RECON
Remedial Construction Services, L.P.

To: Unisys Corporation	From: Remedial Construction Services L.P.	Date:
Geosyntec Consultants, Inc.	Larry Endicott, Project Manager	October 27, 2020

Contract Number:	Client Project Number:	Submittal				ORIGINAL
0	0			New	X	General Approval
RECON Project Number:	Submittal Number: 018 R1		X	Resubmittal		For Information Only
02-4038	Previous Number: 017			Material		Document

TO BE COMPLETED BY RECON			FOR CLIENT USE ONLY			
Item No.	Specification Section/Para.	Description of Material (Include Type, Model Number, Catalog Number, Mfg)	APPROVED	DISAPPROVED	SEE PAGE 2	INITIAL
1	02 55 00	Solidification-Stabilization of Contaminated Material Work Plan	✓			AK
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By completing this form, the undersigned contractor certifies that the material complies with all specifications of the subject contract.

Date:	Name and Title	Signature
October 27, 2020	Bradley Houston, Project Engineer	BP Houston

FOR CLIENT USE ONLY

To: (Unisys Corporation)

For Evaluation and Action — Please review and forward your comments no later than **3 days**.

To: (Contractor) **Remedial Construction Services, L.P. (RECON)**

✓	Approved		Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved items within _____days of date shown below.

Date:	Name and Title	Signature
27 October 2020	Aron Krasnopoler, Senior Engineer	Aron Krasnopoler

COMMENTS

(Number to correspond with applicable item Number on Page 1)

Item No. RECON Comments:

Item No. Client Comments:

Instructions to Author

1 The term "material" is defined as articles, supplies, raw materials, equipment, parts, components, subcontractors plans, specifications and end items that are to be incorporated into the work required by the contract.

2 This form is to be used by RECON for submitting Shop Drawings, Equipment Data, Manufacturer's Literature and Certificates and samples of Materials to the client for approval in accordance with the provisions of this contract. Unless otherwise specified, it is to be prepared in 4 copies, signed, and provided to the client or client's representative with appropriate attachments.

3 Item(s) to be approved will be clearly tabbed or identified. Data pertaining to item(s) to be approved will be clearly identified or tabbed particularly where documents are voluminous, in order to properly evaluate the materials of articles to be incorporated in the work. Each attachment will be numbered to correspond with the item number shown on the face of this form.

4 Requests submitted shall be numbered consecutively by contract, in the space entitled "Submittal Number". This number, in addition to the Contract No., will be used to identify each Approval Submittal. Resubmissions will be indicated in the appropriate block and the insertion of previous submission number and date in addition to a new submission number. A single submission should be used for all work of a section of the specification, but in NO instance should the submission include work for more than one contract. Submittals requiring priority handling will be submitted by using the form and so marked across the face of the form.

5 This Material Approval submittal is not valid unless it is signed by the client or client's representative.

SOLIDIFICATION-STABILIZATION OF CONTAMINATED MATERIAL

FORMER SPERRY REMINGTON SITE-NORTH PORTION

Interim Remedial Measure #4 Amendment #1

Elmira, NY

Prepared for:

UNISYS | Securing Your Tomorrow™

B&B Engineers & Geologists of new york, p.c.

an affiliate of Geosyntec Consultants

Prepared by:

RECON™ Remedial Construction Services, L.P.

Remedial Construction Services, L.P

950 West Valley Road Suite 2802

Wayne, Pennsylvania 19087

OCTOBER 2020

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INTRODUCTION

For soils with elevated lead concentrations that are greater than the Resource Conservation and Recovery Act (RCRA) hazardous waste limit of 5 mg/L (as measured by Toxicity Characteristic Leaching Procedure (TCLP) analyses and greater than ten (10) times the Universal Treatment Standard of 0.75 mg/L (i.e. 7.5 mg/L) and/or total Polychlorinated Biphenyls (PCBs) greater than 1,000 mg/kg, RECON proposes to solidify/stabilize (S/S) soils by mechanically mixing a Blastox 215 reagent designed to treat and lower RCRA soil levels prior to off-site disposal. Technical data and a safety data sheet for Blastox 215 reagent is included as Attachment 1.

MIX DESIGN

The mix design is based on a treatability study performed by the vendor, TDJ Group (Attachment 2). The treatability study results show that a mix design of 3% of Blastox 215 reagent by weight reduced initial TCLP lead concentrations ranging from 6.7 to 9.4 mg/L to <0.050 mg/L. One supersack of Blastox 215 reagent (1.5 tons) will be used to stabilize 50 tons of soils (approximately 26 cubic yards or a 355 square-foot area of a two-foot interval of soil). Based on the bulk density of Blastox 215 reagent of 95 to 100 pounds per cubic foot (Attachment 1), the anticipated volume increase to stabilize 50 tons of soil is 4.2 to 4.4%.

APPROACH AND PREPARATION

Mechanical mixing of in-situ soils will be performed by an excavator with a bucket attachment to the within the area requiring stabilization. The Blastox 215 supersacks will be staged near the proposed mixing site to eliminate excavator travel distance with a suspended load. The supersack, made of woven polypropylene material, has four (4) sewn-in straps available for lifting. RECON will utilize slings, shackles and the 4-way strap to safely lift the supersack. Once supersack is elevated, it will be placed on a cradle support (bin blocks). A spout (or open chute) located at the bottom of the supersack will allow RECON to regulate the amount of material discharged from the supersack. A string or cable is attached to the spout, to allow personnel to stand at a safe distance. The controlled release of Blastox limits the potential for dust exposure and the supersack will be positioned near the ground to halt the flow of material if needed. This will limit any dust released during unloading but as a secondary precaution, RECON will stage a dedicated 2000-gallon water truck at the area during mixing operations to supply a water mist to assist with any fugitive dust emissions. The proposed source of water will be from a city hydrant.

Due to the physical and chemical nature of the Blastox material, all personnel within the mixing zone will be required to have Silica Awareness Training. The (supersack) release area shall be isolated, and all unnecessary or untrained people will be prohibited from entering the zone. Personal Protective Equipment (PPE) will be required in and around the mixing operation. PPE will include face and eye protection, i.e. face shield, safety glasses or googles, and respiratory protection i.e. N95 disposable respirator for when Blastox material is released from supersack and or in areas where exposure limits are unknown or in exceedance. An eye wash station will be positioned nearby in the event airborne particulate matter such as dust gets into the eyes inside the mixing zone. For skin protection, personnel will be required to have nitrile gloves during the handling process and additional garments such as full body Tyvek disposable suits will worn during the discharge operation. The excavator operator will be required to close all door and windows of the cab during mixing activities so that interior air is recirculated properly.

Perimeter air monitoring devices for dust (PM10) will be positioned in upwind and downwind of the mixing area based on prevailing wind direction in accordance with Soil Dust Monitoring and Control Plan (SDCMP) for the project. The Engineer will collect time-averaged air samples for PCB analyses when soils with total PCBs greater than 50 mg/kg are stabilized. To the extent possible, mixing-related activities will be conducted on weekends when Elmira

High School (EHS) students and faculty are not in session to limit potential exposure to airborne particulates that are commonly associated with mixing operations.

MECHANICAL MIXING PLAN

Reagent dosing will be implemented using grids marked on the ground within the excavation zone. A proposed grid layout will be generated in AutoCAD to ensure coverage over entire mixing area for review by the Engineer. Each grid will be laid out in 355 SF increments so that one supersack of reagent will be utilized at a time. Dosing for areas less than 355 SF will be visually measured through slow discharging techniques until approximate required reagent weight to soil volume ratio is achieved. For example, grid size of 141 SF will require 1,300 pounds of Blastox which is equivalent to 45-50% of supersack. This method of dosing measurement will confirm that RECON is meeting the treatability mix design ratio. After one (1) whole supersack Blastox material has been applied to the designated area, RECON will use the excavator bucket to mix the Blastox material into the soil in-situ until a homogeneous mixture is achieved. Mixing will be monitored by visual inspection to indicate that reagent has been distributed evenly through the volume and approved by the Engineer. When stabilization is complete, the Engineer will collect composite samples from test pits within the mixing area for TCLP metals analyses. Test pit locations will be surveyed. After sampling, stabilized material will be relocated and stockpiled in a containment area for off-Site transport and disposal as directed by the Engineer. Once results are received on the stabilized soils, RECON will prepare for disposal as required by the results and disposal facility acceptance.

For soils located inside the slide rail trench footprint, RECON will mechanical mix using an excavator with standard bucket attachment. A supersack of reagent will be lowered into the slide rail system using appropriate lifting techniques. A standard slide rail cell is 24-feet x 12-feet or 288 square-foot area, thus at a two-foot interval, a total of 22 CY of soil will need to be stabilized in each cell (approximate 75% total volume of supersack). Reagent dosing will be measured visually until approximate reagent-soil ratio is accomplished. RECON will mix inside slide rail until a homogeneous mixture is achieved and is visually inspected and approved by both RECON and the Engineer.

Generation of excessive dust will be limited by controlled release of the Blastox material and by the use of water spray, if necessary. If PM10 action levels presented in SDCMP are exceeded, RECON will cease the transfer process and enhance dust controls measures.

The Engineer will collect composite samples of stabilized soil excavated from test pits within the mixing area or slide rail cell for TCLP metals analyses at least twenty-four (24) hours after mixing is complete. Test pit locations will be surveyed. After sampling, stabilized material will be excavated and transferred to a containment area as directed by the Engineer relocated and stockpiled in a containment area for off-Site transport and disposal. Containment areas include the TSCA Accumulation Area or RCRA Accumulation Area constructed on the EHS baseball field or 30-yard roll off containers to be positioned on the football field away from the EHS school building. Roll off containers will be placed on 30 mil. poly liner and will have constructed berms and straw wattles around the perimeter to prevent material overflow and runoff. Once results are received on the stabilized soils, RECON will prepare for disposal as required by the results and disposal facility acceptance.

ATTACHMENT 1

BLASTOX 215 Technical and Safety Data Sheets

(continue to the next page)

TECHNICAL DATA

BLASTOX® 215

PRODUCT NAME

Blastox® 215

PRODUCT DESCRIPTION:

Blastox® 215 is a patented, fine granular, complex calcium silicate-based additive for stabilizing heavy metals including lead and cadmium. Other heavy metals can be stabilized with other TDJ product lines.

USE: Dose rates vary based on untreated leachability rates. Exact dose rates can be verified by performing a treatability study. When resultant waste tests non-hazardous via the EPA TCLP test, it qualifies for disposal in a local subtitle D landfill.

CHEMICAL REACTIONS: Blastox® 215 produces insoluble heavy metal compounds through chemical conversion, pH adjustment and physical encapsulation.

RESTRICTIONS: Material must be kept dry until preparations are made for field application.

TYPICAL PROPERTIES*

SPECIFIC GRAVITY:	3.15 – 3.22
BULK DENSITY:	95 – 100 #/FT^3
pH:	11.0-12.0
SOLUBILITY:	(Slight) .1% - 1.0%
SCREEN ANALYSIS:(>90%):	(-) 70 - (+) 200

*These data are results of historical production performance.

AVAILABILITY

Blastox 215 is sold directly from TDJ's manufacturing facilities in the Chicagoland area. Product is available in bulk, super sacks and 70 lb multi-walled paper bags. Contact TDJ's corporate office for price and availability.

TECHNICAL SERVICE

Complete technical bulletins and information are available from TDJ's corporate office or on the TDJ website at www.blastox.com. Technical assistance for specific applications is available by contacting the corporate office.

BLASTOX® 215 WARRANTY

All recommendations, statements and technical data contained herein are believed to be reliable and accurate, but are not to be construed as a warranty, expressed or implied. We accept no responsibility for results obtained by the application of this information. Unless otherwise specifically stated in a written supply contract, user assumes all responsibility and liability for loss or damage arising from the handling and use of this product.

12/05 Rev: 5/09 Blastox215TechData

The TDJ Group, Inc. www.blastox.com **1-800-252-7869**

Blastox® 215 Safety Data Sheet (SDS)

SECTION 1: PRODUCT AND COMPANY INFORMATION

Manufacturer	TDJ Group, Inc., 760-A Industrial Dr., Cary, IL 60013
Telephone	847-639-1113 FAX (847) 639-0499 WEBSITE: www.blastox.com EMAIL: tdj@blastox.com
Product Name(s)	Blastox® 215
Recommended Uses / Restrictions	Heavy metal stabilizer / Industrial or commercial use only
Emergency Contact / Number	Chemtrec: 800-424-9300; TDJ Group: 847-639-1113

SECTION 2: HAZARD IDENTIFICATION

Hazards

Eye damage/irritation	Category 2B – Causes eye irritation
Skin corrosion/irritation	Category 2 – Causes skin irritation
Specific Target Organ Toxicity (single occurrence)	Category 3 – May cause respiratory irritation

Signal Word WARNING

Precautionary Statements: Wash hands and exposed areas thoroughly after handling. Wear protective gloves. Wear eye and face protection. Avoid breathing dust. Use only outdoors or in a well-ventilated area. **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **If eye irritation persists:** Get medical advice or attention. **If on skin:** Wash with plenty of water. **If skin irritation occurs:** Get medical advice or attention. Take off contaminated clothing and wash before reuse. **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents or container in accordance with applicable regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#	Component%
Calcium silicates and aluminates	See note	>80
Magnesium oxide	1309-48-4	<5
Non-hazardous ingredients	Proprietary Mixture	Balance to 100%

Note: Contains CAS 12168-85-3, 10034-77-2, 12042-78-3, and 12068-35-8

SECTION 4: FIRST AID MEASURES

Most Important Symptoms / Effects: Eye contact with powder or solution can cause irritation or mechanical abrasion. Skin irritation can occur from contact with the product. Inhalation may cause coughing or mild irritation.

Skin Contact: Wash exposed areas promptly with water and mild soap. Remove contaminated clothing immediately and launder before reuse. Seek medical advice or attention if irritation occurs.

Eye Contact: Immediately flush eyes with water for at least 15 minutes. Remove contact lenses if easy to do. Seek medical attention if any symptoms persist.

Inhalation: Move to fresh air. Keep at rest and in a position comfortable for breathing. If you feel unwell, seek medical advice.

Ingestion: Do not induce vomiting. Wash out mouth with water. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Seek immediate medical advice or attention.

Indication of Immediate Medical Attention and Special Treatment, If Necessary: Persistent eye or skin irritation, difficulty in breathing.

SECTION 5: FIREFIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media: Product does not burn. Use fire-fighting techniques appropriate to the surrounding fire.
Specific Hazards Arising from the Chemical: None known.
Special Protective Equipment and Precautions for Fire-Fighters: Use equipment and procedures appropriate to the surrounding fire.

Blastox® 215 Safety Data Sheet (SDS)

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate release area and keep unnecessary or untrained people away. See Section 8 for personal protection gear.
Environmental Precautions: Contain spill if it can be done with minimal risk. Prevent from entering drains, sewers or waterways. Material is not regulated by DOT or EPA.
Methods for Cleaning Up: Avoid actions such as use of compressed air or vigorous dry sweeping that may cause dusting. Place material into container for later use, recycle or disposal.

SECTION 7: HANDLING AND STORAGE

Handling: Plant processes should be designed to minimize or control airborne dusts. All bags and containers should be properly labeled. Keep bags unopened until use. Keep containers tightly sealed when not in use. Use only with adequate ventilation. Wash hands at end of shift or before eating or using restroom. Wear gloves, goggles and appropriate clothing to avoid repeated or prolonged contact. Use good hygiene practices when handling product, including changing and laundering work clothes after use.
Storage: Keep containers in a dry, cool, well-ventilated area. Keep containers tightly closed.

SECTION 8: EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Limits

Component Name	ACGIH TLV-TWA	OSHA PEL-TWA
Particulate material	10 mg/m^3	15 mg/m^3
Calcium silicate	10 mg/m^3	15 mg/m^3 (total) 5 mg/m^3 (respirable)
Magnesium oxide	10 mg/m^3	15 mg/m^3

Engineering Controls: Use appropriate ventilation to maintain airborne concentration limits below exposure limits. Have eye wash stations and safety showers readily available.
Eye and Face Protection: Wear safety glasses or goggles to prevent dust from getting in eyes.
Skin Protection: Wear water-proof gloves to prevent contact. Additional body garments should be used based upon the task being performed.
Respiratory Protection: Use a properly fitted NIOSH respirator in areas where the exposure is unknown or above the OSHA PEL or ACGIH TLV.
General Hygiene: Follow accepted work practices for handling an alkaline material. Do not eat, drink or smoke in areas where this chemical is used or stored. Wash thoroughly with soap and water after task or shift, when using the restroom or before eating.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State	Gray solid (powder)	**Flash Point**	Not Applicable
Specific Gravity (Water=1)	3.15	**Upper Flammability Limits**	Not Applicable
Evaporation Point	Not Applicable	**Lower Flammability Limits**	Not Applicable
pH (in water)	~12	**Auto-ignition Temperature**	Not Applicable
Solubility in Water	Slight (0.1 – 1%)	**Decomposition Temperature**	Not Determined
Odor	No distinct odor	**Vapor Pressure**	Not Applicable
Odor Threshold	Not Determined	**Vapor Density (Air-=1)**	Not Applicable
Melting/Freezing Point	>1000 °C	**Partition Coefficient (n-octanol/water)**	Not Applicable
Boiling Range	Not Applicable	**Viscosity** (cSt , 40 °C)	Not Applicable
Initial Boiling Point	Not Applicable	**Critical Temperature**	Not Determined
Note: Physical and chemical properties are provided for safety, health and environmental considerations and do not fully represent product specifications. Those should be requested separately.			

Blastox® 215 Safety Data Sheet (SDS)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None
Chemical Stability: Stable when properly stored dry. Contact with water can produce calcium hydroxide.
Possibility of Hazardous Reactions: Will not occur under recommended conditions
Conditions to Avoid: Keep dry.
Incompatible Materials: Acids, ammonia salts or aluminum
Hazardous Decomposition Products: None

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects: Aqueous solution can cause serious eye damage due to high alkalinity. Aqueous solution can cause severe skin irritation or burns due to high pH in water. Ingestion may cause burns or irritation to the linings of the mouth, throat, and gastrointestinal tract. Inhalation may be irritating or corrosive to the respiratory tract due to product's alkaline nature.
Target Organ Effects: Lungs and respiratory system: short-term or immediate effects of dust inhalation are expected to be coughing and mild respiratory irritation.
Pre-existing Conditions Aggravated by Exposure: Respiratory or skin disorders
Chronic Effects: Acute symptoms may be aggravated
Carcinogenicity: Contains no components known by IARC, NTP or OSHA to be carcinogenic. Blastox® 215 has been analyzed and does not contain detectible amounts (<0.2%) of crystalline quartz which is known to be carcinogenic.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not Determined
Mobility: Not Determined
Degradability: Not Determined
Bioaccumulation: Not Determined

SECTION 13: DISPOSAL CONSIDERATION

Product is not regulated by EPA or DOT. Dispose in compliance with all applicable federal, state and local regulations.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name: Not Regulated

SECTION 15: REGULATORY INFORMATION

TSCA Status: All components are listed in the TSCA inventory
SARA 311/312 Reporting Categories: Acute hazard
SARA 313 Reportable Ingredients: No ingredients listed

SECTION 16: OTHER INFORMATION

Department Issuing SDS Health and Safety

Disclaimer
While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of Blastox 215 as it is commonly used, the sheet cannot, and does not, anticipate and provide all of the information that might be needed in every situation. In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with Blastox 215 products. Users therefore, should review other applicable safety data sheets before working with Blastox 215.

The TDJ Group, Inc. makes no warranty, expressed or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by TDJ Group, Inc., except that the product shall conform to contracted specifications. The information provided herein was believed by TDJ Group, Inc. to be accurate at the time of preparation or prepared from sources believed to be reliable. But it is the responsibility of the user to investigate and understand other pertinent sources of information. To comply with all laws and procedures applicable to the safe handling and use for the product, and to determine the suitability of the product for its intended use.

AGENCIES PROVE LONG-TERM STABILITY OF TDJ CHEMISTRIES

TDJ's calcium silicate based chemistries have been used in the stabilization of lead and other heavy metals since 1986. During this time, these chemistries have prevented the generation of well over 1 million tons of hazardous wastes. There are no concerns about the long-term stability of this significant volume of waste because TDJ chemistries have withstood the scrutiny of many institutions that have used EPA approved methods to determining long-term stability. The following is a partial list of some of the research conducted on TDJ chemistries.

US EPA National Risk Management Research Laboratory. This agency commissioned a study to determine lead stabilization effectiveness and long term stability of TDJ chemistries. EPA performed the Toxicity Characteristics Leach Procedure (TCLP) and the Multiple Extraction Procedure (MEP) tests on various samples. The MEP (EPA Method 1320) is a long-term stability test which uses 10 extractions of a highly acidic leachate on each sample. The test is intended to simulate 1,000 years exposure in a landfill. Notably, all 46 treated samples tested by the MEP produced results below the regulatory limit for each extraction. The report concluded that TDJ chemistries *"...provide long-term immobilization and durability".*

Army Corps of Engineers Research Laboratory. This agency utilized a single TCLP, back-to-back TCLPs, and MEP for various samples to determine effectiveness and long-term stability. The back-to-back TCLP and MEP tests eliminate the buffering capacity (alkalinity) and therefore indicate if a chemistry is simply "fooling" or "masking" the leach test. All testing demonstrated the waste complied with EPA regulatory limits for disposal. More importantly, the study concluded *"... there is no laboratory evidence of problems associated with their long-term stability. The pH buffering effects were eliminated, showing no dependence on a pH adjustment for stabilization."*

Federal Highway Administration (FHWA). This agency performed testing on several stabilization methods, including iron filings / steel grit and a proprietary TDJ chemical. In this study, FHWA used the MEP test to determine long-term stability over the 10 cycles. They indicated "*that iron addition alone does not produce long-term stability"*, but the proprietary (TDJ) material stabilization was "*very effective".*

The TDJ Group, Inc.

web www.blastox.com phone 847-639-1113 760 - A Industrial Drive
e mail tdj@blastox.com fax 847-639-0499 Cary, Illinois 60013

ATTACHMENT 2

Treatability Study (TDJ Group)

(continue to the next page)

Bradley Houston

From: Bradley Houston
Sent: Thursday, October 15, 2020 7:59 AM
To: Bradley Houston
Subject: RE: [External] RE: Submittal 017 - Blastox 215

From: Mike Carney <m.carney@jcarpenterenvironmental.com>
Sent: Thursday, October 8, 2020 4:58 PM
To: Larry Endicott <larry.endicott@reconservices.com>
Cc: Scott Sutton <Scott.Sutton@reconservices.com>
Subject: RE: [External] RE: Submittal 017 - Blastox 215

Hi Larry,

As discussed, the sample treatability results demonstrated that a 3% dosage of Blastox 215 successfully stabilized lead to "non-detection" for TCLP-Pb. The results are summarized below and the lab reports, attached.

Sample ID	Untreated TCLP-Pb Concentration	Blastox 215 Treatment Dosage	Treated TCLP-Pb Concentration
3522	**6.7 mg/L***	**3%**	**<0.050 mg/L**
3524	**9.4 mg/L***	**3%**	**<0.050 mg/L**

Result provided by Recon in Lab report (attached)

The product is scheduled to ship Monday and arrive in Elmira on Wednesday. Please let me know if you have any questions.

Thanks,

Mike

Michael J. Carney, P.G.
Geologist-Sales Manager
Direct – 414-491-9055
Office – 800-558-9244
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ISO 9001 QMS-Certified
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eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 180-110469-1
Client Project/Site: Former Sperry Remington-North

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

Attn: Mr. Aron Krasnopoler

Authorized for release by:
9/14/2020 11:40:07 AM

David Dunlap, Senior Project Manager
(412)963-2432
David.Dunlap@Eurofinset.com

LINKS

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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.

PA Lab ID: 02-00416

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Job ID: 180-110469-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-110469-1

Receipt
The samples were received on 9/4/2020 9:30 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.4º C.

Metals
Method 7470A: The matrix spike duplicate (MSD) of sample SSHS-B3522C-SUB-10-12 (180-110469-1) had the recovery of mercury above the control limits. The RPD between the spikes and the recoveries of the matrix spike (MS) and laboratory control sample (LCS) were within the control limits.

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

Definitions/Glossary

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

Job ID: 180-110469-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

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

Job ID: 180-110469-1

Laboratory: Eurofins TestAmerica, Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11182	04-01-21

Sample Summary

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

Job ID: 180-110469-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-110469-1	SSHS-B3522C-SUB-10-12	Solid	09/03/20 12:15	09/04/20 09:30	
180-110469-2	SSHS-B3523C-SUB-2-4	Solid	09/03/20 10:50	09/04/20 09:30	
180-110469-3	SSHS-B3524C-SUB-2-4	Solid	09/03/20 11:20	09/04/20 09:30	
180-110469-4	SSHS-B3525C-SUB-2-4	Solid	09/03/20 12:45	09/04/20 09:30	
180-110469-5	SSHS-B3528C-SUB-2-4	Solid	09/03/20 14:00	09/04/20 09:30	

Method Summary

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

Job ID: 180-110469-1

Method	Method Description	Protocol	Laboratory
EPA 6010C	Metals (ICP)	SW846	TAL PIT
EPA 7470A	Mercury (CVAA)	SW846	TAL PIT
3010A	Preparation, Total Metals	SW846	TAL PIT
7470A	Preparation, Mercury	SW846	TAL PIT
EPA 1311	TCLP Extraction	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = Eurofins 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-North

Job ID: 180-110469-1

Client Sample ID: SSHS-B3522C-SUB-10-12 — Lab Sample ID: 180-110469-1

Date Collected: 09/03/20 12:15 — **Matrix: Solid**
Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.33 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	328986	09/09/20 10:51	KEM	TAL PIT
TCLP	Analysis	EPA 6010C		1			329282	09/10/20 11:59	RJG	TAL PIT
	Instrument ID: C									
TCLP	Leach	EPA 1311			100.33 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	329144	09/10/20 10:00	RJR	TAL PIT
TCLP	Analysis	EPA 7470A		1			329419	09/11/20 11:55	RJR	TAL PIT
	Instrument ID: HGY									

Client Sample ID: SSHS-B3523C-SUB-2-4 — Lab Sample ID: 180-110469-2

Date Collected: 09/03/20 10:50 — **Matrix: Solid**
Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.43 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	328986	09/09/20 10:51	KEM	TAL PIT
TCLP	Analysis	EPA 6010C		1			329282	09/10/20 12:31	RJG	TAL PIT
	Instrument ID: C									
TCLP	Leach	EPA 1311			100.43 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	329144	09/10/20 10:00	RJR	TAL PIT
TCLP	Analysis	EPA 7470A		1			329419	09/11/20 12:00	RJR	TAL PIT
	Instrument ID: HGY									

Client Sample ID: SSHS-B3524C-SUB-2-4 — Lab Sample ID: 180-110469-3

Date Collected: 09/03/20 11:20 — **Matrix: Solid**
Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.88 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	328986	09/09/20 10:51	KEM	TAL PIT
TCLP	Analysis	EPA 6010C		1			329282	09/10/20 12:36	RJG	TAL PIT
	Instrument ID: C									
TCLP	Leach	EPA 1311			100.88 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	329144	09/10/20 10:00	RJR	TAL PIT
TCLP	Analysis	EPA 7470A		1			329419	09/11/20 12:01	RJR	TAL PIT
	Instrument ID: HGY									

Client Sample ID: SSHS-B3525C-SUB-2-4 — Lab Sample ID: 180-110469-4

Date Collected: 09/03/20 12:45 — **Matrix: Solid**
Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.14 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	328986	09/09/20 10:51	KEM	TAL PIT
TCLP	Analysis	EPA 6010C		1			329282	09/10/20 12:40	RJG	TAL PIT
	Instrument ID: C									

Lab Chronicle

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

Job ID: 180-110469-1

Client Sample ID: SSHS-B3525C-SUB-2-4

Lab Sample ID: 180-110469-4

Date Collected: 09/03/20 12:45

Matrix: Solid

Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.14 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	329144	09/10/20 10:00	RJR	TAL PIT
TCLP	Analysis	EPA 7470A		1			329419	09/11/20 12:02	RJR	TAL PIT
	Instrument ID: HGY									

Client Sample ID: SSHS-B3528C-SUB-2-4

Lab Sample ID: 180-110469-5

Date Collected: 09/03/20 14:00

Matrix: Solid

Date Received: 09/04/20 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.44 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	3010A			5 mL	50 mL	328986	09/09/20 10:51	KEM	TAL PIT
TCLP	Analysis	EPA 6010C		1			329282	09/10/20 11:46	RJG	TAL PIT
	Instrument ID: C									
TCLP	Leach	EPA 1311			100.44 g	2000 mL	328596	09/04/20 15:00	GRN	TAL PIT
TCLP	Prep	7470A			50 mL	50 mL	329144	09/10/20 10:00	RJR	TAL PIT
TCLP	Analysis	EPA 7470A		1			329419	09/11/20 12:03	RJR	TAL PIT
	Instrument ID: HGY									

Laboratory References:

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

Analyst References:

Lab: TAL PIT

- Batch Type: Leach
  - GRN = Gavin Nicholls
- Batch Type: Prep
  - KEM = Kimberly Mahoney
  - RJR = Ron Rosenbaum
- Batch Type: Analysis
  - RJG = Rob Good
  - RJR = Ron Rosenbaum

Client Sample Results

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

Job ID: 180-110469-1

Client Sample ID: SSHS-B3522C-SUB-10-12

Lab Sample ID: 180-110469-1
Date Collected: 09/03/20 12:15
Matrix: Solid
Date Received: 09/04/20 09:30

Method: EPA 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.041	mg/L		09/09/20 10:51	09/10/20 11:59	1
Barium	**1.9**	**J**	2.0	0.026	mg/L		09/09/20 10:51	09/10/20 11:59	1
Cadmium	**0.0067**	**J**	0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 11:59	1
Chromium	ND		0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 11:59	1
Lead	**6.7**		0.50	0.029	mg/L		09/09/20 10:51	09/10/20 11:59	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 11:59	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 11:59	1

Method: EPA 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	F1	0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 11:55	1

Client Sample ID: SSHS-B3523C-SUB-2-4

Lab Sample ID: 180-110469-2
Date Collected: 09/03/20 10:50
Matrix: Solid
Date Received: 09/04/20 09:30

Method: EPA 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.041	mg/L		09/09/20 10:51	09/10/20 12:31	1
Barium	**1.8**	**J**	2.0	0.026	mg/L		09/09/20 10:51	09/10/20 12:31	1
Cadmium	ND		0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 12:31	1
Chromium	**0.0093**	**J**	0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 12:31	1
Lead	**0.26**	**J**	0.50	0.029	mg/L		09/09/20 10:51	09/10/20 12:31	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 12:31	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 12:31	1

Method: EPA 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 12:00	1

Client Sample ID: SSHS-B3524C-SUB-2-4

Lab Sample ID: 180-110469-3
Date Collected: 09/03/20 11:20
Matrix: Solid
Date Received: 09/04/20 09:30

Method: EPA 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.041	mg/L		09/09/20 10:51	09/10/20 12:36	1
Barium	**1.6**	**J**	2.0	0.026	mg/L		09/09/20 10:51	09/10/20 12:36	1
Cadmium	ND		0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 12:36	1
Chromium	**0.015**	**J**	0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 12:36	1
Lead	**9.4**		0.50	0.029	mg/L		09/09/20 10:51	09/10/20 12:36	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 12:36	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 12:36	1

Method: EPA 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 12:01	1

Client Sample Results

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

Job ID: 180-110469-1

Client Sample ID: SSHS-B3525C-SUB-2-4

Lab Sample ID: 180-110469-4
Date Collected: 09/03/20 12:45
Matrix: Solid
Date Received: 09/04/20 09:30

Method: EPA 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.041	mg/L		09/09/20 10:51	09/10/20 12:40	1
Barium	**2.3**		2.0	0.026	mg/L		09/09/20 10:51	09/10/20 12:40	1
Cadmium	**0.0030**	**J**	0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 12:40	1
Chromium	**0.011**	**J**	0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 12:40	1
Lead	**0.57**		0.50	0.029	mg/L		09/09/20 10:51	09/10/20 12:40	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 12:40	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 12:40	1

Method: EPA 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 12:02	1

Client Sample ID: SSHS-B3528C-SUB-2-4

Lab Sample ID: 180-110469-5
Date Collected: 09/03/20 14:00
Matrix: Solid
Date Received: 09/04/20 09:30

Method: EPA 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.041**	**J**	0.50	0.041	mg/L		09/09/20 10:51	09/10/20 11:46	1
Barium	**2.1**		2.0	0.026	mg/L		09/09/20 10:51	09/10/20 11:46	1
Cadmium	ND		0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 11:46	1
Chromium	**0.011**	**J**	0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 11:46	1
Lead	**0.13**	**J**	0.50	0.029	mg/L		09/09/20 10:51	09/10/20 11:46	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 11:46	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 11:46	1

Method: EPA 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 12:03	1

QC Sample Results

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

Job ID: 180-110469-1

Method: EPA 6010C - Metals (ICP)

Lab Sample ID: MB 180-328986/1-A
Matrix: Solid
Analysis Batch: 329282

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328986

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.050	0.0041	mg/L		09/09/20 10:51	09/10/20 10:07	1
Barium	ND		0.20	0.0026	mg/L		09/09/20 10:51	09/10/20 10:07	1
Cadmium	ND		0.050	0.00028	mg/L		09/09/20 10:51	09/10/20 10:07	1
Chromium	ND		0.050	0.00078	mg/L		09/09/20 10:51	09/10/20 10:07	1
Lead	ND		0.050	0.0029	mg/L		09/09/20 10:51	09/10/20 10:07	1
Selenium	ND		0.050	0.0036	mg/L		09/09/20 10:51	09/10/20 10:07	1
Silver	ND		0.050	0.00085	mg/L		09/09/20 10:51	09/10/20 10:07	1

Lab Sample ID: LCS 180-328986/2-A
Matrix: Solid
Analysis Batch: 329282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.03		mg/L		103	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Cadmium	0.500	0.514		mg/L		103	80 - 120
Chromium	0.500	0.487		mg/L		97	80 - 120
Lead	0.500	0.490		mg/L		98	80 - 120
Selenium	1.00	1.08		mg/L		108	80 - 120
Silver	0.250	0.253		mg/L		101	80 - 120

Lab Sample ID: LB 180-328596/1-B
Matrix: Solid
Analysis Batch: 329282

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 328986

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.041	mg/L		09/09/20 10:51	09/10/20 11:41	1
Barium	ND		2.0	0.026	mg/L		09/09/20 10:51	09/10/20 11:41	1
Cadmium	ND		0.50	0.0028	mg/L		09/09/20 10:51	09/10/20 11:41	1
Chromium	ND		0.50	0.0078	mg/L		09/09/20 10:51	09/10/20 11:41	1
Lead	ND		0.50	0.029	mg/L		09/09/20 10:51	09/10/20 11:41	1
Selenium	ND		0.50	0.036	mg/L		09/09/20 10:51	09/10/20 11:41	1
Silver	ND		0.50	0.0085	mg/L		09/09/20 10:51	09/10/20 11:41	1

Lab Sample ID: 180-110469-1 MS
Matrix: Solid
Analysis Batch: 329282

Client Sample ID: SSHS-B3522C-SUB-10-12
Prep Type: TCLP
Prep Batch: 328986

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		5.00	4.77		mg/L		95	75 - 125
Barium	1.9	J	50.0	50.1		mg/L		96	75 - 125
Cadmium	0.0067	J	1.00	0.981		mg/L		97	75 - 125
Chromium	ND		5.00	4.55		mg/L		91	75 - 125
Lead	6.7		5.00	12.2		mg/L		109	75 - 125
Selenium	ND		1.00	1.07		mg/L		107	75 - 125
Silver	ND		1.00	0.953		mg/L		95	75 - 125

Method: EPA 6010C - Metals (ICP) (Continued)

Lab Sample ID: 180-110469-1 MSD — **Client Sample ID: SSHS-B3522C-SUB-10-12**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 329282 — **Prep Batch: 328986**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		5.00	4.81		mg/L		96	75 - 125	1	20
Barium	1.9	J	50.0	50.3		mg/L		97	75 - 125	0	20
Cadmium	0.0067	J	1.00	0.986		mg/L		98	75 - 125	0	20
Chromium	ND		5.00	4.55		mg/L		91	75 - 125	0	20
Lead	6.7		5.00	12.2		mg/L		110	75 - 125	0	20
Selenium	ND		1.00	1.06		mg/L		106	75 - 125	0	20
Silver	ND		1.00	0.959		mg/L		96	75 - 125	1	20

Method: EPA 7470A - Mercury (CVAA)

Lab Sample ID: MB 180-329144/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 329419 — **Prep Batch: 329144**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 11:51	1

Lab Sample ID: LCS 180-329144/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 329419 — **Prep Batch: 329144**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00250	0.00258		mg/L		103	80 - 120

Lab Sample ID: LB 180-328596/1-D — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 329419 — **Prep Batch: 329144**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00013	mg/L		09/10/20 10:00	09/11/20 11:53	1

Lab Sample ID: 180-110469-1 MS — **Client Sample ID: SSHS-B3522C-SUB-10-12**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 329419 — **Prep Batch: 329144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	F1	0.00500	0.00610		mg/L		122	75 - 125

Lab Sample ID: 180-110469-1 MSD — **Client Sample ID: SSHS-B3522C-SUB-10-12**
Matrix: Solid — **Prep Type: TCLP**
Analysis Batch: 329419 — **Prep Batch: 329144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	F1	0.00500	0.00629	F1	mg/L		126	75 - 125	3	20

QC Association Summary

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

Job ID: 180-110469-1

Metals

Leach Batch: 328596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-110469-1	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 1311	
180-110469-2	SSHS-B3523C-SUB-2-4	TCLP	Solid	EPA 1311	
180-110469-3	SSHS-B3524C-SUB-2-4	TCLP	Solid	EPA 1311	
180-110469-4	SSHS-B3525C-SUB-2-4	TCLP	Solid	EPA 1311	
180-110469-5	SSHS-B3528C-SUB-2-4	TCLP	Solid	EPA 1311	
LB 180-328596/1-B	Method Blank	TCLP	Solid	EPA 1311	
LB 180-328596/1-D	Method Blank	TCLP	Solid	EPA 1311	
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 1311	
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 1311	
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 1311	
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 1311	

Prep Batch: 328986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-110469-1	SSHS-B3522C-SUB-10-12	TCLP	Solid	3010A	328596
180-110469-2	SSHS-B3523C-SUB-2-4	TCLP	Solid	3010A	328596
180-110469-3	SSHS-B3524C-SUB-2-4	TCLP	Solid	3010A	328596
180-110469-4	SSHS-B3525C-SUB-2-4	TCLP	Solid	3010A	328596
180-110469-5	SSHS-B3528C-SUB-2-4	TCLP	Solid	3010A	328596
LB 180-328596/1-B	Method Blank	TCLP	Solid	3010A	328596
MB 180-328986/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 180-328986/2-A	Lab Control Sample	Total/NA	Solid	3010A	
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	3010A	328596
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	3010A	328596

Prep Batch: 329144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-110469-1	SSHS-B3522C-SUB-10-12	TCLP	Solid	7470A	328596
180-110469-2	SSHS-B3523C-SUB-2-4	TCLP	Solid	7470A	328596
180-110469-3	SSHS-B3524C-SUB-2-4	TCLP	Solid	7470A	328596
180-110469-4	SSHS-B3525C-SUB-2-4	TCLP	Solid	7470A	328596
180-110469-5	SSHS-B3528C-SUB-2-4	TCLP	Solid	7470A	328596
LB 180-328596/1-D	Method Blank	TCLP	Solid	7470A	328596
MB 180-329144/1-A	Method Blank	Total/NA	Solid	7470A	
LCS 180-329144/2-A	Lab Control Sample	Total/NA	Solid	7470A	
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	7470A	328596
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	7470A	328596

Analysis Batch: 329282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-110469-1	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 6010C	328986
180-110469-2	SSHS-B3523C-SUB-2-4	TCLP	Solid	EPA 6010C	328986
180-110469-3	SSHS-B3524C-SUB-2-4	TCLP	Solid	EPA 6010C	328986
180-110469-4	SSHS-B3525C-SUB-2-4	TCLP	Solid	EPA 6010C	328986
180-110469-5	SSHS-B3528C-SUB-2-4	TCLP	Solid	EPA 6010C	328986
LB 180-328596/1-B	Method Blank	TCLP	Solid	EPA 6010C	328986
MB 180-328986/1-A	Method Blank	Total/NA	Solid	EPA 6010C	328986
LCS 180-328986/2-A	Lab Control Sample	Total/NA	Solid	EPA 6010C	328986
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 6010C	328986
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 6010C	328986

QC Association Summary

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

Job ID: 180-110469-1

Metals

Analysis Batch: 329419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-110469-1	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 7470A	329144
180-110469-2	SSHS-B3523C-SUB-2-4	TCLP	Solid	EPA 7470A	329144
180-110469-3	SSHS-B3524C-SUB-2-4	TCLP	Solid	EPA 7470A	329144
180-110469-4	SSHS-B3525C-SUB-2-4	TCLP	Solid	EPA 7470A	329144
180-110469-5	SSHS-B3528C-SUB-2-4	TCLP	Solid	EPA 7470A	329144
LB 180-328596/1-D	Method Blank	TCLP	Solid	EPA 7470A	329144
MB 180-329144/1-A	Method Blank	Total/NA	Solid	EPA 7470A	329144
LCS 180-329144/2-A	Lab Control Sample	Total/NA	Solid	EPA 7470A	329144
180-110469-1 MS	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 7470A	329144
180-110469-1 MSD	SSHS-B3522C-SUB-10-12	TCLP	Solid	EPA 7470A	329144

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

Chain of Custody Record

Pb Waste Characterization

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Client Information	Sampler: S. Perdziola	Lab PM: Dunlap, David A	Carrier Tracking No(s):	COC No: 180-45857-9656.1
Client Contact: Mr. Aron Krasnopoler	Phone: 412-652-5703	E-Mail: david.dunlap@testamericainc.com		Page: Page 1 of 1
Company: Geosyntec Consultants, Inc.				Job #:
Address: 10211 Wincopin Circle 4'th Floor	Due Date Requested:			
City: Columbia	TAT Requested (days): 5 day			
State, Zip: MD, 21044				
Phone:	PO #: MN0832			
Email: akrasnopoler@geosyntec.com	WO #:			
Project Name: Former Sperry Remington Site-North	Project #: 18013464			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL Volatiles	8270D - TCL Semivolatiles	8082A - TCL PCBs	6010C, 7471B - TAL Metals/mercury	8015D - DRO	537.1 (mod.) - PFAS	TCLP Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N	N			
SSHS-B3522C-SUB-10-12	9/3/20	1215	C	Solid									X	2	
SSHS-B3523C-SUB-2-4	↓	1050	↓	↓									X	2	
SSHS-B3524C-SUB-2-4	↓	1120	↓	↓									X	2	
SSHS-B3525C-SUB-2-4	↓	1245	↓	↓									X	2	
SSHS-B3528C-SUB-2-4	↓	1400	↓	↓									X	2	

180-110469 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/3/20 1600	Geosyntec	[signature]	9/4/20 930	[illegible]

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-110469-1

Login Number: 110469
List Number: 1
Creator: Say, Thomas C

List Source: Eurofins 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	

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ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-188811-1
Client Project/Site: Recon - Elmira

For:
TDJ Group, The
18 East Dundee Road
Bldg 6 Siote 100
Barrington, Illinois 60010

Attn: James Lively

Authorized for release by:
10/7/2020 3:39:35 PM

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Case Narrative

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Job ID: 500-188811-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-188811-1

Comments
No additional comments.

Receipt
The samples were received on 10/5/2020 12:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice.

Metals
Method 1311: For sample Recon.Elmira.3524-C.215.3 (500-188811-1), the initial pH of the solution was 10.70. The pH after adding H-Cl was 1.65 and the final pH after rotation was 7.81.

Method 1311: For sample Recon.Elmira.3522-C.215.3 (500-188811-2), the initial pH of the solution was 10.68. The pH after adding H-Cl was 1.74 and the final pH after rotation was 7.89.

Method 6010C: The following samples were diluted due to the nature of the sample matrix: Recon.Elmira.3524-C.215.3 (500-188811-1) and Recon.Elmira.3522-C.215.3 (500-188811-2). Elevated reporting limits (RLs) are provided.

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

Sample Summary

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-188811-1	Recon.Elmira.3524-C.215.3	Solid	10/02/20 00:00	10/05/20 12:10	
500-188811-2	Recon.Elmira.3522-C.215.3	Solid	10/02/20 00:00	10/05/20 12:10	

Client Sample Results

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Client Sample ID: Recon.Elmira.3524-C.215.3

Lab Sample ID: 500-188811-1

Date Collected: 10/02/20 00:00

Matrix: Solid

Date Received: 10/05/20 12:10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Lead	**3100**		0.98		mg/Kg		10/06/20 20:05	10	EEN

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Lead	<0.050		0.050		mg/L		10/07/20 08:06	1	JEF

Client Sample Results

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Client Sample ID: Recon.Elmira.3522-C.215.3

Lab Sample ID: 500-188811-2

Date Collected: 10/02/20 00:00

Matrix: Solid

Date Received: 10/05/20 12:10

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Lead	**1900**		1.0		mg/Kg		10/06/20 20:08	10	EEN

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Analyzed	Dil Fac	Analyst
Lead	<0.050		0.050		mg/L		10/07/20 08:10	1	JEF

Accreditation/Certification and Definitions Summary

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-21

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
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Method Summary

Client: TDJ Group, The
Project/Site: Recon - Elmira

Job ID: 500-188811-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL CHI
1311	Toxicity Characteristic Leaching Procedure	SW846	TAL CHI
3010A	Preparation, Total Metals	SW846	TAL CHI
3050B	Preparation, Metals	SW846	TAL CHI

Protocol References:

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

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicago
2417 Bond St.
University Park, IL 604
708-534-5200
Fax. 708-534-5211

500-188811 COC

Report To:		Bill To:	
Contact:	James Lively	Contact:	Mike Behymer
Company:	TDJ Group	Company	TDJ Group
Address:	18-6 East Dundee Rd.	Address:	Same
	Barrington, IL 60010		
Phone:	847-639-1113	Phone:	Same
Email:	jlively@blastox.com	Email	mbehymer@blastox.com
		PO #:	967

Lab Lot # 500 - 188811

Package Sealed Yes (No) — **Samples Sealed** Yes (No)

Received on Ice Yes (No) — **Samples Intact** (Yes) No N/A

Temperature °C of Cooler Unchilled

Within Hold Time (Yes) No — **Preserv. Indicated** Yes No (N/A)

pH Check OK Yes (No) — **Res CL_2 Check OK** Yes No (N/A)

Sample Labels and COC Agree (Yes) No — COC not present

Sampler Name:

Signature:

Project Name: Recon - Elmira

TestAmerica Project Number:

Project Location:

TAT 3 day TAT

Lab PM: Jim Knapp

Laboratory ID	MS-MSD	Client Sample ID	Sampling Date	Sampling Time	Matrix	Comp/Grab	TCLP Pb & Total Pb
1		recon.elmira.3524-C.215.3					X
2		recon.elmira.3522-C.215.3					X

3 Day Turn Around Time please

RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:
James L	TDJ	9/21/2020		[signature]	TACHI	10/5/20	1210
RELINQUISHED BY:	COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:

Matrix Key
WW = Wastewater, SE = Sediment
W = Water, SO = Solid
S = Soil, DL = Drum Liquid
SL = Sludge, DS = Drum Solid
MS = Miscellaneous, L = Leachate
OL = Oil, W = Wipe
A = Air, O = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

Preservative Key
1. HCl, Cool to 4°
2. H_2SO_4, Cool to 4°
3. HNO_3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ____/____/____
Courier:
Hand Delivered ☐
Bill of Lading:

____of____

STL-8208 (0600)

10/7/2020