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/m ³	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/m ³	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/m ³	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/m ³	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/m ³	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/m ³	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/m ³	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/m ³	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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LIMS Reference ID: AB67731
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-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
Customer PO:
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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LIMS Reference ID: AB67731
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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EMSL Order ID: 012367731
LIMS Reference ID: AB67731
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
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% <i>R1</i>			60-120		12/28/23 11:13	12/29/23 17:31	RAG/TL1	EPA TO-10A	EPA TO-10A

**EMSL Analytical, Inc.**

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EMSL Order ID: 012367731
LIMS Reference ID: AB67731
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-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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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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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-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

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)

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

**EMSL Analytical, Inc.**

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 EMSL-CIN-01

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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

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.



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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

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 122 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 Trautner

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 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 <i>Describe below in Special Instructions</i>	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.

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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 Condition on Receipt

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

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

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

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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**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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 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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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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LIMS Reference ID: AB67810

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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

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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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

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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: 12/27/2023 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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 (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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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-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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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)

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: 12/27/2023 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
 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

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

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

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

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

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
Type:	<u>Tube</u>	_____	_____	_____
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

	Cartridge 1	Cartridge 2	Cartridge 3	Cartridge 4
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 / X 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

Cartridge 1 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ PT 12-21-23
 Audit Flow Check Within 5.0
 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: NCSUPH 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, Poe Hall DATE(S) SAMPLED: 12-20-20 - 12-21-23
 SITE: NCSU, Raleigh, NC TIME PERIOD SAMPLED: 24 hrs.
 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: Polymer
 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.

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>
<u>PT 12-20</u>									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)?
 pre- 5.0 Cartridge 1 Cartridge 2 Cartridge 3 Cartridge 4 PT, 12-20
 post- _____ 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, 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-06-635-122/23

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: SIOE 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-SIOE-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>SIOE</u>	<u>66.9</u>	<u>30.48</u>	<u>5.0</u>	<u>N/A</u>	<u>1150</u>	<u>1155</u>	<u>1,445</u>	<u>7.152</u>

III. FIELD AUDIT

Audit Flow Check Within 5.0
 10% of Set Point (Y/N)?
 pre- 4.9 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 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
Type, Pol
 Adsorbent: 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.

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

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-
 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~~ Pr, 12-20
 Adsorbent: like, but _____
 Serial No.: Polyurethane _____
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
Pr 12-20									

III. FIELD AUDIT

Audit Flow Check Within 10% of Set Point (Y/N)? 4.8 ~~Cartridge 2~~ ~~Cartridge 3~~ ~~Cartridge 4~~ Pr, 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.

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: 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 pre- Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 PT, 12-20
 post- 4.94 Cartridge 1 post- Cartridge 2 _____ Cartridge 3 _____ Cartridge 4 _____

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, 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)?
 pre- 4.8 _____ pre- _____ pre- _____
 post- 4.8 _____ 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		
014033	106	59.1	30.42	5.0	N/A	1420	1440	7,056	7,854
								1460	

III. FIELD AUDIT

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

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-033-400-1220223
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
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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-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						
Surrogate: Tetrachloro-m-xylene	73%			21-123		01/04/24 10:34	01/08/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl	90%			17-128		01/04/24 10:34	01/08/24 16:00	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-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

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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

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EMSL Sales Rep: Emily Stressman
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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 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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 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-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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 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
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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.**

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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-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						
Surrogate: Tetrachloro-m-xylene		73%		21-123		01/03/24 11:15	01/04/24 14:24	SXD/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		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 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
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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						
<i>Surrogate: Tetrachloro-m-xylene</i>		64%		21-123		01/03/24 11:15	01/04/24 15:07	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		85%		17-128		01/03/24 11:15	01/04/24 15:07	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
 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						
<i>Surrogate: Tetrachloro-m-xylene</i>		66%		21-123		01/03/24 11:15	01/04/24 15:27	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		85%		17-128		01/03/24 11:15	01/04/24 15:27	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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 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-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.**

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-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						
<i>Surrogate: Tetrachloro-m-xylene</i>		58%		21-123		01/03/24 11:15	01/04/24 16:09	SXD/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		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						
<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.**

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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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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.**

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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-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
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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-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
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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-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
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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-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
 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-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

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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
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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-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.

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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-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

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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-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						
<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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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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 EMSL-CIN-01

EMSL Order ID: 012367620
LIMS Reference ID: AB67620
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: 12/21/2023 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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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: 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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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:	JAahrens@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 <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	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"/>	<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: Olivia 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: Geosyntec Consultants	Company Name: Same as customer info
	Contact Name: Jeff Ahrens	Billing Contact:
	Street Address: 1300 South Mint St. Suite 300	Street Address:
	City, State, Zip: Charlotte NC 28203 Country:	City, State, Zip: Country:
Phone: 704-227-0850	Phone:	
Email(s) for Report: JAhrens@geosyntec.com	Email(s) for Invoice:	

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: Marc Webb / Amy 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 Describe below in Special Instructions	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-055-630-122023			12/20/23 1315	O	none	X									
W-056-700-122023			12/20/23 1025	O	none	X									
W-057-719-122023			12/20/23 1130	O	none	X									
W-058-729-122023			12/20/23 1045	O	none	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: 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 (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:	
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

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	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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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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Customer PO:
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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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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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Project Name: NCSU PH
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EMSL Sales Rep: Emily Stressman
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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						
<i>Surrogate: Tetrachloro-m-xylene</i>		70%		21-123		01/02/24 10:48	01/03/24 16:00	MxB/AxJ	SW846 3540C	SW846-8082A
<i>Surrogate: Decachlorobiphenyl</i>		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

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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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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	

**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
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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-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.**

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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-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						
Surrogate: Tetrachloro-m-xylene		55%		21-123		01/02/24 10:48	01/03/24 17:24	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		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

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
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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 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-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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**EMSL Analytical, Inc.**

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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-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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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.**

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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-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



EMSL Analytical, Inc.

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Project Name: NCSU PH

Customer PO:
EMSL Sales Rep: Emily Stressman
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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 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: 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-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						
Surrogate: Tetrachloro-m-xylene		62%		21-123		01/02/24 10:48	01/03/24 19:51	MxB/AxJ	SW846 3540C	SW846-8082A
Surrogate: Decachlorobiphenyl		73%		17-128		01/02/24 10:48	01/03/24 19:51	MxB/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
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

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 Telephone: 856-858-4800 Fax:856-786-5974
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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-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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 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
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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-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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 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

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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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 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-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

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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-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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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-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.**

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-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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 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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 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-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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 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
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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.**

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
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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



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
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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 Analytical, Inc.**

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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
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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 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-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
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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



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

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Project Name: NCSU PH

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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



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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-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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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-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 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: 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-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 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

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.**

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LIMS Reference ID: AB67733
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: 12/22/2023 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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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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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

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

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

PHONE: (800) 220-3675

EMAIL: EnvChemistry2@EMSL.com

AB67733

Customer Information	Customer ID:	Billing ID:	Same as customer info
	Company Name:	Company Name:	
	Contact Name:	Billing Contact:	
	Street Address:	Street Address:	
	City, State, Zip:	City, State, Zip:	Country:
	Country:		
	Phone:	Phone:	
	Email(s) for Report:	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:		
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: 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: 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: _____ 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:		
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

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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 35710L</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"/>		
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"/>		
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"/>		
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"/>		
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.

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: [Signatures] 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"/>	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"/>	
	<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: Anna Brand	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
Phone:	704-227-0850	City, State, Zip:		Country:	
Email(s) for Report:	JAhrens@geosyntec.com	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: 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: