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11 August 2017

Mr. Timothy Schneider
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

Subject: Interim Remedial Measures Work Plan – Amendment #1
Former Sperry Remington Site – North Portion (#c808022)
777 South Main Street, City of Elmira, Chemung County, NY

Dear Mr. Schneider:

On behalf of Unisys Corporation (Unisys), Geosyntec Consultants, Inc. and its New York engineering affiliate, Beech and Bonaparte Engineering, P.C. (collectively, Geosyntec) are submitting this Amendment #1 to the Interim Remedial Measures Work Plan (IRM Work Plan) for the Former Sperry Remington Site – North Portion (Site #c808022) (Site) in Elmira, New York. On 26 April 2016, Unisys applied to enter the Site into the New York State Department of Environmental Conservation (NYSDEC) Brownfields Cleanup Program (BCP) with the consent of Elmira City School District (ECSD). NYSDEC gave an initial determination that the BCP application is complete on 10 June 2016 and received public comments until 22 July 2016. The BCP Agreement for the Site were executed on 23 March 2017. Unisys proposed an IRM at the Site dated 30 June 2017 in accordance with the BCP Agreement, and NYSDEC provided contingent approval upon certain conditions and drawing revisions (3 July 2017). A revised Final IRM Work Plan was submitted to NYSDEC on 11 July 2017. This IRM Work Plan amendment was previously submitted as Amendment #2 on 9 August 2017.

The purpose of the IRM has been to remove soils within or adjacent to areas of the Site in which ECSD plans to construct capital improvements in 2017 including the tennis courts and main parking lot. IRM construction in the North Excavation (i.e., tennis courts) is substantially complete. As communicated to NYSDEC on 13 July 2017, IRM construction in the South Excavation (i.e., main parking lot) has been limited to excavation to four (4) feet below ground surface (ft bgs) in the main parking lot and to two (2) ft bgs in areas to the east due to the current schedule for ECSD capital improvements. The balance of the South Excavation will be completed in accordance with the IRM Work Plan at a later date. As a result, the volume of stockpiled soils that are suitable for reuse as backfill below two (2) feet bgs is expected to exceed the volume of backfill currently required. Therefore, Unisys is requesting in this IRM Work Plan amendment to modify the material storage area (MSA) at the Southern Tier Commerce Center (STCC) property to the south of the Site for long-term management.

The findings of the Site Characterization Report (SC Report) submitted to NYSDEC on 17 May 2017 included detection of polychlorinated biphenyls (PCBs) detected above the Restricted Residential Soil Cleanup Objective (SCO) of one (1) milligram per kilogram (mg/kg) in surface soil (0 to 0.17 ft bgs) in the

southwest portion of the football field and high jump pit area. In this IRM Work Plan amendment, Unisys also proposes to conduct surface soil removal to minimize potential exposure in the football field and high jump pit area during the current mobilization.

The remainder of this letter present the proposed scope of work for long-term MSA stabilization and surface soil removal in the football field/high jump pit area and an updated schedule.

PROPOSED SCOPE OF WORK

Long-Term MSA Stabilization (Amend Sections 2.1 and 2.2.2 of IRM Work Plan)

Because of the more limited scope of work to be completed during the current mobilization, the volume of stockpiled soils that are suitable for reuse as backfill below two (2) feet bgs is expected to exceed the volume of backfill required. Unisys is requesting to manage soils approved for reuse within the MSA for up to one (1) year following completion of 2017 soils removal for future use. Currently, Unisys is working with STCC to amend the current access agreement to allow the MSA to be maintained on its property until 30 September 2018.

Unisys has completed sampling of stockpiled soils for potential reuse or waste characterization in accordance with the IRM Work Plan. The current segregation of stockpiled soils is presented in **Attachment 1**. Requests to reuse soil will be submitted with validated analytical results to NYSDEC for approval in accordance with DER-10. Soils and debris that will not be maintained in the stabilized MSA will be characterized for off-Site disposal based on waste characterization results and transported off-Site upon approval from the receiving facility.

Following receipt of NYSDEC approval for reuse as backfill, windrow stockpiles will be combined into a single, larger stockpile, covered with a tarp, and secured as shown on the Construction Drawings (**Attachment 2**). The MSA will be stabilized to secure reuse soils and minimize the potential for contact with precipitation. As shown on the Construction Drawings, MSA stabilization will include:

- Anchoring the temporary fencing by driving two-inch (2-in) steel fence posts and mechanically securing the temporary fence to the driven posts;
- Regrading the stockpile to create a single pile no greater than five (5) feet tall (i.e., lower than the top of the fence);
- Covering the stockpiled soils with a heavy-duty tarp (e.g. 12 to 20 mil thickness) that is designed for longer term exposure. The tarp will be manufactured into a single large panel so it will cover the entire stockpile without requiring unwelded, overlapping panels that could catch the wind;
- Placing gravel used outside the excavation limit of disturbance for construction entrances, etc., at the base of the tarp so that it is secure and runoff from the tarp gets slowed down before hitting the ground; and
- Placing crane mats that have been used during construction on top of the tarp to create an inspection walkway as well as additional anchoring.

After demobilization, Unisys will inspect the MSA weekly and after significant storm events (e.g. over one inch of rainfall in twenty-four [24] hours). Inspections will include observations of the fence, tarp, and material used for anchoring. Deficiencies will be corrected within twenty-four (24) hours of observation. Inspection reports will be included in the monthly progress report submitted to NYSDEC in accordance with the BCP Agreement. The inspection report will include a checklist, photographs and details of corrective actions taken. The use of compost filter socks as an erosion and sediment control will be evaluated for effectiveness and may need to be replaced with silt fence

Football Field Surface Soil Removal

As presented in the SC Report, PCBs were detected above the Restricted Residential SCO in surface soil (0 to 0.17 ft bgs) at twelve (12) locations in the football field (1.3 to 10.4 mg/kg total PCBs) shown on **Figure 1**. Additional samples were collected on 17 May 2017 to delineate the area around the detection of 10.4 mg/kg total PCBs in surface soil at SSHS-B445. The analytical report is included as **Attachment 3**. PCB results in surface soil are summarized on **Table 1.**

Soils within the football field above the cleanup goal of PCB concentrations greater than or equal to one (1) mg/kg as identified on **Figure 1** will be removed to a depth of six (6) inches. Surface soil removal will be conducted in accordance with the Construction Drawing provided as **Attachment 2** and the Construction Drawings and Construction Specifications included in the IRM Work Plan. Excavated soils from those areas with PCB concentrations less than ten (10) mg/kg will be stockpiled for potential use as backfill between two (2) and fourteen (ft) bgs. Soils with total PCB concentrations greater than ten (10) mg/kg and less than fifty (50) mg/kg will be stockpiled for transport and off-Site disposal as non-hazardous waste. Soils will be tested for reuse as backfill or off-Site transport for disposal in accordance with the IRM Work Plan. Following excavation, demarcation netting will be placed at the base of the excavation and imported topsoil approved for import to the Site will be placed in one (1) six-inch (6-inch) lift. The surface will be finished with sod in order to provide an immediate vegetative cover.

Due to the need to traverse the existing running track in a manner that does not damage its surface, excavation of the football field will be performed using mini-excavator equipment and pick-up sized dump trucks. The mini-excavator will load the pick-up dump truck, which will then transport soils over the running track to the MSA. Trucks will be loaded an inspected prior to transport as described in Specification Sections 02057 and 02110. As an added protective measure, crane mats underlain by geotextile fabric will be placed on the access route between the excavation and the temporary haul road.

Figure 1 also presents the extent of PCBs in shallow subsurface (0.17 to 2 ft bgs). The total PCB concentration detected at SSHS-B169 at this depth interval is approximately eighty (80) mg/kg, as shown in **Table 1**. A soil sample was collected at SSHS-B169B on 3 August 2017 from the zero to six (0-6) inches bgs to determine if soils removed from that area would need to be managed as TSCA soils (total PCBs greater than or equal to 50 mg/kg). Analytical results were received on 7 August 2017 and validated on 9 August 2017 (see **Attachment 3**). As shown on **Figure 1**, the total PCB concentration for the 0-6 inch interval at SSHS-B169B is less than one (1) mg/kg. Therefore, no soils will need to be managed as TSCA soils.

QUALITY ASSURANCE

Sample handling, including sample custody and sample control, will be conducted in accordance with the QAPP/FSP. Quality control samples, including field duplicates, matrix spike/matrix spike duplicates, trip blanks, and equipment blanks, will be collected at the frequency specified in the QAPP/FSP.

HEALTH AND SAFETY

A Site-specific Health and Safety Plan (HASP) was presented in the SC Work Plan and subsequent addenda. Each contractor will be required to prepare a project-specific HASP in accordance with DER-10 to be followed during implementation of the field program.

SCHEDULE AND DELIVERABLES

Unisys will commence the implementation of football field surface soil removal on 14 August 2017, pending NYSDEC approval. Once initiated, Unisys anticipates that soil removal and restoration will take approximately fourteen (14) days to complete. Completion of the work will be dependent on weather conditions and access.

Long-term stabilization of the MSA will commence upon receipt of NYSDEC approval for reuse of soils to be maintained within the MSA and transport of soils not designated for reuse for off-Site disposal as non-hazardous waste. Weekly MSA inspections will begin following IRM demobilization. As noted above, it is anticipated that long-term use of the MSA will continue until 30 September 2018.

CLOSING

Geosyntec appreciates the opportunity to submit this work plan to the NYSDEC, NYSDOH and ECSD.
If you have any questions, please contact Mr. Kevin Krueger of Unisys at (651) 687-2210.

Sincerely,

Geosyntec Consultants, Inc.

Paul Brookner, P.G.
Principal/Project Director
Geosyntec Consultants, Inc.

Aron Krasnopoler, Ph.D., P.E.
Project Engineer/Project Manager
Beech and Bonaparte Engineering P.C.

Attachments: Table 1 –Summary of PCB Results in Football Field Surface and Shallow Subsurface Soils
Figure 1 – Proposed Football Field Surface Soil Removal
Attachment 1 – Stockpile Layout
Attachment 2 – Construction Drawings

Attachment 3 – Analytical Reports and Data Validation Reports

Copies to:	Bernette Schilling, NYSDEC	Kevin Krueger, Unisys
	Ben Conlon, NYSDEC	John H. Paul, Beveridge & Diamond
	Michael Cruden, NYSDEC	Michael G. Murphy, Beveridge & Diamond
	Justin Deming, NYSDOH	Michael Dunn, ECSD
	Dawn Hettrick, NYSDOH	Hillary Austin, ECSD

Certification

I Aron Krasnopoler certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Amendment #1 to the Interim Remedial Measures Work Plan for the Former Sperry Remington Site – North Portion dated 11 August 2017 was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Aron Krasnopoler, P.E.

STATE OF NEW YORK
ARON A. KRASNOPOLER
069954-1
LICENSED PROFESSIONAL ENGINEER
8/11/17

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, NY 14414-9516
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www.dec.ny.gov

Via E-mail

August 10, 2017

Mr. Kevin Krueger, PE
Unisys Corporation
Corporate Environmental Affairs
3199 Pilot Knob Road
Eagan, NY 55121

Dear Mr. Krueger:

Re: Interim Remedial Measures Work Plan - Amendment
Former Sperry Remington Site #c808022
Elmira, Chemung County

The New York State Department of Environmental Conservation (NYSDEC) has completed the review of "Interim Remedial Measures Work Plan – Amendment #2" for the Former Sperry Remington – North Portion Site #c808022, last revised August 9, 2017 and approve the work plan amendment contingent upon the following:

1. The Amendment is appropriately renamed Amendment #1.
2. Approval of work plan modifications to Material Storage Area (MSA) management techniques and time duration are contingent upon Southern Tier Commerce Center approval.
3. Written NYSDEC approval to consolidate windrows will be required.
4. Community air monitoring will continue during amendment activities.

This letter shall be attached to the revised IRM Work Plan Amendment #1 and a hard copy is required to be kept in the document repository and one sent to NYSDEC.

Additional NYS Department of Health comments, if any, will be transmitted directly.

As a reminder, all final documents and reports are to be in electronic format on compact computer discs (CDs). The disk should contain an Adobe® Acrobat® Portable Document Format (PDF) file and must be searchable. In addition, all data submitted to the DER must be in the DEC-approved Electronic Data Deliverable (EDD). Moreover, new data must be submitted on a continuous basis immediately after data validation occurs but in no event more than 90 days after the data has been submitted to the remedial party or its consultant(s). In other words, data is not to be held and submitted with the related reports.

Please contact me at (585) 226-5480 if you have any questions regarding this letter.

Sincerely,

Timothy Schneider, P.E.
Professional Engineer 1

P. Brookner
A. Krasnopoler
B. Schilling
M. Cruden
B. Conlon
D. Hettrick
J. Deming
A. Meinstein

TABLES

TABLE 1
PCBs in Surface Soil and Shallow Subsurface Soil - Southwest Football Field Area
Former Sperry Remington Site - North
Elmira, New York

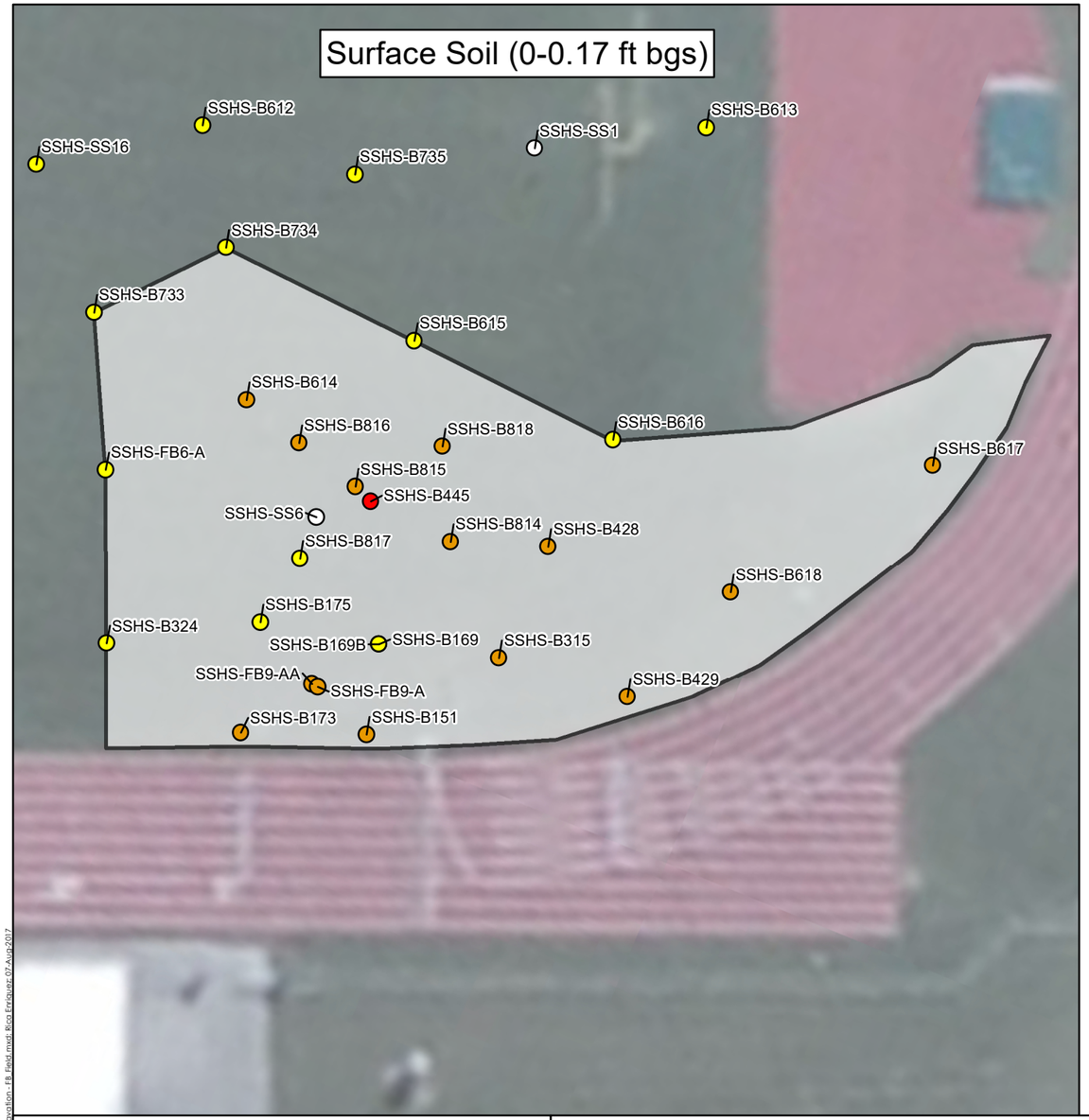
			Polychlorinated Biphenyls									
			Arochlor 1016	**Arochlor 1221**	**Arochlor 1232**	**Arochlor 1242**	**Arochlor 1248**	**Arochlor 1254**	**Arochlor 1260**	**Arochlor 1268**	**Arochlor 1262**	**Total PCBs**
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.00079	0.001	0.00091	0.00086	0.00092	0.0053	0.00075	0.00068	0.0012	
Surface Soil Criteria												1
NYS Hazardous Material												50
Location	**Depth Range (ft bgs)**	**Sample Date**										
SSHS-B135	0-2	7/27/2015	<0.0039U	<0.0048U	<0.0067U	<0.0049U	0.88J	0.49J	0.079J	<0.0039U	<0.0071U	1.449
SSHS-B138	0-2	7/27/2015	<0.0039U	<0.0048U	<0.0067U	<0.0049U	0.32J	0.19J	0.04J	<0.0039U	<0.0071U	0.55
SSHS-B151	0-0.17	8/5/2015	<0.0038U	<0.0046U	<0.0064U	<0.0047U	1.9J	1.5J	0.2J	<0.0037U	<0.0068U	3.6
SSHS-B151	0.17-2	8/5/2015	<0.19U	<0.23U	<0.31U	<0.23U	29J	13J	1.6J	<0.18U	<0.34U	43.6
SSHS-B166	0-2	7/27/2015	<0.0039U	<0.0048U	<0.0066U	<0.0048U	<0.0047U	0.39J	0.12J	<0.0038U	<0.007U	0.51
SSHS-B169	0-0.17	7/28/2015	<0.0039U	<0.0047U	<0.0065U	<0.0048U	1J	0.63J	0.11J	<0.0038U	<0.007U	1.74
SSHS-B169	0.17-2	7/28/2015	<0.19U	<0.23U	<0.32U	<0.23U	55J	23J	2.3J	<0.18U	<0.34U	80.3
SSHS-B169B	0-0.5	8/3/2017	<0.011U	<0.01U	<0.0079U	<0.016U	0.37J	0.27J	0.1J	<0.0061U	<0.014U	0.74
SSHS-B170	0-2	7/27/2015	<0.0041U	<0.005U	<0.0069U	<0.005U	0.16J	0.09J	<0.02U	<0.004U	<0.0073U	0.25
SSHS-B173	0-0.17	8/5/2015	<0.0039U	<0.0047U	<0.0065U	<0.0048U	2J	1.4J	0.2J	<0.0038U	<0.007U	3.6
SSHS-B173	0.17-2	8/5/2015	<0.076U	<0.093U	<0.13U	<0.094U	28J	13J	1.4J	<0.075U	<0.14U	42.4
SSHS-B175	0-0.17	7/28/2015	<0.0041U	<0.005U	<0.0069U	<0.005U	0.14J	0.13J	0.051J	<0.004U	<0.0073U	0.321
SSHS-B175	0.17-2	7/28/2015	<0.0038U	<0.0047U	<0.0065U	<0.0048U	4.2J	1.8J	0.23J	<0.0038U	<0.007U	6.23
SSHS-B222	0-2	7/16/2015	<0.0042U	<0.0051U	<0.007U	<0.0052U	0.61J	0.31J	0.047J	<0.0041U	<0.0075U	0.967
SSHS-B223	0-2	7/28/2015	<0.004U	<0.0049U	<0.0068U	<0.005U	1J	0.69J	0.19J	<0.004U	<0.0073U	1.88
SSHS-B228	0-2	7/15/2015	<0.004U	<0.005U	<0.0069U	<0.005U	<0.005U	0.099J	0.038J	<0.004U	<0.0073U	0.137
SSHS-B229	0-2	7/15/2015	<0.004U	<0.005U	<0.0069U	<0.005U	2.7J	1.2J	0.1J	<0.004U	<0.0073U	4
SSHS-B230	0-2	7/28/2015	<0.004U	<0.0049U	<0.0068U	<0.0049U	1.3J	0.43J	0.041J	<0.0039U	<0.0072U	1.771
SSHS-B234A	0-2	7/28/2015	<0.0039U	<0.0048U	<0.0066U	<0.0048U	0.36J	0.21J	0.082J	<0.0039U	<0.0071U	0.652
SSHS-B314	0-2	3/2/2016	<0.091U	<0.14U	<0.05U	<0.074U	10J	4.8J	0.35J	<0.037U	<0.062U	15.15
SSHS-B315	0-0.17	3/1/2016	<0.011U	<0.017U	<0.0059U	<0.0087U	3	<0.0088U	0.31	<0.0044U	<0.0074U	3.31
SSHS-B315	0.17-2	3/1/2016	<0.087U,F1	<0.14U	<0.047U	<0.07U	8.2J	3.2J	0.59J	<0.035U	<0.059U	11.99
SSHS-B318	0-2	3/2/2016	<0.0093U	<0.015U	<0.0051U	<0.0075U	0.12J	0.084J	0.029J	<0.0038U	<0.0063U	0.233
SSHS-B320	0-2	3/2/2016	<0.0094U	<0.015U	<0.0051U	<0.0076U	2J	1.1J	0.19J	<0.0038U	<0.0064U	3.29
SSHS-B324	0-0.17	3/1/2016	<0.011U	<0.017U	<0.0058U	<0.0085U	0.75	<0.0085U	0.092	<0.0043U	<0.0072U	0.842
SSHS-B324	0.17-2	3/1/2016	<0.043U	<0.068U	<0.024U	<0.035U	5.3J	1.9J	0.37J	<0.018U	<0.029U	7.57
SSHS-B407	0-2	8/25/2016	<0.009U	<0.014U	<0.0049U	<0.0072U	0.012J	<0.0073U	<0.0067U	<0.0037U	<0.0061U	0.012
SSHS-B411	0-2	8/22/2016	<0.0085U	<0.013U	<0.0047U	<0.0069U	1.4J	0.95J	0.27J	<0.0035U	<0.0058U	2.62
SSHS-B412	0-2	8/25/2016	<0.0092U	<0.015U	<0.005U	<0.0074U	0.2J	0.11J	<0.0069U	<0.0037U	<0.0062U	0.31
SSHS-B413	0-2	8/26/2016	<0.0082U	<0.013U	<0.0045U	<0.0066U	0.83J	0.3J	0.072J	<0.0033U	<0.0056U	1.202
SSHS-B414	0-2	8/22/2016	<0.0085U	<0.013U	<0.0047U	<0.0069U	1.6J	0.86J	0.14J	<0.0035U	<0.0058U	2.6
SSHS-B428	0-0.17	8/26/2016	<0.01U	<0.016U	<0.0056U	<0.0082U	1.3J	0.57J	0.18J	<0.0041U	<0.0069U	2.05
SSHS-B428	0.17-2	8/26/2016	<0.0085U	<0.013U	<0.0046U	<0.0068U	4.8J	3.1J	0.94J	<0.0035U	<0.0057U	8.84
SSHS-B429	0-0.17	8/26/2016	<0.0097U	<0.015U	<0.0053U	<0.0078U	0.83J	0.39J	0.099J	<0.004U	<0.0066U	1.319
SSHS-B429	0.17-2	8/26/2016	<0.0089U	<0.014U	<0.0049U	<0.0072U	6.2J	2.3J	0.5J	<0.0036U	<0.0061U	9
SSHS-B441	0-2	8/24/2016	<0.0093U	<0.015U	<0.0051U	<0.0075U	0.7J	0.21J	<0.007U	<0.0038U	<0.0063U	0.91
SSHS-B442	0-2	8/24/2016	<0.0088U	<0.014U	<0.0048U	<0.0071U	1.7J	0.69J	0.16J	<0.0036U	<0.006U	2.55
SSHS-B445	0-0.17	8/26/2016	<0.011U	<0.017U	<0.0058U	<0.0085U	5.3J	4J	1.1J	<0.0043U	<0.0072U	10.4
SSHS-B612	0-0.17	2/7/2017	<0.012U	<0.012U	<0.009U	<0.018U	0.037J	0.022J	<0.015U	<0.0069U	<0.016U	0.059
SSHS-B613	0-0.17	2/8/2017	<0.013U	<0.012U	<0.0094U	<0.019U	0.086J	0.055J	0.024J	<0.0073U	<0.017U	0.165
SSHS-B614	0-0.17	2/7/2017	<0.012U	<0.012U	<0.0089U	<0.018U	1.3J	0.5J	0.12J	<0.0068U	<0.016U	1.92
SSHS-B615	0-0.17	2/7/2017	<0.012U	<0.012U	<0.009U	<0.018U	0.24J	0.12J	0.033J	<0.007U	<0.016U	0.393
SSHS-B616	0-0.17	2/7/2017	<0.013U	<0.012U	<0.0094U	<0.019U	0.43J	0.18J	0.042J	<0.0072U	<0.017U	0.652
SSHS-B617	0-0.17	2/7/2017	<0.012U	<0.012U	<0.0093U	<0.019U	0.66J	0.29J	0.076J	<0.0072U	<0.017U	1.026
SSHS-B618	0-0.17	2/7/2017	<0.013U	<0.012U	<0.0095U	<0.019U	1.8J	0.77J	0.18J	<0.0073U	<0.017U	2.75
SSHS-B733	0-0.17	4/11/2017	<0.012U	<0.012U	<0.0088U	<0.018U	<0.011U	0.054	0.023	<0.0068U	<0.016U	0.077
SSHS-B734	0-0.17	4/11/2017	<0.012U	<0.011U	<0.0086U	<0.017U	<0.01U	0.059	0.018J	<0.0066U	<0.016U	0.077
SSHS-B735	0-0.17	4/11/2017	<0.012U	<0.012U	<0.0089U	<0.018U	<0.011U	0.054	<0.015U	<0.0068U	<0.016U	0.054
SSHS-B814	0-0.17	5/18/2017	<0.012U	<0.011U	<0.0087U	<0.017U	1.2	0.98	0.21	<0.0067U	<0.016U	2.39
SSHS-B814	0.17-2	5/18/2017	<0.01U	<0.01U	<0.0078U	<0.016U	0.73	0.48	0.062	<0.006U	<0.014U	1.272
SSHS-B815	0-0.17	5/18/2017	<0.011U	<0.011U	<0.0085U	<0.017U	1.6	1.6	0.4p	<0.0066U	<0.015U	3.6
SSHS-B815	0.17-2	5/18/2017	<0.01U	<0.01U	<0.0076U	<0.015U	3.7	2.8	0.56	<0.0059U	<0.014U	7.06
SSHS-B816	0-0.17	5/18/2017	<0.011U	<0.011U	<0.0083U	<0.017U	0.75	0.53	0.13	<0.0064U	<0.015U	1.41
SSHS-B816	0.17-2	5/18/2017	<0.01U	<0.01U	<0.0078U	<0.016U	0.39	0.16	0.055	<0.006U	<0.014U	0.605
SSHS-B817	0-0.17	5/18/2017	<0.011U	<0.011U	<0.0085U	<0.017U	0.14	0.14	0.052	<0.0065U	<0.015U	0.332
SSHS-B817	0.17-2	5/18/2017	<0.01U	<0.01U	<0.0076U	<0.015U	0.18	0.088	0.054	<0.0059U	<0.014U	0.322

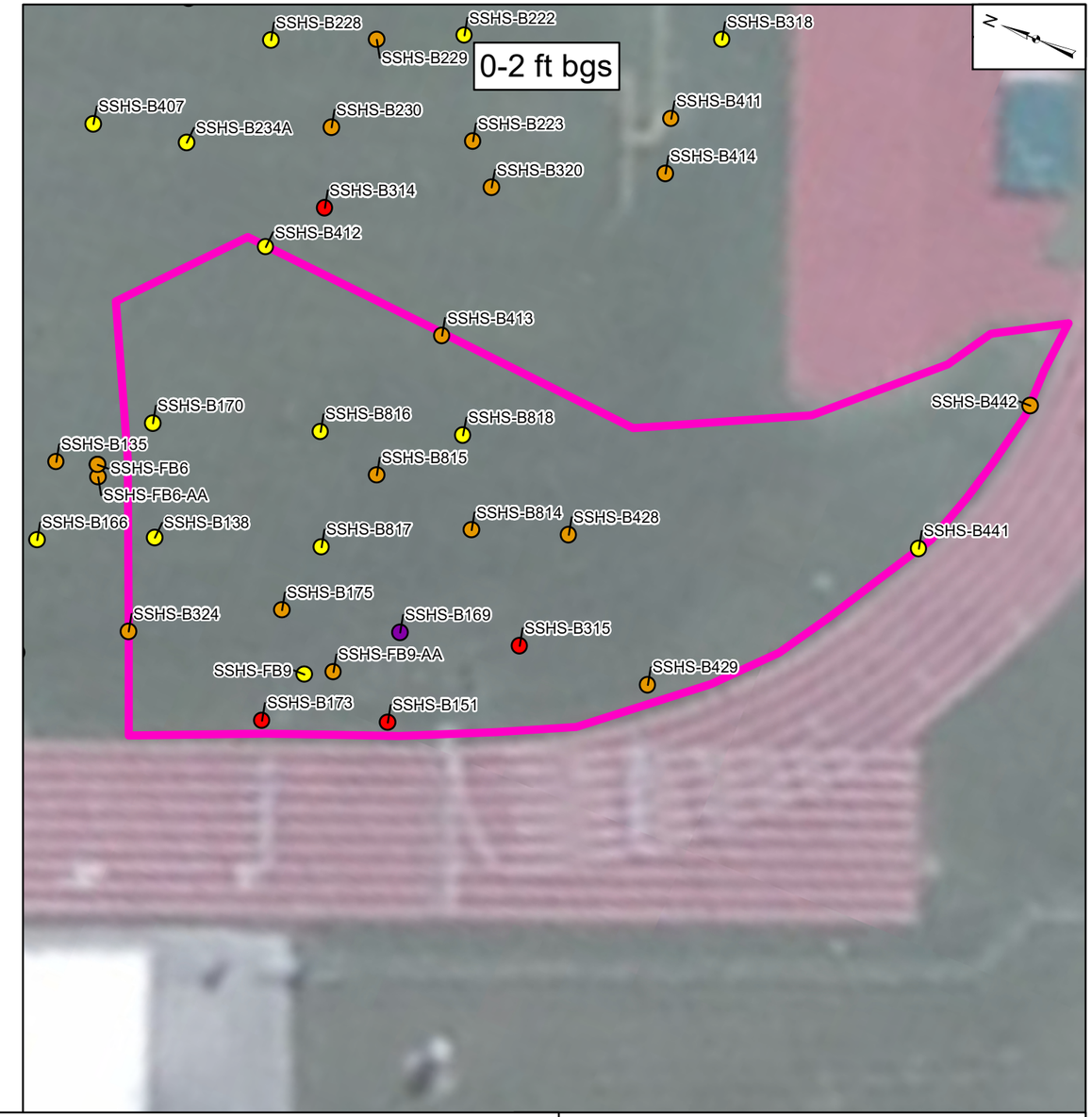
TABLE 1
PCBs in Surface Soil and Shallow Subsurface Soil - Southwest Football Field Area
Former Sperry Remington Site - North
Elmira, New York

			Polychlorinated Biphenyls									
			Arochlor 1016	**Arochlor 1221**	**Arochlor 1232**	**Arochlor 1242**	**Arochlor 1248**	**Arochlor 1254**	**Arochlor 1260**	**Arochlor 1268**	**Arochlor 1262**	**Total PCBs**
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.00079	0.001	0.00091	0.00086	0.00092	0.0053	0.00075	0.00068	0.0012	
Surface Soil Criteria												1
NYS Hazardous Material												50
Location	**Depth Range (ft bgs)**	**Sample Date**										
SSHS-B818	0-0.17	5/18/2017	<0.011U	<0.011U	<0.0084U	<0.017U	0.64	0.6	0.14	<0.0065U	<0.015U	1.38
SSHS-B818	0.17-2	5/18/2017	<0.01U	<0.01U	<0.0078U	<0.016U	0.17	0.12	<0.013U	<0.006U	<0.014U	0.29
SSHS-FB6	1-2	6/29/2000	<0.04U	<0.04U	<0.04U	<0.04U	0.94D	<0.04U	0.066	-	-	1.006
SSHS-FB6	1-3	6/29/2000	<0.037U	<0.037U	<0.037U	<0.037U	<0.037U	<0.037U	<0.037U	-	-	<0
SSHS-FB6-A	0-0.17	7/22/2014	<0.0008U	<0.001U	<0.00092U	<0.00087U	0.18J	0.15J	<0.00076U	<0.00069U	<0.0012U	0.33
SSHS-FB6-AA	0-2	7/15/2015	<0.0039U	<0.0048U	<0.0066U	<0.0048U	<0.0048U	1.3J	0.71J	<0.0038U	<0.0071U	2.01
SSHS-FB9	1-2	6/29/2000	<0.041U	<0.041U	<0.041U	<0.041U	<0.041U	<0.041U	0.068	-	-	0.068
SSHS-FB9-A	0-0.17	7/22/2014	<0.0016U	<0.0021U	<0.0018U	<0.0018U	1.2J	0.8J	<0.0015U	<0.0014U	0.091J	2.091
SSHS-FB9-AA	0-0.17	7/16/2015	<0.0046U	<0.0057U	<0.0078U	<0.0057U	1.4J	0.95J	0.17J	<0.0046U	<0.0084U	2.52
SSHS-FB9-AA	0.17-0.5	7/16/2015	<0.0043U	<0.0052U	<0.0072U	<0.0053U	1.5J	0.87J	0.13J	<0.0042U	<0.0077U	2.5
SSHS-SS1	0-0.25	5/10/2000	<0.05U	<0.05U	<0.05U	<0.05U	<0.05U	<0.05U	<0.05U	-	-	<0
SSHS-SS16	0-0.17	7/22/2014	<0.00079U	<0.001U	<0.00091U	<0.00086U	0.028J	0.025J	<0.00075U	<0.00068U	<0.0012U	0.053
SSHS-SS6	0-0	9/12/2000	<0.047U	<0.047U	<0.047U	<0.047U	<0.047U	<0.047U	<0.047U	-	-	<0

Notes:
J - estimated value
U - non-detect
- - not analyzed
mg/kg - milligram per kilogram
ft bgs - feet below ground surface
PCBs - polychlorinated biphenyls
Concentrations detected above the soil criteria for PCBs (0-2 ft bgs) of 1 mg/kg (NYSDEC CP-51) are presented in grey.
PCB concentrations detected above New York State hazardous waste threshold (6 NYCRR Part 371.4 (e)) are presented in dark grey

FIGURES





Legend

Total PCBs Concentration

- Non-Detect
- >0 to 1 mg/kg
- >1 to 10 mg/kg
- >10 to 50 mg/kg
- >50 mg/kg

Proposed Excavation Area (0-0.5 ft bgs)

Proposed Excavation Bottom (0.5 ft bgs)

Notes
PCB - Polychlorinated Biphenyl
ft bgs - Feet below ground surface
mg/kg - milligram per kilogram

Aerial imagery accessed via ArcGIS Online and provided by Microsoft on 07 August 2017. Image is dated 2 June 2010.

25 0 25 Feet

Proposed Football Field Excavation

Former Sperry Remington - North Portion #808022
Elmira, New York

Geosyntec consultants

Columbia, Maryland | August 2017

Figure 1

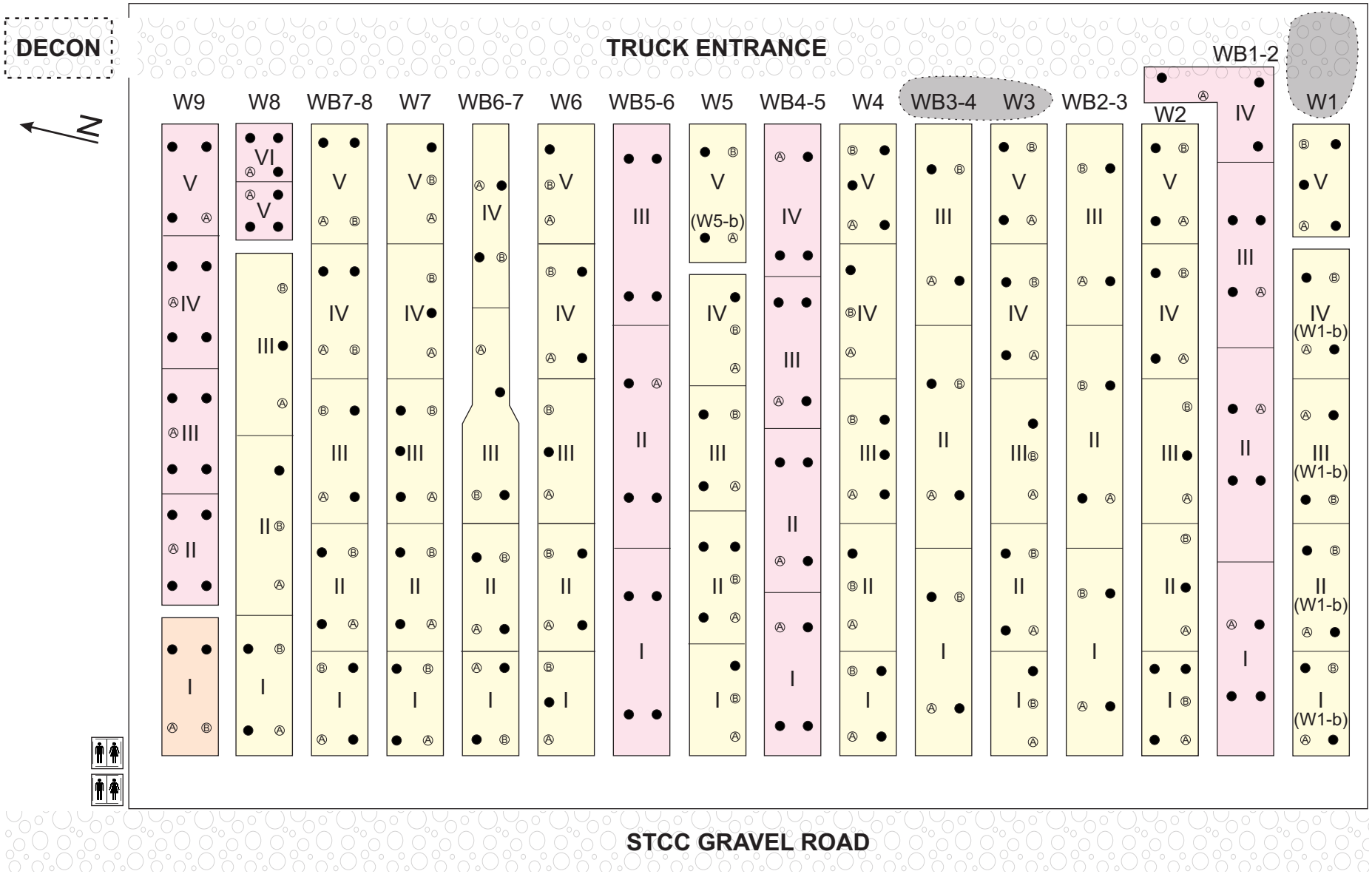
\\minneapolis01\DATA\GIS\Elmira - MN0873\Maps\NYDEC-ACOC\BM 2017\Excavation - FB Field must fixes Enviquest 07-Aug-2017

ATTACHMENT 1

STOCKPILE LAYOUT

FORMER SPERRY REMINGTION STCC STOCKPILE AREA

as of August 8, 2017



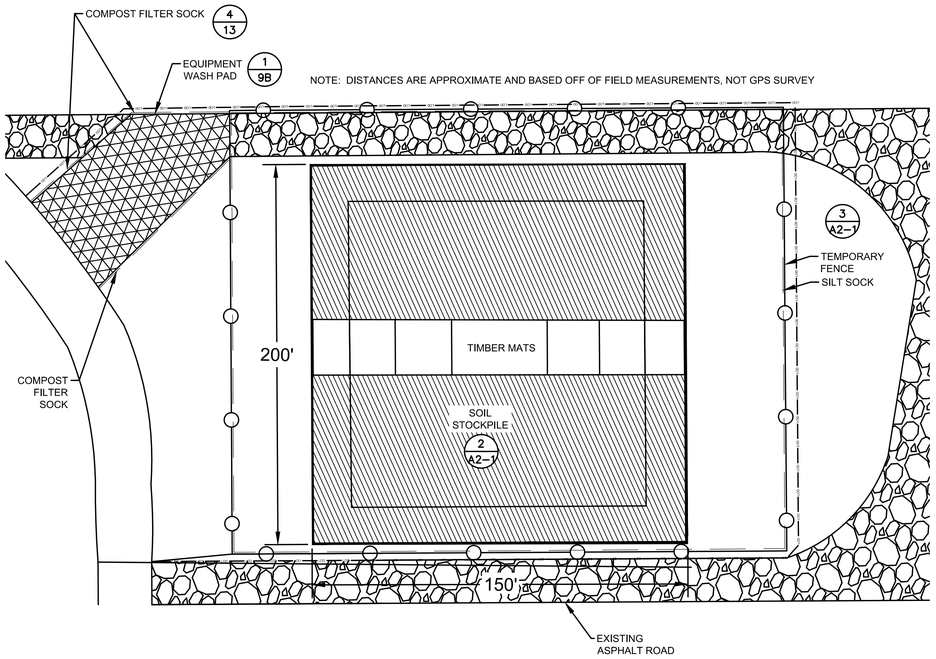
Legend

- 10<50 ppm
- TSCA overlay
- <10 ppm
- Gravel Road(s)
- I-VI Windrow ≤100yd³ sections
- Sample(s)
- Mulch, Asphalt, Concrete

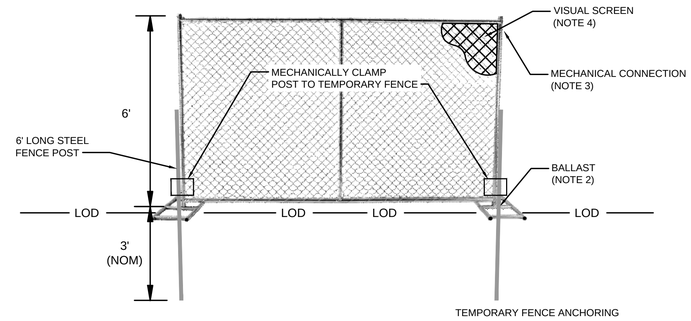
Note: This figure is not to scale, but depicts general location of windrows, sections, approximate sampling locations, and material PCB concentrations. There is no SIV of W8.

ATTACHMENT 2

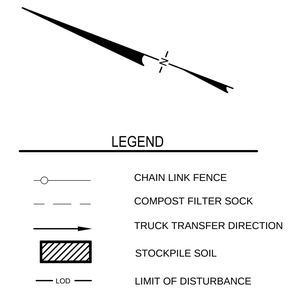
CONSTRUCTION DRAWINGS



1 A2-1 PLAN
STOCKPILE AREA
NTS



3 A2-1 PLAN
TEMPORARY FENCE

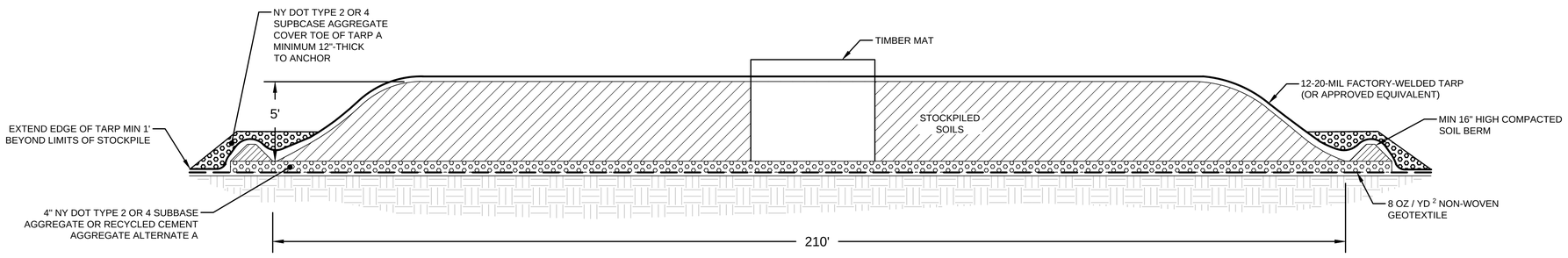


NOTES:

1. PROVIDE 6-FT TALL, PORTABLE CHAIN-LINK FENCE PANELS, SET ON THE EXISTING GROUND SURFACE, COINCIDENT WITH THE LIMIT OF CONSTRUCTION DISTURBANCE.
2. REPLACE TEMPORARY BALLAST WITH DRIVEN POSTS AS SHOWN, TO PREVENT OVERTURNING OF THE FENCE PANELS.
3. PROVIDE FLEXIBLE, MECHANICAL CONNECTION, BETWEEN FENCE PANELS.
4. PROVIDE FULL-COVERAGE VISUAL SCREENING OVER EACH ENTIRE FENCE PANEL.

NOTES

1. CONTRACTOR SHALL UTILIZE EARTH DIKE, COMPOST FILTER SOCK, AND DEWATERING SUMP PIT.
2. CONTRACTOR SHALL PLACE A HEAVY-DUTY TARP (12 TO 20 MIL THICKNESS) THAT IS DESIGNED FOR LONGER TERM EXPOSURE OVER THE ENTIRE STOCKPILE. THE TARP SHALL BE FACTORY-WELDED BY THE MANUFACTURER INTO A SINGLE LARGE PANEL TO COVER THE STOCKPILE.
3. CONTRACTOR SHALL PLACE GRAVEL PREVIOUSLY USED OUTSIDE THE EXCAVATION LIMIT OF DISTURBANCE (CONSTRUCTION ENTRANCES, ETC.), AROUND THE ENTIRE PERIMETER BASE OF THE TARP SO THAT IT IS SECURE AND RUNOFF FROM THE TARP IS SLOWED BEFORE RUNNING ONTO SURROUNDING GROUND.
4. TIMBER MATS FROM EQUIPMENT WASH PAD(S) SHALL BE PLACED ON TOP OF THE TARP TO CREATE AN INSPECTION WALKWAY AS WELL AS ADDITIONAL ANCHORING.
5. CONTRACTOR SHALL COVER THE EQUIPMENT WASH PAD WITH A TARP AND SECURE FOR REUSE.
6. CONTRACTOR SHALL SECURE TEMPORARY 6' TALL CHAIN LINK FENCING PARALLEL TO THE LIMITS OF CONSTRUCTION DISTURBANCE. FENCING SHALL INCLUDE VISUAL SCREENING. SEE DRAWINGS FOR DETAILS.



2 A2-1 DETAIL
SOIL STOCKPILE (FRONT VIEW)

0 40' 80'
SCALE IN FEET

REV	DATE	DESCRIPTION	DRN	APP

Beech and Bonaparte engineering p.c.
an affiliate of Geosyntec Consultants

UNISYS

TITLE: MATERIAL STAGING AREA (MSA) PLAN

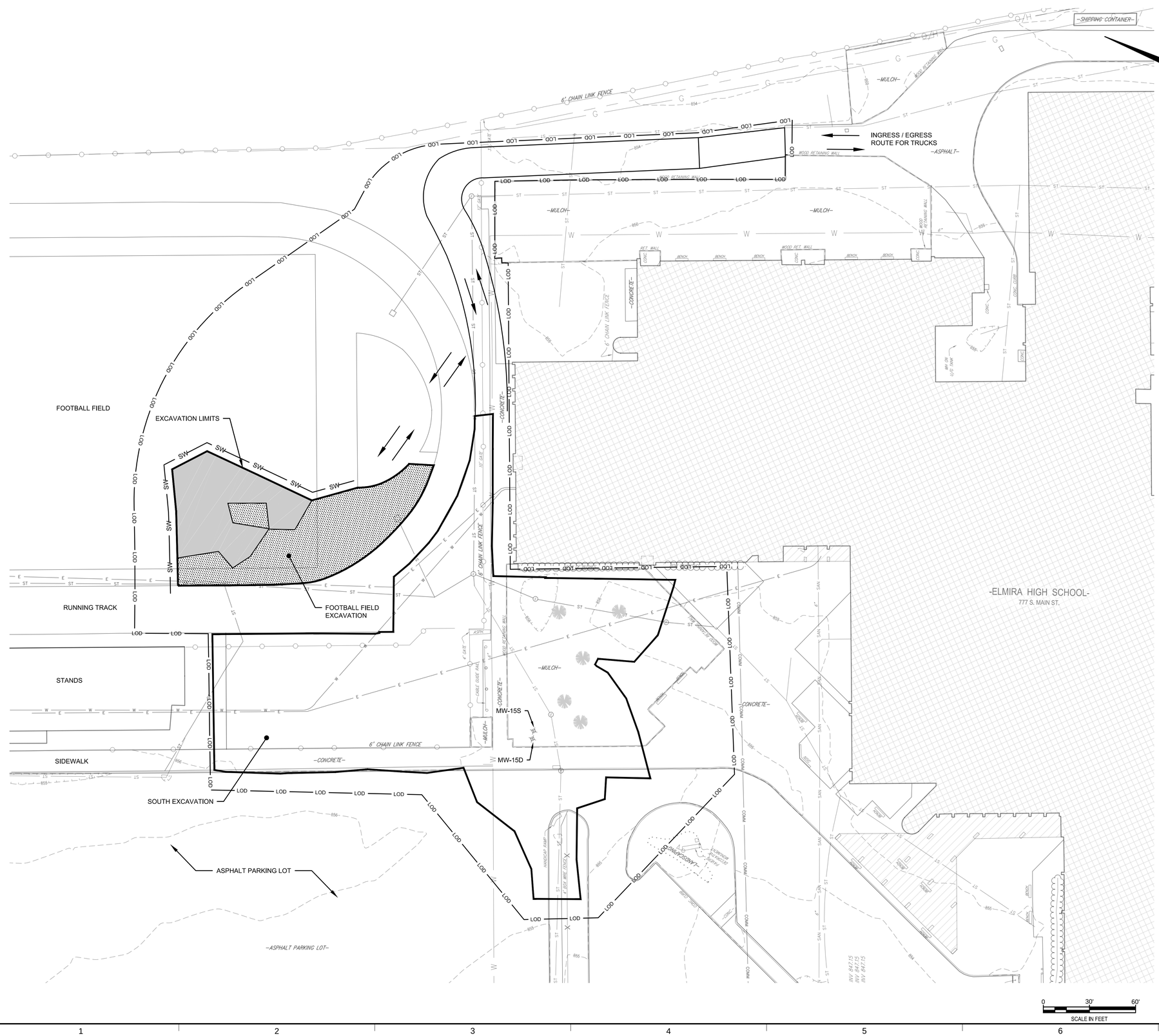
PROJECT: INTERIM REMEDIAL MEASURE

SITE: ELMIRA HIGH SCHOOL
ELMIRA, NEW YORK

SIGNATURE
DATE 8/11/17

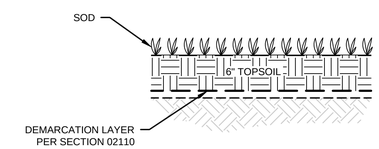
STATE OF NEW YORK · ARON A. KRASINSKI · 089954-1 · LICENSED PROFESSIONAL ENGINEER

DESIGN BY:	AK	DATE:	AUGUST 2017
DRAWN BY:	BGF	PROJECT NO.:	MN0832
CHECKED BY:	TBR	FILE:	Stockpile Detail
REVIEWED BY:	PLB	DRAWING NO.:	
APPROVED BY:	AK		A2-1



LEGEND

- MANHOLE
- CATCH BASIN
- CULVERT PIPE
- CHAIN LINK FENCE
- WOODEN FENCE
- PROPERTY LINE
- EXISTING CONTOUR LINE
- EDGE OF WATER
- EDGE OF WOODS OR BRUSH
- BURIED ELECTRIC CABLE
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINER
- WATER LINE
- EXCAVATION LIMITS
- TREE
- MONITORING WELL
- LIMIT OF CONSTRUCTION DISTURBANCE
- NON RCRA / TSCA SOILS TO BE RE-USED AS BACKFILL (TOTAL PCB < 10 Mg/Kg)
- NON RCRA / TSCA SOILS FOR OFF-SITE DISPOSAL (PCB > 10 Mg/Kg, < 50 Mg/Kg



1 / A2-2 SECTION
FOOTBALL FIELD EXCAVATION RESTORATION
SCALE: 1" = 1'

NOTES:

1. EXCAVATION CONSISTS OF THE REMOVAL OF THE UPPER 6 INCHES OF SOILS.
2. SEE SECTION 02110 FOR REQUIREMENTS REGARDING EXCAVATION.
3. ACCESS TO THE FOOTBALL FIELD EXCAVATION AREA SHALL BE AS SHOWN.
4. TO MINIMIZE POTENTIAL FOR DAMAGE TO THE RUNNING TRACK SURFACE AND RUTTING OF FOOTBALL FIELD VEGETATION, CONTRACTOR SHAL INSTALL GEOTEXTILE UNDERNEATH TIMBER MATS OR PLYWOOD DECKING OVER RUNNING TRACK AND FOOTBALL FIELD TO CREATE AN ACCESS PATH TO THE LIMITS OF EXCAVATION.
5. CONTRACTOR SHALL USE MINI-EXCAVATOR EQUIPMENT AND PICK-UP SIZED DUMP TRUCKS FOR SOIL REMOVAL WITHIN THE FOOTBAL FIELD.
6. LOADED PICK-UP DUMP TRUCKS SHALL TRANSPORT SOILS TO THE MSA. TRUCKS WILL BE LOADED AN INSPECTED PRIOR TO TRANSPORT AS DESCRIBED IN SPECIFICATION SECTIONS 02057 AND 02110.
7. EXCAVATED SOILS SHALL BE SEGREGATED AND STOCKPILED AT THE MATERIAL STAGING AREA FOR SAMPLING PER THE APPROVED IRM WORK PLAN.
8. PLACE DEMARCATION LAYER NETTING OVER BOTTOM OF EXCAVATION PRIOR TO BACKFILLING. SEE SECTION 1.
9. FOLLOWING PLACEMENT OF TOPSOIL BACKFILL, FINISH SURFACE WITH SOD.
10. ALL MATERIALS IMPORTED TO THE SITE MUST MEET THE REQUIREMENTS OF DER-10 SECTION 5.4(E) AND APPENDIX 5 FOR RESTRICTED RESIDENTIAL USE. ALL CONFORMANCE DATA FOR IMPORTED MATERIALS MUST BE VALIDATED AND APPROVED BY NYSDEC.
11. SEE DRAWING 2 OF IRM WORK PLAN FOR GENERAL NOTES.

REV	DATE	DESCRIPTION	DRN	APP

Beech and Bonaparte engineering p.c.
an affiliate of Geosyntec Consultants

UNISYS

TITLE: EXCAVATION PLAN - FOOTBALL FIELD

PROJECT: INTERIM REMEDIAL MEASURE

SITE: ELMIRA HIGH SCHOOL
ELMIRA, NEW YORK

SIGNATURE 8/9/17
DATE

STATE OF NEW YORK · ANDRI A. KRASNIQI · 089954-1 · LICENSED PROFESSIONAL ENGINEER

DESIGN BY:	AK	DATE:	AUGUST 2017
DRAWN BY:	TSJ	PROJECT NO.:	MN0832
CHECKED BY:	TBR	FILE:	0832 A2-2
REVIEWED BY:	PLB	DRAWING NO.:	A2-2
APPROVED BY:	AK		

ATTACHMENT 3

ANALYTICAL REPORTS

AND

DATA VALIDATION REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-66476-1
Client Project/Site: Former Sperry Remington Site - North

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Mr. Aron Krasnopoler

Authorized for release by:
5/22/2017 11:29:22 AM

David Dunlap, Senior Project Manager
(412)963-2432
david.dunlap@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Certification Summary 5
Sample Summary 6
Method Summary 7
Lab Chronicle 8
Client Sample Results 12
QC Sample Results 16
QC Association Summary 17
Chain of Custody 19
Receipt Checklists 21

Job ID: 180-66476-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-66476-1

Receipt
The samples were received on 5/19/2017 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1º C and 1.9º C.

GC Semi VOA
Method(s) 8082A: The continuing calibration verification (CCV) analyzed in batch 180-211798 was below criteria for arcolor 1248 (CCV 180-211798/4) on column RTX-CLP1. All positive detections in the associated samples were reported from column RTX-CLP2, which met criteria. The % difference between the sample results on both columns was <40%.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11182	03-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-66476-1	SSHS-B814-SS	Solid	05/18/17 07:40	05/19/17 09:10
180-66476-3	SSHS-B815-SS	Solid	05/18/17 07:55	05/19/17 09:10
180-66476-4	SSHS-B815-SUB-0.17-2	Solid	05/18/17 08:00	05/19/17 09:10
180-66476-5	SSHS-B816-SS	Solid	05/18/17 08:15	05/19/17 09:10
180-66476-7	SSHS-B817-SS	Solid	05/18/17 08:05	05/19/17 09:10
180-66476-9	SSHS-B818-SS	Solid	05/18/17 08:30	05/19/17 09:10
180-66476-11	PS-FD-10	Solid	05/18/17 00:00	05/19/17 09:10

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B814-SS — Lab Sample ID: 180-66476-1

Date Collected: 05/18/17 07:40 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211756	05/20/17 00:03	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B814-SS — Lab Sample ID: 180-66476-1

Date Collected: 05/18/17 07:40 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 74.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 13:12	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B815-SS — Lab Sample ID: 180-66476-3

Date Collected: 05/18/17 07:55 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211722	05/19/17 19:24	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B815-SS — Lab Sample ID: 180-66476-3

Date Collected: 05/18/17 07:55 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 75.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.4 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 13:32	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B815-SUB-0.17-2 — Lab Sample ID: 180-66476-4

Date Collected: 05/18/17 08:00 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211722	05/19/17 23:24	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B815-SUB-0.17-2 — Lab Sample ID: 180-66476-4

Date Collected: 05/18/17 08:00 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 85.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.3 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 13:52	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B816-SS — Lab Sample ID: 180-66476-5

Date Collected: 05/18/17 08:15 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211729	05/20/17 05:36	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B816-SS — Lab Sample ID: 180-66476-5

Date Collected: 05/18/17 08:15 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 78.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 14:12	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B817-SS — Lab Sample ID: 180-66476-7

Date Collected: 05/18/17 08:05 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211729	05/20/17 09:33	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B817-SS — Lab Sample ID: 180-66476-7

Date Collected: 05/18/17 08:05 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 77.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 14:32	JMO	TAL PIT
	Instrument ID: CHGC8									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B818-SS — Lab Sample ID: 180-66476-9

Date Collected: 05/18/17 08:30 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211729	05/20/17 07:34	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B818-SS — Lab Sample ID: 180-66476-9

Date Collected: 05/18/17 08:30 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 76.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.4 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 14:53	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: PS-FD-10 — Lab Sample ID: 180-66476-11

Date Collected: 05/18/17 00:00 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211722	05/20/17 04:24	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: PS-FD-10 — Lab Sample ID: 180-66476-11

Date Collected: 05/18/17 00:00 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 83.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.3 g	20.0 mL	211699	05/19/17 10:17	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	211803	05/21/17 09:19	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	211804	05/21/17 09:20	JMO	TAL PIT
Total/NA	Analysis	8082A		1			211798	05/21/17 15:13	JMO	TAL PIT
	Instrument ID: CHGC8									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

JMO = John Oravec

Batch Type: Prep

BAP = Brian Pino

Batch Type: Analysis

JJZ = Joseph Zubrow

JMO = John Oravec

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B814-SS

Lab Sample ID: 180-66476-1
Date Collected: 05/18/17 07:40
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 74.7

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	12	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1221	ND		22	11	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1232	ND		22	8.7	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1242	ND		22	17	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1248	**1200**		22	11	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1254	**980**		22	9.7	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1260	**210**		22	15	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1262	ND		22	16	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1
PCB-1268	ND		22	6.7	ug/Kg	☼	05/19/17 10:17	05/21/17 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:12*	*1*
DCB Decachlorobiphenyl (Surr)	*94*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:12*	*1*
Tetrachloro-m-xylene (Surr)	*91*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:12*	*1*
Tetrachloro-m-xylene (Surr)	*81*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**25.3**		0.1	0.1	%			05/20/17 00:03	1
Percent Solids	**74.7**		0.1	0.1	%			05/20/17 00:03	1

Client Sample ID: SSHS-B815-SS

Lab Sample ID: 180-66476-3
Date Collected: 05/18/17 07:55
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 75.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	11	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1221	ND		22	11	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1232	ND		22	8.5	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1242	ND		22	17	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1248	**1600**		22	10	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1254	**1600**		22	9.5	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1260	**400**	**p**	22	14	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1262	ND		22	15	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1
PCB-1268	ND		22	6.6	ug/Kg	☼	05/19/17 10:17	05/21/17 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*80*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:32*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:32*	*1*
Tetrachloro-m-xylene (Surr)	*77*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:32*	*1*
Tetrachloro-m-xylene (Surr)	*69*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:32*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.7**		0.1	0.1	%			05/19/17 19:24	1
Percent Solids	**75.3**		0.1	0.1	%			05/19/17 19:24	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B815-SUB-0.17-2

Lab Sample ID: 180-66476-4
Date Collected: 05/18/17 08:00
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 85.0

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		19	10	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1221	ND		19	10	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1232	ND		19	7.6	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1242	ND		19	15	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1248	**3700**		19	9.2	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1254	**2800**		19	8.4	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1260	**560**		19	13	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1262	ND		19	14	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1
PCB-1268	ND		19	5.9	ug/Kg	☼	05/19/17 10:17	05/21/17 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*78*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:52*	*1*
DCB Decachlorobiphenyl (Surr)	*79*		*23 - 150*	*05/19/17 10:17*	*05/21/17 13:52*	*1*
Tetrachloro-m-xylene (Surr)	*71*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:52*	*1*
Tetrachloro-m-xylene (Surr)	*65*		*27 - 138*	*05/19/17 10:17*	*05/21/17 13:52*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.0**		0.1	0.1	%			05/19/17 23:24	1
Percent Solids	**85.0**		0.1	0.1	%			05/19/17 23:24	1

Client Sample ID: SSHS-B816-SS

Lab Sample ID: 180-66476-5
Date Collected: 05/18/17 08:15
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 78.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1221	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1232	ND		21	8.3	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1242	ND		21	17	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1248	**750**		21	10	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1254	**530**		21	9.2	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1260	**130**		21	14	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1262	ND		21	15	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1
PCB-1268	ND		21	6.4	ug/Kg	☼	05/19/17 10:17	05/21/17 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*81*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:12*	*1*
DCB Decachlorobiphenyl (Surr)	*84*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:12*	*1*
Tetrachloro-m-xylene (Surr)	*81*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:12*	*1*
Tetrachloro-m-xylene (Surr)	*71*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:12*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.5**		0.1	0.1	%			05/20/17 05:36	1
Percent Solids	**78.5**		0.1	0.1	%			05/20/17 05:36	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: SSHS-B817-SS

Lab Sample ID: 180-66476-7
Date Collected: 05/18/17 08:05
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 77.9

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1221	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1232	ND		21	8.5	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1242	ND		21	17	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1248	**140**		21	10	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1254	**140**		21	9.4	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1260	**52**		21	14	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1262	ND		21	15	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1
PCB-1268	ND		21	6.5	ug/Kg	☼	05/19/17 10:17	05/21/17 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*71*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:32*	*1*
DCB Decachlorobiphenyl (Surr)	*70*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:32*	*1*
Tetrachloro-m-xylene (Surr)	*65*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:32*	*1*
Tetrachloro-m-xylene (Surr)	*59*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:32*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**22.1**		0.1	0.1	%			05/20/17 09:33	1
Percent Solids	**77.9**		0.1	0.1	%			05/20/17 09:33	1

Client Sample ID: SSHS-B818-SS

Lab Sample ID: 180-66476-9
Date Collected: 05/18/17 08:30
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 76.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1221	ND		21	11	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1232	ND		21	8.4	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1242	ND		21	17	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1248	**640**		21	10	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1254	**600**		21	9.3	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1260	**140**		21	14	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1262	ND		21	15	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1
PCB-1268	ND		21	6.5	ug/Kg	☼	05/19/17 10:17	05/21/17 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*65*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:53*	*1*
DCB Decachlorobiphenyl (Surr)	*68*		*23 - 150*	*05/19/17 10:17*	*05/21/17 14:53*	*1*
Tetrachloro-m-xylene (Surr)	*61*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:53*	*1*
Tetrachloro-m-xylene (Surr)	*56*		*27 - 138*	*05/19/17 10:17*	*05/21/17 14:53*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.8**		0.1	0.1	%			05/20/17 07:34	1
Percent Solids	**76.2**		0.1	0.1	%			05/20/17 07:34	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Client Sample ID: PS-FD-10

Date Collected: 05/18/17 00:00
Date Received: 05/19/17 09:10

Lab Sample ID: 180-66476-11

Matrix: Solid
Percent Solids: 83.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	10	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1221	ND		20	10	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1232	ND		20	7.7	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1242	ND		20	16	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1248	**590**		20	9.3	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1254	**400**		20	8.6	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1260	**86**		20	13	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1262	ND		20	14	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1
PCB-1268	ND		20	6.0	ug/Kg	☼	05/19/17 10:17	05/21/17 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*23 - 150*	*05/19/17 10:17*	*05/21/17 15:13*	*1*
DCB Decachlorobiphenyl (Surr)	*87*		*23 - 150*	*05/19/17 10:17*	*05/21/17 15:13*	*1*
Tetrachloro-m-xylene (Surr)	*81*		*27 - 138*	*05/19/17 10:17*	*05/21/17 15:13*	*1*
Tetrachloro-m-xylene (Surr)	*72*		*27 - 138*	*05/19/17 10:17*	*05/21/17 15:13*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**16.5**		0.1	0.1	%			05/20/17 04:24	1
Percent Solids	**83.5**		0.1	0.1	%			05/20/17 04:24	1

QC Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-211699/1-C
Matrix: Solid
Analysis Batch: 211798

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	8.8	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1221	ND		17	8.6	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1232	ND		17	6.6	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1242	ND		17	13	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1248	ND		17	8.0	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1254	ND		17	7.3	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1260	ND		17	11	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1262	ND		17	12	ug/Kg		05/19/17 10:17	05/21/17 12:52	1
PCB-1268	ND		17	5.1	ug/Kg		05/19/17 10:17	05/21/17 12:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*99*		*23 - 150*	*05/19/17 10:17*	*05/21/17 12:52*	*1*
DCB Decachlorobiphenyl (Surr)	*102*		*23 - 150*	*05/19/17 10:17*	*05/21/17 12:52*	*1*
Tetrachloro-m-xylene (Surr)	*101*		*27 - 138*	*05/19/17 10:17*	*05/21/17 12:52*	*1*
Tetrachloro-m-xylene (Surr)	*97*		*27 - 138*	*05/19/17 10:17*	*05/21/17 12:52*	*1*

Lab Sample ID: LCS 180-211699/2-C
Matrix: Solid
Analysis Batch: 211798

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211699

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1330	1140		ug/Kg		85	52 - 126		
PCB-1260			1330	1210		ug/Kg		91	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*91*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*93*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*88*		*27 - 138*

Lab Sample ID: LCSD 180-211699/3-C
Matrix: Solid
Analysis Batch: 211798

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 211699

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1330	1160		ug/Kg		87	52 - 126	2	20
PCB-1260			1330	1300		ug/Kg		98	50 - 130	7	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*96*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*97*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*93*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*89*		*27 - 138*

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

GC Semi VOA

Prep Batch: 211699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-1	SSHS-B814-SS	Total/NA	Solid	3541	
180-66476-3	SSHS-B815-SS	Total/NA	Solid	3541	
180-66476-4	SSHS-B815-SUB-0.17-2	Total/NA	Solid	3541	
180-66476-5	SSHS-B816-SS	Total/NA	Solid	3541	
180-66476-7	SSHS-B817-SS	Total/NA	Solid	3541	
180-66476-9	SSHS-B818-SS	Total/NA	Solid	3541	
180-66476-11	PS-FD-10	Total/NA	Solid	3541	
MB 180-211699/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-211699/2-C	Lab Control Sample	Total/NA	Solid	3541	
LCSD 180-211699/3-C	Lab Control Sample Dup	Total/NA	Solid	3541	

Analysis Batch: 211798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-1	SSHS-B814-SS	Total/NA	Solid	8082A	211804
180-66476-3	SSHS-B815-SS	Total/NA	Solid	8082A	211804
180-66476-4	SSHS-B815-SUB-0.17-2	Total/NA	Solid	8082A	211804
180-66476-5	SSHS-B816-SS	Total/NA	Solid	8082A	211804
180-66476-7	SSHS-B817-SS	Total/NA	Solid	8082A	211804
180-66476-9	SSHS-B818-SS	Total/NA	Solid	8082A	211804
180-66476-11	PS-FD-10	Total/NA	Solid	8082A	211804
MB 180-211699/1-C	Method Blank	Total/NA	Solid	8082A	211804
LCS 180-211699/2-C	Lab Control Sample	Total/NA	Solid	8082A	211804
LCSD 180-211699/3-C	Lab Control Sample Dup	Total/NA	Solid	8082A	211804

Cleanup Batch: 211803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-1	SSHS-B814-SS	Total/NA	Solid	3665A	211699
180-66476-3	SSHS-B815-SS	Total/NA	Solid	3665A	211699
180-66476-4	SSHS-B815-SUB-0.17-2	Total/NA	Solid	3665A	211699
180-66476-5	SSHS-B816-SS	Total/NA	Solid	3665A	211699
180-66476-7	SSHS-B817-SS	Total/NA	Solid	3665A	211699
180-66476-9	SSHS-B818-SS	Total/NA	Solid	3665A	211699
180-66476-11	PS-FD-10	Total/NA	Solid	3665A	211699
MB 180-211699/1-C	Method Blank	Total/NA	Solid	3665A	211699
LCS 180-211699/2-C	Lab Control Sample	Total/NA	Solid	3665A	211699
LCSD 180-211699/3-C	Lab Control Sample Dup	Total/NA	Solid	3665A	211699

Cleanup Batch: 211804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-1	SSHS-B814-SS	Total/NA	Solid	3660B	211803
180-66476-3	SSHS-B815-SS	Total/NA	Solid	3660B	211803
180-66476-4	SSHS-B815-SUB-0.17-2	Total/NA	Solid	3660B	211803
180-66476-5	SSHS-B816-SS	Total/NA	Solid	3660B	211803
180-66476-7	SSHS-B817-SS	Total/NA	Solid	3660B	211803
180-66476-9	SSHS-B818-SS	Total/NA	Solid	3660B	211803
180-66476-11	PS-FD-10	Total/NA	Solid	3660B	211803
MB 180-211699/1-C	Method Blank	Total/NA	Solid	3660B	211803
LCS 180-211699/2-C	Lab Control Sample	Total/NA	Solid	3660B	211803
LCSD 180-211699/3-C	Lab Control Sample Dup	Total/NA	Solid	3660B	211803

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-1

General Chemistry

Analysis Batch: 211722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-3	SSHS-B815-SS	Total/NA	Solid	2540G	
180-66476-4	SSHS-B815-SUB-0.17-2	Total/NA	Solid	2540G	
180-66476-11	PS-FD-10	Total/NA	Solid	2540G	

Analysis Batch: 211729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-5	SSHS-B816-SS	Total/NA	Solid	2540G	
180-66476-7	SSHS-B817-SS	Total/NA	Solid	2540G	
180-66476-9	SSHS-B818-SS	Total/NA	Solid	2540G	

Analysis Batch: 211756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-1	SSHS-B814-SS	Total/NA	Solid	2540G	

TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2468

180-66476 Chain of Custody

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Alan Krasnopoler	Site Contact: Jay Thompson	Date: 5/18/17	COC No:
Geosyntec Consultants	Tel/Fax: 401-381-4333	Lab Contact: Dave Dunlap	Carrier: FedEx	1 of 2 COCs
10211 Wincopin Circle, 4th Floor	Analysis Turnaround Time			Sampler: JT
Columbia, MD 21044	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
410-381-4333 Phone	TAT if different from Below _____			Walk-in Client:
410-381-4499 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Former Sperry Remington Site - North	☐ 1 week			
Site: Elmira	☐ 2 days			Job / SDG No.:
P O # MN0832B	☑ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs -8082A	Sample Specific Notes:
SS HS-B814-SS	5/18/17	0740	C	S	2	N	N	X	
SS HS-B814-SUB-0.17-2		0745	C	S	2	N	N	X	HOLD
SS HS-B815-SS		0755	C	S	2	N	N	X	
SS HS-B815-SUB-0.17-2		0800	C	S	2	N	N	X	
SS HS-B816-SS		0815	C	S	2	N	N	X	
SS HS-B816-SUB-0.17-2		0820	C	S	2	N	N	X	HOLD
SS HS-B817-SS		0805	C	S	2	N	N	X	
SS HS-B817-SUB-0.17-2		0810	C	S	2	N	N	X	HOLD
SS HS-B818-SS		0830	C	S	2	N	N	X	
SS HS B818-SUB-0.17-2		0835	C	S	2	N	Y	X	HOLD PS-MS/MSD 1-6
PS-FD-10		X	C	S	2	N	N	X	

RUSH

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Jay Thompson	Geosyntec	5/18/17 1730		TAP	5/19/17 0910
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2468

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Aron Krasnopoler	Site Contact: Jay Thompson	Date: 5/18/17	COC No:
Geosyntec Consultants	Tel/Fax: 401-381-4333	Lab Contact: Dave Dunlap	Carrier: FedEx	2 of 2 COCs
10211 Wincopin Circle, 4th Floor	Analysis Turnaround Time			Sampler: JT
Columbia, MD 21044	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
410-381-4333 Phone	TAT if different from Below _____			Walk-in Client:
410-381-4499 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Former Sperry Remington Site - North	☐ 1 week			
Site: Elmira	☐ 2 days JT 5/18/17			Job / SDG No.:
P O # MN0832B	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	PCBs -8082A		Sample Specific Notes:
EB-1	5/18/17	1200	G	W	2	N	N	X	PCBs - 8082 LL	2-WK TAT

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ | 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Jay Thompson	Geosyntec	5/18/17 1730	[illegible]	TAP	5/19/17 910
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-66476-1

Login Number: 66476
List Number: 1
Creator: Dunlap, David A

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-66476-2
Client Project/Site: Former Sperry Remington Site - North

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Mr. Aron Krasnopoler

Authorized for release by:
5/24/2017 10:17:06 PM

David Dunlap, Senior Project Manager
(412)963-2432
david.dunlap@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Certification Summary 5
Sample Summary 6
Method Summary 7
Lab Chronicle 8
Client Sample Results 10
QC Sample Results 12
QC Association Summary 15
Chain of Custody 17
Receipt Checklists 19

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Job ID: 180-66476-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-66476-2

Comments
This report contains the results of 'hold' samples taken off hold on 5/22/17.

Receipt
The samples were received on 5/19/2017 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1º C and 1.9º C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11182	03-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-66476-2	SSHS-B814-SUB-0.17-2	Solid	05/18/17 07:45	05/19/17 09:10
180-66476-6	SSHS-B816-SUB-0.17-2	Solid	05/18/17 08:20	05/19/17 09:10
180-66476-8	SSHS-B817-SUB-0.17-2	Solid	05/18/17 08:10	05/19/17 09:10
180-66476-10	SSHS-B818-SUB-0.17-2	Solid	05/18/17 08:35	05/19/17 09:10

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Client Sample ID: SSHS-B814-SUB-0.17-2 — Lab Sample ID: 180-66476-2

Date Collected: 05/18/17 07:45 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211984	05/23/17 13:07	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B814-SUB-0.17-2 — Lab Sample ID: 180-66476-2

Date Collected: 05/18/17 07:45 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 84.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	20.0 mL	212001	05/23/17 12:00	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	212074	05/24/17 06:06	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	212075	05/24/17 06:08	JMO	TAL PIT
Total/NA	Analysis	8082A		1			212071	05/24/17 10:39	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: SSHS-B816-SUB-0.17-2 — Lab Sample ID: 180-66476-6

Date Collected: 05/18/17 08:20 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211729	05/20/17 10:32	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B816-SUB-0.17-2 — Lab Sample ID: 180-66476-6

Date Collected: 05/18/17 08:20 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	20.0 mL	212002	05/23/17 12:30	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	212076	05/24/17 06:09	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	212077	05/24/17 06:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			212072	05/24/17 10:44	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B817-SUB-0.17-2 — Lab Sample ID: 180-66476-8

Date Collected: 05/18/17 08:10 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211729	05/20/17 08:34	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Client Sample ID: SSHS-B817-SUB-0.17-2 — Lab Sample ID: 180-66476-8

Date Collected: 05/18/17 08:10 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 85.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	20.0 mL	212002	05/23/17 12:30	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	212076	05/24/17 06:09	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	212077	05/24/17 06:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			212072	05/24/17 11:04	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: SSHS-B818-SUB-0.17-2 — Lab Sample ID: 180-66476-10

Date Collected: 05/18/17 08:35 — **Matrix: Solid**
Date Received: 05/19/17 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			211722	05/20/17 08:24	JJZ	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: SSHS-B818-SUB-0.17-2 — Lab Sample ID: 180-66476-10

Date Collected: 05/18/17 08:35 — **Matrix: Solid**
Date Received: 05/19/17 09:10 — **Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	20.0 mL	212001	05/23/17 12:00	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	212074	05/24/17 06:06	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	212075	05/24/17 06:08	JMO	TAL PIT
Total/NA	Analysis	8082A		1			212071	05/24/17 11:00	JMO	TAL PIT
	Instrument ID: CHGC16									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

JMO = John Oravec

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

JJZ = Joseph Zubrow

JMO = John Oravec

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Client Sample ID: SSHS-B814-SUB-0.17-2

Lab Sample ID: 180-66476-2
Date Collected: 05/18/17 07:45
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 84.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	10	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1221	ND		20	10	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1232	ND		20	7.8	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1242	ND		20	16	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1248	**730**		20	9.4	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1254	**480**		20	8.7	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1260	**62**		20	13	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1262	ND		20	14	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1
PCB-1268	ND		20	6.0	ug/Kg	☼	05/23/17 12:00	05/24/17 10:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*87*		*23 - 150*	*05/23/17 12:00*	*05/24/17 10:39*	*1*
DCB Decachlorobiphenyl (Surr)	*90*		*23 - 150*	*05/23/17 12:00*	*05/24/17 10:39*	*1*
Tetrachloro-m-xylene (Surr)	*85*		*27 - 138*	*05/23/17 12:00*	*05/24/17 10:39*	*1*
Tetrachloro-m-xylene (Surr)	*86*		*27 - 138*	*05/23/17 12:00*	*05/24/17 10:39*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.7**		0.1	0.1	%			05/23/17 13:07	1
Percent Solids	**84.3**		0.1	0.1	%			05/23/17 13:07	1

Client Sample ID: SSHS-B816-SUB-0.17-2

Lab Sample ID: 180-66476-6
Date Collected: 05/18/17 08:20
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 84.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	10	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1221	ND		20	10	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1232	ND		20	7.8	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1242	ND		20	16	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1248	**390**		20	9.4	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1254	**160**		20	8.7	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1260	**55**		20	13	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1262	ND		20	14	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1
PCB-1268	ND		20	6.0	ug/Kg	☼	05/23/17 12:30	05/24/17 10:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*92*		*23 - 150*	*05/23/17 12:30*	*05/24/17 10:44*	*1*
DCB Decachlorobiphenyl (Surr)	*94*		*23 - 150*	*05/23/17 12:30*	*05/24/17 10:44*	*1*
Tetrachloro-m-xylene (Surr)	*88*		*27 - 138*	*05/23/17 12:30*	*05/24/17 10:44*	*1*
Tetrachloro-m-xylene (Surr)	*76*		*27 - 138*	*05/23/17 12:30*	*05/24/17 10:44*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.5**		0.1	0.1	%			05/20/17 10:32	1
Percent Solids	**84.5**		0.1	0.1	%			05/20/17 10:32	1

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Client Sample ID: SSHS-B817-SUB-0.17-2

Lab Sample ID: 180-66476-8
Date Collected: 05/18/17 08:10
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 85.7

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		19	10	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1221	ND		19	10	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1232	ND		19	7.6	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1242	ND		19	15	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1248	**180**		19	9.2	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1254	**88**		19	8.5	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1260	**54**		19	13	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1262	ND		19	14	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1
PCB-1268	ND		19	5.9	ug/Kg	☼	05/23/17 12:30	05/24/17 11:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*23 - 150*	*05/23/17 12:30*	*05/24/17 11:04*	*1*
DCB Decachlorobiphenyl (Surr)	*93*		*23 - 150*	*05/23/17 12:30*	*05/24/17 11:04*	*1*
Tetrachloro-m-xylene (Surr)	*87*		*27 - 138*	*05/23/17 12:30*	*05/24/17 11:04*	*1*
Tetrachloro-m-xylene (Surr)	*77*		*27 - 138*	*05/23/17 12:30*	*05/24/17 11:04*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**14.3**		0.1	0.1	%			05/20/17 08:34	1
Percent Solids	**85.7**		0.1	0.1	%			05/20/17 08:34	1

Client Sample ID: SSHS-B818-SUB-0.17-2

Lab Sample ID: 180-66476-10
Date Collected: 05/18/17 08:35
Matrix: Solid
Date Received: 05/19/17 09:10
Percent Solids: 84.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	10	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1221	ND		20	10	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1232	ND		20	7.8	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1242	ND		20	16	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1248	**170**		20	9.4	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1254	**120**		20	8.6	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1260	ND		20	13	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1262	ND		20	14	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1
PCB-1268	ND		20	6.0	ug/Kg	☼	05/23/17 12:00	05/24/17 11:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*23 - 150*	*05/23/17 12:00*	*05/24/17 11:00*	*1*
DCB Decachlorobiphenyl (Surr)	*91*		*23 - 150*	*05/23/17 12:00*	*05/24/17 11:00*	*1*
Tetrachloro-m-xylene (Surr)	*77*		*27 - 138*	*05/23/17 12:00*	*05/24/17 11:00*	*1*
Tetrachloro-m-xylene (Surr)	*79*		*27 - 138*	*05/23/17 12:00*	*05/24/17 11:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.5**		0.1	0.1	%			05/20/17 08:24	1
Percent Solids	**84.5**		0.1	0.1	%			05/20/17 08:24	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-212001/1-C
Matrix: Solid
Analysis Batch: 212070

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 212001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	8.8	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1221	ND		17	8.6	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1232	ND		17	6.6	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1242	ND		17	13	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1248	ND		17	8.0	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1254	ND		17	7.3	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1260	ND		17	11	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1262	ND		17	12	ug/Kg		05/23/17 12:00	05/24/17 07:35	1
PCB-1268	ND		17	5.1	ug/Kg		05/23/17 12:00	05/24/17 07:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*101*		*23 - 150*	*05/23/17 12:00*	*05/24/17 07:35*	*1*
DCB Decachlorobiphenyl (Surr)	*97*		*23 - 150*	*05/23/17 12:00*	*05/24/17 07:35*	*1*
Tetrachloro-m-xylene (Surr)	*106*		*27 - 138*	*05/23/17 12:00*	*05/24/17 07:35*	*1*
Tetrachloro-m-xylene (Surr)	*100*		*27 - 138*	*05/23/17 12:00*	*05/24/17 07:35*	*1*

Lab Sample ID: MB 180-212001/1-C
Matrix: Solid
Analysis Batch: 212071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 212001

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	8.8	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1221	ND		17	8.6	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1232	ND		17	6.6	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1242	ND		17	13	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1248	ND		17	8.0	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1254	ND		17	7.3	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1260	ND		17	11	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1262	ND		17	12	ug/Kg		05/23/17 12:00	05/24/17 07:52	1
PCB-1268	ND		17	5.1	ug/Kg		05/23/17 12:00	05/24/17 07:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*97*		*23 - 150*	*05/23/17 12:00*	*05/24/17 07:52*	*1*
DCB Decachlorobiphenyl (Surr)	*108*		*23 - 150*	*05/23/17 12:00*	*05/24/17 07:52*	*1*
Tetrachloro-m-xylene (Surr)	*93*		*27 - 138*	*05/23/17 12:00*	*05/24/17 07:52*	*1*
Tetrachloro-m-xylene (Surr)	*99*		*27 - 138*	*05/23/17 12:00*	*05/24/17 07:52*	*1*

Lab Sample ID: LCS 180-212001/2-C
Matrix: Solid
Analysis Batch: 212070

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 212001

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1330	1380		ug/Kg		104	52 - 126		
PCB-1260			1330	1330		ug/Kg		99	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*95*		*23 - 150*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 180-212001/2-C
Matrix: Solid
Analysis Batch: 212070

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 212001

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*96*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*104*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*98*		*27 - 138*

Lab Sample ID: 180-66476-10 MS
Matrix: Solid
Analysis Batch: 212071

Client Sample ID: SSHS-B818-SUB-0.17-2
Prep Type: Total/NA
Prep Batch: 212001

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	ND		1580	1450		ug/Kg	☼	92	52 - 126
PCB-1260	ND		1580	1380		ug/Kg	☼	87	50 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*82*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*86*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*85*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*86*		*27 - 138*

Lab Sample ID: 180-66476-10 MSD
Matrix: Solid
Analysis Batch: 212071

Client Sample ID: SSHS-B818-SUB-0.17-2
Prep Type: Total/NA
Prep Batch: 212001

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		1580	1500		ug/Kg	☼	95	52 - 126	3	20
PCB-1260	ND		1580	1440		ug/Kg	☼	91	50 - 130	4	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*86*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*90*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*84*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*88*		*27 - 138*

Lab Sample ID: MB 180-212002/1-C
Matrix: Solid
Analysis Batch: 212072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 212002

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	8.8	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1221	ND		17	8.6	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1232	ND		17	6.6	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1242	ND		17	13	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1248	ND		17	8.0	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1254	ND		17	7.3	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1260	ND		17	11	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1262	ND		17	12	ug/Kg		05/23/17 12:30	05/24/17 10:24	1
PCB-1268	ND		17	5.1	ug/Kg		05/23/17 12:30	05/24/17 10:24	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 180-212002/1-C
Matrix: Solid
Analysis Batch: 212072

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 212002

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*103*		*23 - 150*	*05/23/17 12:30*	*05/24/17 10:24*	*1*
DCB Decachlorobiphenyl (Surr)	*101*		*23 - 150*	*05/23/17 12:30*	*05/24/17 10:24*	*1*
Tetrachloro-m-xylene (Surr)	*100*		*27 - 138*	*05/23/17 12:30*	*05/24/17 10:24*	*1*
Tetrachloro-m-xylene (Surr)	*96*		*27 - 138*	*05/23/17 12:30*	*05/24/17 10:24*	*1*

Lab Sample ID: LCS 180-212002/2-C
Matrix: Solid
Analysis Batch: 212072

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 212002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1330	1120		ug/Kg		84	52 - 126
PCB-1260	1330	1410		ug/Kg		106	50 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*86*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*88*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*88*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*83*		*27 - 138*

Method: 2540G - SM 2540G

Lab Sample ID: 180-66476-2 DU
Matrix: Solid
Analysis Batch: 211984

Client Sample ID: SSHS-B814-SUB-0.17-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	15.7		14.6		%		7	20
Percent Solids	84.3		85.4		%		1	20

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

GC Semi VOA

Prep Batch: 212001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-2	SSHS-B814-SUB-0.17-2	Total/NA	Solid	3541	
180-66476-10	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3541	
MB 180-212001/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-212001/2-C	Lab Control Sample	Total/NA	Solid	3541	
180-66476-10 MS	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3541	
180-66476-10 MSD	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3541	

Prep Batch: 212002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-6	SSHS-B816-SUB-0.17-2	Total/NA	Solid	3541	
180-66476-8	SSHS-B817-SUB-0.17-2	Total/NA	Solid	3541	
MB 180-212002/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-212002/2-C	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 212070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-212001/1-C	Method Blank	Total/NA	Solid	8082A	212075
LCS 180-212001/2-C	Lab Control Sample	Total/NA	Solid	8082A	212075

Analysis Batch: 212071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-2	SSHS-B814-SUB-0.17-2	Total/NA	Solid	8082A	212075
180-66476-10	SSHS-B818-SUB-0.17-2	Total/NA	Solid	8082A	212075
MB 180-212001/1-C	Method Blank	Total/NA	Solid	8082A	212075
180-66476-10 MS	SSHS-B818-SUB-0.17-2	Total/NA	Solid	8082A	212075
180-66476-10 MSD	SSHS-B818-SUB-0.17-2	Total/NA	Solid	8082A	212075

Analysis Batch: 212072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-6	SSHS-B816-SUB-0.17-2	Total/NA	Solid	8082A	212077
180-66476-8	SSHS-B817-SUB-0.17-2	Total/NA	Solid	8082A	212077
MB 180-212002/1-C	Method Blank	Total/NA	Solid	8082A	212077
LCS 180-212002/2-C	Lab Control Sample	Total/NA	Solid	8082A	212077

Cleanup Batch: 212074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-2	SSHS-B814-SUB-0.17-2	Total/NA	Solid	3665A	212001
180-66476-10	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3665A	212001
MB 180-212001/1-C	Method Blank	Total/NA	Solid	3665A	212001
LCS 180-212001/2-C	Lab Control Sample	Total/NA	Solid	3665A	212001
180-66476-10 MS	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3665A	212001
180-66476-10 MSD	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3665A	212001

Cleanup Batch: 212075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-2	SSHS-B814-SUB-0.17-2	Total/NA	Solid	3660B	212074
180-66476-10	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3660B	212074
MB 180-212001/1-C	Method Blank	Total/NA	Solid	3660B	212074
LCS 180-212001/2-C	Lab Control Sample	Total/NA	Solid	3660B	212074
180-66476-10 MS	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3660B	212074
180-66476-10 MSD	SSHS-B818-SUB-0.17-2	Total/NA	Solid	3660B	212074

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North

TestAmerica Job ID: 180-66476-2

Cleanup Batch: 212076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-6	SSHS-B816-SUB-0.17-2	Total/NA	Solid	3665A	212002
180-66476-8	SSHS-B817-SUB-0.17-2	Total/NA	Solid	3665A	212002
MB 180-212002/1-C	Method Blank	Total/NA	Solid	3665A	212002
LCS 180-212002/2-C	Lab Control Sample	Total/NA	Solid	3665A	212002

Cleanup Batch: 212077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-6	SSHS-B816-SUB-0.17-2	Total/NA	Solid	3660B	212076
180-66476-8	SSHS-B817-SUB-0.17-2	Total/NA	Solid	3660B	212076
MB 180-212002/1-C	Method Blank	Total/NA	Solid	3660B	212076
LCS 180-212002/2-C	Lab Control Sample	Total/NA	Solid	3660B	212076

General Chemistry

Analysis Batch: 211722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-10	SSHS-B818-SUB-0.17-2	Total/NA	Solid	2540G	

Analysis Batch: 211729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-6	SSHS-B816-SUB-0.17-2	Total/NA	Solid	2540G	
180-66476-8	SSHS-B817-SUB-0.17-2	Total/NA	Solid	2540G	

Analysis Batch: 211984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-66476-2	SSHS-B814-SUB-0.17-2	Total/NA	Solid	2540G	
180-66476-2 DU	SSHS-B814-SUB-0.17-2	Total/NA	Solid	2540G	

TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2468

180-66476 Chain of Custody

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

☐ DW ☐ NPDES ☐ RCRA ☑ Other:

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Alan Krasnopoler	Site Contact: Jay Thompson	Date: 5/18/17	COC No:
Geosyntec Consultants	Tel/Fax: 401-381-4333	Lab Contact: Dave Dunlap	Carrier: FedEx	1 of 2 COCs
10211 Wincopin Circle, 4th Floor	Analysis Turnaround Time			Sampler: JT
Columbia, MD 21044	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
410-381-4333 Phone	TAT if different from Below _____			Walk-in Client:
410-381-4499 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Former Sperry Remington Site - North	☐ 1 week			
Site: Elmira	☐ 2 days			Job / SDG No.:
P O # MN0832B	☑ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCBs -8082A	Sample Specific Notes:
SS HS-B814-SS	5/18/17	0740	C	S	2	N	N	X	
SS HS-B814-SUB-0.17-2		0745	C	S	2	N	N	X	HOLD
SS HS-B815-SS		0755	C	S	2	N	N	X	
SS HS-B815-SUB-0.17-2		0800	C	S	2	N	N	X	
SS HS-B816-SS		0815	C	S	2	N	N	X	
SS HS-B816-SUB-0.17-2		0820	C	S	2	N	N	X	HOLD
SS HS-B817-SS		0805	C	S	2	N	N	X	
SS HS-B817-SUB-0.17-2		0810	C	S	2	N	N	X	HOLD
SS HS-B818-SS		0830	C	S	2	N	N	X	
SS HS B818-SUB-0.17-2		0835	C	S	2	N	Y	X	HOLD PS-MS/MSD 1-6
PS-FD-10		X	C	S	2	N	N	X	

RUSH

Page 1 of 10

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Jay Thompson	Geosyntec	5/18/17 1730		TAP	5/19/17 910
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

5/24/2017

TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2468

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Aron Krasnopoler	Site Contact: Jay Thompson	Date: 5/18/17	COC No:
Geosyntec Consultants	Tel/Fax: 401-381-4333	Lab Contact: Dave Dunlap	Carrier: FedEx	2 of 2 COCs
10211 Wincopin Circle, 4th Floor	Analysis Turnaround Time			Sampler: JT
Columbia, MD 21044	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
410-381-4333 Phone	TAT if different from Below _____			Walk-in Client:
410-381-4499 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Former Sperry Remington Site - North	☐ 1 week JT 5/18/17			
Site: Elmira	☐ 2 days			Job / SDG No.:
P O # MN0832B	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	PCBs -8082A	PCBs - 8082 LL	Sample Specific Notes:
EB-1	5/18/17	1200	G	W	2	N	N	X		2-WK TAT

5/18/17
JT

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Jay Thompson	Geosyntec	5/18/17 1730	[illegible]	TAP	5/19/17 910
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-66476-2

Login Number: 66476
List Number: 1
Creator: Dunlap, David A

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-68926-1
Client Project/Site: Former Sperry Remington Site - North IRM

For:
Geosyntec Consultants, Inc.
10211 Wincopin Circle
4'th Floor
Columbia, Maryland 21044

Attn: Mr. Aron Krasnopoler

Authorized for release by:
8/7/2017 2:24:27 PM

David Dunlap, Senior Project Manager
(412)963-2432
david.dunlap@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Certification Summary 5
Sample Summary 6
Method Summary 7
Lab Chronicle 8
Client Sample Results 9
QC Sample Results 10
QC Association Summary 11
Chain of Custody 12
Receipt Checklists 13

Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Job ID: 180-68926-1

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative
180-68926-1

Receipt
The sample was received on 8/4/2017 8:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11182	03-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-68926-1	B169-B	Solid	08/03/17 10:00	08/04/17 08:00

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Client Sample ID: B169-B

Lab Sample ID: 180-68926-1
Date Collected: 08/03/17 10:00
Matrix: Solid
Date Received: 08/04/17 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1			219137	08/04/17 11:05	JTL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: B169-B

Lab Sample ID: 180-68926-1
Date Collected: 08/03/17 10:00
Matrix: Solid
Date Received: 08/04/17 08:00
Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	20.0 mL	219077	08/04/17 11:48	BAP	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	219180	08/05/17 07:13	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	219181	08/05/17 07:14	JMO	TAL PIT
Total/NA	Analysis	8082A		1			219192	08/05/17 11:17	JMO	TAL PIT
	Instrument ID: CHGC8									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

JMO = John Oravec

Batch Type: Prep

BAP = Brian Pino

Batch Type: Analysis

JMO = John Oravec

JTL = Justin Landry

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Client Sample ID: B169-B

Date Collected: 08/03/17 10:00
Date Received: 08/04/17 08:00

Lab Sample ID: 180-68926-1

Matrix: Solid
Percent Solids: 82.7

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	11	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1221	ND		20	10	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1232	ND		20	7.9	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1242	ND		20	16	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1248	**370**		20	9.5	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1254	**270**		20	8.7	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1260	**100**		20	13	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1262	ND		20	14	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1
PCB-1268	ND		20	6.1	ug/Kg	☼	08/04/17 11:48	08/05/17 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*23 - 150*	*08/04/17 11:48*	*08/05/17 11:17*	*1*
DCB Decachlorobiphenyl (Surr)	*89*		*23 - 150*	*08/04/17 11:48*	*08/05/17 11:17*	*1*
Tetrachloro-m-xylene (Surr)	*90*		*27 - 138*	*08/04/17 11:48*	*08/05/17 11:17*	*1*
Tetrachloro-m-xylene (Surr)	*77*		*27 - 138*	*08/04/17 11:48*	*08/05/17 11:17*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**17.3**		0.1	0.1	%			08/04/17 11:05	1
Percent Solids	**82.7**		0.1	0.1	%			08/04/17 11:05	1

QC Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 180-219077/1-A
Matrix: Solid
Analysis Batch: 219079

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	8.8	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1221	ND		17	8.6	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1232	ND		17	6.6	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1242	ND		17	13	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1248	ND		17	8.0	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1254	ND		17	7.3	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1260	ND		17	11	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1262	ND		17	12	ug/Kg		08/04/17 04:29	08/04/17 20:25	1
PCB-1268	ND		17	5.1	ug/Kg		08/04/17 04:29	08/04/17 20:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*80*		*23 - 150*	*08/04/17 04:29*	*08/04/17 20:25*	*1*
DCB Decachlorobiphenyl (Surr)	*85*		*23 - 150*	*08/04/17 04:29*	*08/04/17 20:25*	*1*
Tetrachloro-m-xylene (Surr)	*87*		*27 - 138*	*08/04/17 04:29*	*08/04/17 20:25*	*1*
Tetrachloro-m-xylene (Surr)	*84*		*27 - 138*	*08/04/17 04:29*	*08/04/17 20:25*	*1*

Lab Sample ID: LCS 180-219077/2-A
Matrix: Solid
Analysis Batch: 219079

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219077

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			1330	1220		ug/Kg		92	52 - 126		
PCB-1260			1330	1440		ug/Kg		108	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*92*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*91*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*87*		*27 - 138*

Lab Sample ID: LCSD 180-219077/3-A
Matrix: Solid
Analysis Batch: 219079

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 219077

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			1330	1150		ug/Kg		86	52 - 126	6	20
PCB-1260			1330	1400		ug/Kg		105	50 - 130	3	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*82*		*23 - 150*
DCB Decachlorobiphenyl (Surr)	*87*		*23 - 150*
Tetrachloro-m-xylene (Surr)	*87*		*27 - 138*
Tetrachloro-m-xylene (Surr)	*82*		*27 - 138*

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Former Sperry Remington Site - North IRM

TestAmerica Job ID: 180-68926-1

GC Semi VOA

Prep Batch: 219077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-68926-1	B169-B	Total/NA	Solid	3541	
MB 180-219077/1-A	Method Blank	Total/NA	Solid	3541	
LCS 180-219077/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 180-219077/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	

Analysis Batch: 219079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-219077/1-A	Method Blank	Total/NA	Solid	8082A	219077
LCS 180-219077/2-A	Lab Control Sample	Total/NA	Solid	8082A	219077
LCSD 180-219077/3-A	Lab Control Sample Dup	Total/NA	Solid	8082A	219077

Cleanup Batch: 219180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-68926-1	B169-B	Total/NA	Solid	3665A	219077

Cleanup Batch: 219181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-68926-1	B169-B	Total/NA	Solid	3660B	219180

Analysis Batch: 219192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-68926-1	B169-B	Total/NA	Solid	8082A	219181

General Chemistry

Analysis Batch: 219137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-68926-1	B169-B	Total/NA	Solid	2540G	

TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2468

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Aron Krasnopoler	Site Contact: Ashwin Ranna/Ellen Buelow	Date: 8/3/17	COC No:
Geosyntec Consultants	Tel/Fax: 401-381-4333	Lab Contact: Dave Dunlap	Carrier: FedEx	1 of 1 COCs
10211 Wincopin Circle, 4th Floor	Analysis Turnaround Time			Sampler:
Columbia, MD 21044	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
410-381-4333 Phone	TAT if different from Below _____			Walk-in Client:
410-381-4499 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Former Sperry Remington Site - North	☐ 1 week			
Site: Elmira	☐ 2 days			Job / SDG No.:
P O # MN0832B	☑ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260C - VOA- Select List	6010C, 7471B, 9014	8082A, ~~8270D_LL~~ JP	8260C_LL-VOA-Select List	TCLP RCRA metals*	TCLP SVOCs*	TCLP VOCs*	Sample Specific Notes:
B169-B	8/3/17	1000	G	Soil	5					X		X	X	X	Run 8082A, *HOLD TCLP Analyses (until Geosyntec can review 8082A results)
JP															

RUSH

180-68926 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 423455 | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geosyntec	8/3/17 - 1830	[signature]	[signature]	8/4/17 0800
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-68926-1

Login Number: 68926
List Number: 1
Creator: Neri, Tom

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Geosyntec consultants

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Knoxville, TN 37922
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Memorandum

Date:	9 August 2017
To:	Aron Krasnopoler
From:	Kristoffer Henderson
CC:	J. Caprio
Subject:	**Stage 2A Data Validation - Level II Data Deliverable, TestAmerica Job ID 180-68926-1**

SITE: Former Sperry Remington Site-North IRM

INTRODUCTION

This report summarizes the findings of the Stage 2A data validation of one solid sample, collected August 3, 2017, as part of the Former Sperry Remington Site-North IRM project. The analyses were performed at TestAmerica Laboratories, Inc., Pittsburgh, Pennsylvania. The samples were analyzed for the following tests:

- Polychlorinated Biphenyls (PCBs) by EPA Methods 3541/8082A
- Total Solids by Standard Method 2540G

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.

Overall, based on this Stage 2A data validation covering the quality control (QC) parameters listed below, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitations of the qualification.

The data were validated the Quality Assurance Project Plan (QAPP) for Former Sperry Remington Facility Industrial Outfall Site, Elmira, New York, NYSDEC Site I.D. # 808043, NY09-2480-04, July 7, 2010, Revised November 11, 2010, USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2017 (EPA 540-R-2017-002), the pertinent methods referenced by the laboratory report and professional and technical judgment.

The following sample was analyzed and validated at Stage 2A level in the data set:

Laboratory ID	Client ID
180-68926-1	B169-B

The sample was received at the laboratory at 2.7ºC, within the criteria of 0-6ºC. No sample preservation issues were noted by the laboratory.

Toxicity characteristic leaching procedure (TCLP) analyses (metals, semivolatile organic compounds (SVOCs) and volatile organic compounds (VOCs)) were listed as on hold on the chain of custody (COC). These analyses were not reported in the laboratory report.

The solids data, used to report the samples on a dry weight basis, were not validated.

1.0 POLYCHLORINATED BIPHENYLS

The samples were analyzed for PCBs by EPA Methods 3541/8082A.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised over the course of the validation review and should be considered to determine any impact on data quality and usability.

⊗ Overall Assessment
✓ Holding Times
✓ Method Blank
✓ Matrix Spike/Matrix Spike Duplicate
✓ Laboratory Control Sample
✓ Surrogates
✓ Field Duplicate
✓ Sensitivity
✓ Electronic Data Deliverable Review

1.1 Overall Assessment

The PCB data reported in this package are considered usable for meeting project objectives. The analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for this sample set is 100%.

The sample contains mixtures of PCBs 1248, 1254 and 1260. There are peaks in 1248 and 1254 that are in both of these PCBs and peaks in 1254 and 1260 that are in both of these PCBs; therefore, there is contribution between PCBs when more than one PCB is detected in a sample. Therefore,

based on professional and technical judgment, the concentrations of PCBs 1248, 1254 and 1260 in the sample were J qualified as estimated.

Sample ID	Compound	Laboratory Concentration (mg/kg)	Laboratory Flag	Validation Concentration (mg/kg)	Validation Qualifier	Reason Code
B169-B	PCB-1248	370	NA	370	J	13
B169-B	PCB-1254	270	NA	270	J	13
B169-B	PCB-1260	100	NA	100	J	13

mg/kg-milligrams per kilogram
NA-not applicable

1.2 Holding Times

The holding times for the PCB analysis of solids are 14 days from sample collection to extraction and 40 days from extraction to analysis. The holding times were met for the sample analyses.

1.3 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was reported (batch 219077). PCBs were not detected in the method blank above the method detection limits (MDLs).

1.4 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD pairs were not reported.

1.5 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One LCS/LCS duplicate (LCSD) pair was reported. The recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

1.6 Surrogates

Acceptable surrogate recoveries were reported.

1.7 Field Duplicate

Field duplicates were not collected with the sample set.

1.8 Sensitivity

The samples were reported to the MDLs. Elevated non-detect results were not reported.

1.9 Electronic Data Deliverable (EDD) Review

The results and sample IDs in the EDD were reviewed against the information provided by the associated level II report at a minimum of 20% as part of the data validation process. The sample receipt date and time were included as part of the sample IDs in the EDD; this was not included in the level II report. No other discrepancies were identified between the level II report and the EDD.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; however, the associated numerical value is likely to be higher that the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.

J- The analyte was positively identified; however, the associated numerical value is likely to be lower that the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec's Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other

RPD-relative percent difference

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