

## William Salomone

---

**From:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Sent:** Tuesday, May 30, 2017 4:50 PM  
**To:** William Salomone  
**Subject:** RE: New Kent Wood Products - DAA Qualifications Submittal

Bill, I think this will do. Thank you.

Ruth

---

**From:** William Salomone [mailto:wsalomone@daa.com]  
**Sent:** Tuesday, May 30, 2017 4:36 PM  
**To:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Cc:** tliesfeld@aol.com; Ken Bannister <kbannister@daa.com>; Guy Butts <gbutts@daa.com>; Devlin Harris (Devlin.Harris@deq.virginia.gov) <Devlin.Harris@deq.virginia.gov>; Rip Ford <rford@daa.com>  
**Subject:** RE: New Kent Wood Products - DAA Qualifications Submittal

Ruth,

The intent of Rip Ford's email was to inform you that: As required under Section 9.3 of the Order, as requested by Mr. Thomas Liesfeld, as of May 5, 2017, I am the Project Coordinator for the Response Action for the Site owned by New Kent Wood Preservatives, Inc. in replacement of Rip Ford.

Please let me know if you need anything additional.

Thank you,

William A. Salomone, P.E.  
Senior Project Engineer

## Draper Aden Associates

*Engineering • Surveying • Environmental Services*

*Lasting Positive Impact*

office 804.264.2228 • fax 804.264.8773

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**From:** Scharr, Ruth [mailto:[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)]  
**Sent:** Tuesday, May 30, 2017 3:34 PM  
**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>  
**Cc:** [tliesfeld@aol.com](mailto:tliesfeld@aol.com); Ken Bannister <[kbannister@daa.com](mailto:kbannister@daa.com)>; Guy Butts <[gbutts@daa.com](mailto:gbutts@daa.com)>; Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>  
**Subject:** RE: New Kent Wood Products - DAA Qualifications Submittal



Bill, I will be sending the approval for Draper Aden as a contractor working at the New Kent Wood Preservatives Site. Mr. Liesfeld needs to identify a new project coordinator. Mr. Rip Ford said in his email to me on May 5, 2017, that you were the new Project Engineer. I took that as the new Project Coordinator. The Unilateral Order does require that EPA be notified in writing when the Respondent changes their Project Coordinator, please refer to Section 9.3 (page 14) of the Order. Would you please confirm for me that Mr. Ford's email was intended to inform me on behalf of Mr. Liesfeld that the Respondent was changing its Project Coordinator to you.

Thank you,

Ruth Scharr  
On-Scene Coordinator  
Eastern Response Branch

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Thursday, May 25, 2017 10:45 AM  
**To:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
**Cc:** [tliesfeld@aol.com](mailto:tliesfeld@aol.com); Ken Bannister <[kbannister@daa.com](mailto:kbannister@daa.com)>; Guy Butts <[gbutts@daa.com](mailto:gbutts@daa.com)>  
**Subject:** New Kent Wood Products - DAA Qualifications Submittal

Ruth,

Please see attached submittal. Please let me know if you have any questions or comments.

Thank you,

Bill

William A. Salomone, P.E.  
Senior Project Engineer

**Draper Aden Associates**  
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## William Salomone

---

**From:** Miller, Jason (DEQ) <Jason.Miller@deq.virginia.gov>  
**Sent:** Thursday, August 17, 2017 4:14 PM  
**To:** Charles Carter  
**Cc:** Harris, Devlin (DEQ); Winter, Kyle (DEQ); Bill Hase; William Salomone; tliesfield@aol.com; Scharr, Ruth; Perszyk, Kathryn (DEQ)  
**Subject:** RE: Request for Beneficial Use Determination by Weanack Land LLC  
**Attachments:** Weanack BUD Approval.pdf  
  
**Importance:** High

Mr. Carter,  
Attached is the approval for your Beneficial Use Determination request. Please let me know if you have any questions...Jason

Jason A. Miller  
Land Protection Program Manager  
Piedmont Regional Office  
Virginia Department of Environmental Quality 4949-A Cox Rd.  
Glen Allen, VA 23060  
804-527-5028

-----Original Message-----

From: Charles Carter [mailto:charles@remadeland.com]  
Sent: Friday, July 21, 2017 3:05 PM  
To: Miller, Jason (DEQ) <Jason.Miller@deq.virginia.gov>  
Cc: Harris, Devlin (DEQ) <Devlin.Harris@deq.virginia.gov>; Winter, Kyle (DEQ) <Kyle.Winter@deq.virginia.gov>; Mongold, Mark (DEQ) <Mark.Mongold@deq.virginia.gov>; DAA Bill Hase P. E. <bhase@daa.com>; William Salomone <wsalomone@daa.com>  
Subject: Request for Beneficial Use Determination by Weanack Land LLC

Via email to Jason.Miller@deq.virginia.gov

Friday, July 21, 2017

Mr. Jason Miller  
Land Protection Manager  
Virginia Department of Environmental Quality Piedmont Regional Office  
4949 Cox Road A  
Glen Allen, Virginia 23060

RE: Beneficial Use Determination - Structural Fill from New Kent Wood Preservatives at Weanack Land LLC  
(Permit VPA00579)



Dear Mr. Miller:

Please find attached a letter and figures for Weanack Land LLC's request for approval by the Virginia Department of Environmental Quality for the beneficial use by Weanack of contaminated surficial fill material removed from the New Kent Wood Preservatives Site in New Kent County, Virginia under EPA Administrative Order (EPA Docket No. CERC-03-2015-0262DC) at the Weanack Land Reclamation Project facility located at 461 Shirley Plantation Road Virginia in Charles City, Virginia.

Sincerely,

Charles H. Carter, III  
Weanack Land, LLC

Attachments:

20170721P Request to DEQ for Beneficial Use Determination - Weanack Land LLC  
20170721P Request to DEQ for Beneficial Use Determination - Weanack Land LLC -- Figures

cc: Winter, Kyle (DEQ)  
Mark Mongold (DEQ)  
Devlin Harris (DEQ)  
William Salomone, P.E (Draper Aden Associates)  
William Hase, P.E. (Draper Aden Associates)



## William Salomone

---

**From:** Miller, Jason (DEQ) <Jason.Miller@deq.virginia.gov>  
**Sent:** Thursday, August 17, 2017 4:14 PM  
**To:** Charles Carter  
**Cc:** Harris, Devlin (DEQ); Winter, Kyle (DEQ); Bill Hase; William Salomone; tliesfield@aol.com; Scharr, Ruth; Perszyk, Kathryn (DEQ)  
**Subject:** RE: Request for Beneficial Use Determination by Weanack Land LLC  
**Attachments:** Weanack BUD Approval.pdf  
  
**Importance:** High

Mr. Carter,  
Attached is the approval for your Beneficial Use Determination request. Please let me know if you have any questions...Jason

Jason A. Miller  
Land Protection Program Manager  
Piedmont Regional Office  
Virginia Department of Environmental Quality 4949-A Cox Rd.  
Glen Allen, VA 23060  
804-527-5028

-----Original Message-----

From: Charles Carter [mailto:charles@remadeland.com]  
Sent: Friday, July 21, 2017 3:05 PM  
To: Miller, Jason (DEQ) <Jason.Miller@deq.virginia.gov>  
Cc: Harris, Devlin (DEQ) <Devlin.Harris@deq.virginia.gov>; Winter, Kyle (DEQ) <Kyle.Winter@deq.virginia.gov>; Mongold, Mark (DEQ) <Mark.Mongold@deq.virginia.gov>; DAA Bill Hase P. E. <bhase@daa.com>; William Salomone <wsalomone@daa.com>  
Subject: Request for Beneficial Use Determination by Weanack Land LLC

Via email to Jason.Miller@deq.virginia.gov

Friday, July 21, 2017

Mr. Jason Miller  
Land Protection Manager  
Virginia Department of Environmental Quality Piedmont Regional Office  
4949 Cox Road A  
Glen Allen, Virginia 23060

RE: Beneficial Use Determination - Structural Fill from New Kent Wood Preservatives at Weanack Land LLC  
(Permit VPA00579)



Dear Mr. Miller:

Please find attached a letter and figures for Weanack Land LLC's request for approval by the Virginia Department of Environmental Quality for the beneficial use by Weanack of contaminated surficial fill material removed from the New Kent Wood Preservatives Site in New Kent County, Virginia under EPA Administrative Order (EPA Docket No. CERC-03-2015-0262DC) at the Weanack Land Reclamation Project facility located at 461 Shirley Plantation Road Virginia in Charles City, Virginia.

Sincerely,

Charles H. Carter, III  
Weanack Land, LLC

Attachments:

20170721P Request to DEQ for Beneficial Use Determination - Weanack Land LLC  
20170721P Request to DEQ for Beneficial Use Determination - Weanack Land LLC -- Figures

cc: Winter, Kyle (DEQ)  
Mark Mongold (DEQ)  
Devlin Harris (DEQ)  
William Salomone, P.E (Draper Aden Associates)  
William Hase, P.E. (Draper Aden Associates)





# *COMMONWEALTH of VIRGINIA*

## *DEPARTMENT OF ENVIRONMENTAL QUALITY*

### PIEDMONT REGIONAL OFFICE

Molly Joseph Ward  
Secretary of Natural Resources

4949A Cox Road, Glen Allen, Virginia 23060  
(804) 527-5020 Fax (804) 527-5106  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Jeffery A. Steers  
Regional Director

August 17, 2017

Mr. Charles Carter  
Weanack Land LLC  
461 Shirley Plantation  
Charles City, VA 23030

RE: Beneficial Use of Contaminated Surficial Fill Material generated at the New Kent Wood Preservatives Site in New Kent, Virginia

Dear Mr. Carter:

The Virginia Department of Environmental Quality (DEQ) Piedmont Regional Office (PRO) received your Beneficial Use request dated July 21, 2017, for the use of contaminated surficial fill material to be generated during site excavation activities at the New Kent Wood Preservatives (NKWP) site located in New Kent, Virginia. The NKWP site is a former wood preserving facility currently under an Environmental Protection Agency (EPA) Administrative Order to conduct remediation activities at the site. Under the Order and associated Removal Response Action, contaminated surface soil and gravel is to be excavated and removed from the site.

The proposed beneficial use of this material is for use as structural fill at the Weanack Land Reclamation Project (WLRP) facility, which operates under Virginia Pollution Abatement Permit No. 00579 (VPA00579). The material will be used for construction of dike or berms inside the permitted basin areas, as well as elevating roadways over internal dikes within the permitted basin. The proposal indicates approximately 8,000 cubic yards of material may be generated at the NKWP site for beneficial use as structural fill.

The use of contaminated surficial fill material from the NKWP site for use as structural fill at the WLRP facility is considered a beneficial use of solid waste in accordance with 9 VAC 20-81-97 of the Virginia Solid Waste Management Regulations (VSWMR, 9 VAC 20-81) and is authorized with the following conditions:



Mr. Charles Carter  
Beneficial Use Determination  
August 17, 2017

1. Contaminated surficial fill material from the NKWP site is a solid waste until beneficially used as a structural fill material at the WLRP facility in accordance with this letter.
2. The contaminated surficial fill material shall not be speculatively accumulated on site at the WLRP or NKWP facilities. "Speculatively accumulated material" means any material that is accumulated before being used, reused, or reclaimed or in anticipation of potential use, reuse, or reclamation. Materials are not being accumulated speculatively when they can be used, reused or reclaimed, have a feasible means of use, reuse, or reclamation available and 75% of the materials accumulated are being removed from the facility annually.
3. The contaminated surficial fill material shall be used within 90 days of delivery to the WLRP facility in accordance with 9 VAC 20-81-97.A.1.d.(1)(d).
4. Stockpiles of the contaminated surficial fill material shall be stored within the permitted basin areas at the WLRP facility. Dust, run-off, and siltation from the stockpiles must be controlled.
5. The contaminated surficial fill material shall be utilized and managed, including pre-excavation soil sampling and analysis, in accordance with the procedures outlined in the July 21, 2017, Beneficial Use Determination Request and VPA00579.
6. In accordance with 9 VAC 20-81-97.A.4., the DEQ may revoke this determination if it finds that one or more of the items of information submitted serving as the basis for this determination was incorrect or is no longer valid, the DEQ finds that there has been a violation of any condition attached to this determination, or that the use, reuse or reclamation process has become a public nuisance.

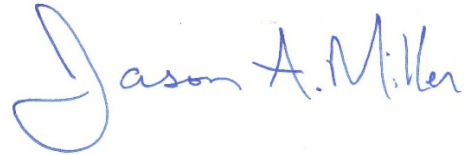
If you do not agree to any of the above conditions in this approval, you must notify the DEQ prior to the use of the solid waste as a beneficial material. In doing so, you may request either a meeting with staff or an informal fact-finding pursuant to Va. Code § 2.2-4019 to present argument or information regarding why this approval should be granted without the contested conditions and to receive a final decision on the requirement of the conditions for approval.



Mr. Charles Carter  
Beneficial Use Determination  
August 17, 2017

Please note that it is the responsibility of applicant to obtain any other permits or authorizations that may be necessary. If you have any questions regarding this matter, please contact Jason Miller at (804) 527-5028 or [Jason.miller@deq.virginia.gov](mailto:Jason.miller@deq.virginia.gov).

Respectfully,

A handwritten signature in blue ink that reads "Jason A. Miller". The signature is written in a cursive style with a large, looped initial "J".

Jason A. Miller  
Regional Land Protection Program Manager

cc: Neil Zahradka, DEQ-CO  
Devlin Harris, DEQ-CO  
Kathryn Perszyk, DEQ-CO  
Ruth Scharr, EPA  
William Salomone, P.E., Draper Aden Associates  
Tom Liesfield



## William Salomone

---

**From:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Sent:** Friday, August 25, 2017 10:49 AM  
**To:** William Salomone  
**Subject:** Re: L-WOOD- NKWP- Response Action-EPA Approval of Contractor

Ok

Sent from my iPhone

On Aug 25, 2017, at 10:25 AM, William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)> wrote:

I would call the contractor directly at the number below. His name is Jon Lamb.

---

**From:** Scharr, Ruth [<mailto:Scharr.Ruth@epa.gov>]  
**Sent:** Friday, August 25, 2017 10:24 AM  
**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>  
**Subject:** Re: L-WOOD- NKWP- Response Action-EPA Approval of Contractor

Who can I notify in lieu if you next week

Sent from my iPhone

On Aug 25, 2017, at 10:02 AM, William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)> wrote:

Ruth,

On behalf of the Owner, we seek EPA approval for *East Cost Athletics, LLC* as the contractor to complete the Response Action Construction in place of *Waterfront Piers and Bulkheads, Inc.*, as originally requested. Please see attached Contractor Qualifications for your review.

Once approved by EPA, we will proceed with preparing the contract documents. Once the Contract is executed, we will request a schedule from the Contractor. The response Action Construction is tentatively scheduled to begin the first week in October 2017. If time permits, a two day pre-sampling event may be scheduled for mid-to late-September 2017. We will notify you in advance before any site work, including pre-sampling, is scheduled.

I will be on vacation between 8/28 and 9/5. I am available anytime today until 1:00. Please feel free to contact me if you have anything to discuss. Please feel free to contact *East Cost Athletics, LLC* directly at (757) 645-7529, if you require additional information from them in my absence.

Thank you,

Bill



**William A. Salomone, P.E.**

Senior Project Engineer

## Draper Aden Associates

*Engineering • Surveying • Environmental Services*

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Phone: 804.264.2228 • Direct: 804.237.1858

[Web](#) • [Blog](#) • [Facebook](#) • [Twitter](#) • [LinkedIn](#)

<Contractor Qualifications - East Coast Athletics LLC 17 822.pdf>



## William Salomone

---

**From:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Sent:** Thursday, August 31, 2017 5:22 PM  
**To:** tliesfeld@aol.com  
**Cc:** Ken Bannister; Devlin Harris (Devlin.Harris@deq.virginia.gov); William Salomone  
**Subject:** RE: L-WOOD- NKWP- Response Action-EPA Approval of Contractor  
**Attachments:** Certified copy of final UAO.pdf

Mr. Liesfeld, The Contractor Qualifications do not state whether the personnel to be working on site have the require 40 Hour OSHA Training. Please have the proposed contractor update the qualifications to include whether they meet this requirement in 29 CFR 1910.120 . Reference to this can be found in the Unilateral Order in page 10 in Section 8.3 (i). I wasn't given an email address for Mr. Jon Lamb but if you would forward him the order for his reference that would be helpful.

If contractor meets the training and medical monitoring requirements, then I have no reason to disapprove this contractor.

Kindest regards,

Ruth Scharr  
OSC  
Eastern Response Branch  
215 756-7897

---

**From:** William Salomone [mailto:wsalomone@daa.com]  
**Sent:** Friday, August 25, 2017 10:01 AM  
**To:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Cc:** tliesfeld@aol.com; Ken Bannister <kbannister@daa.com>  
**Subject:** L-WOOD- NKWP- Response Action-EPA Approval of Contractor

Ruth,

On behalf of the Owner, we seek EPA approval for *East Cost Athletics, LLC* as the contractor to complete the Response Action Construction in place of *Waterfront Piers and Bulkheads, Inc.*, as originally requested. Please see attached Contractor Qualifications for your review.

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I will be on vacation between 8/28 and 9/5. I am available anytime today until 1:00. Please feel free to contact me if you have anything to discuss. Please feel free to contact *East Cost Athletics, LLC* directly at (757) 645-7529, if you require additional information from them in my absence.

Thank you,

Bill

**William A. Salomone, P.E.**

Senior Project Engineer

**Draper Aden Associates**

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Phone: 804.264.2228 • Direct: 804.237.1858

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## William Salomone

---

**From:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Sent:** Monday, October 2, 2017 12:15 PM  
**To:** William Salomone  
**Cc:** Devlin Harris (Devlin.Harris@deq.virginia.gov)  
**Subject:** comments on Part C Addendum for Removal action work plan  
**Attachments:** rscharr comments- RAP Part C - Addendum 1 - 17 0929 - DRAFT.doc

Bill, Minor edits as we discussed last Friday. Also reminding you that you will add Mr. Carter's letter requesting the BUD

Thanks.

Ruth Scharr  
OSC  
Eastern Response Branch



DRAFT

**NEW KENT WOOD PRESERVATIVES, INC. SITE**  
**PROVIDENCE FORGE, NEW KENT COUNTY, VIRGINIA**

**RESPONSE ACTION PLAN**  
**PART C – SAMPLE COLLECTION METHODS AND PROCEDURES PLAN - ADDENDUM 1**

**ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTION**  
**DOCKET NO. CERC-03-2015-0262DC**

Prepared for:  
**Thomas J. Liesfeld**

Prepared by:  
**DRAPER ADEN ASSOCIATES**  
Richmond, Virginia

September 28, 2017



DRAFT

**NEW KENT WOOD PRESERVATIVES, INC. SITE**  
**PROVIDENCE FORGE, NEW KENT COUNTY, VIRGINIA**

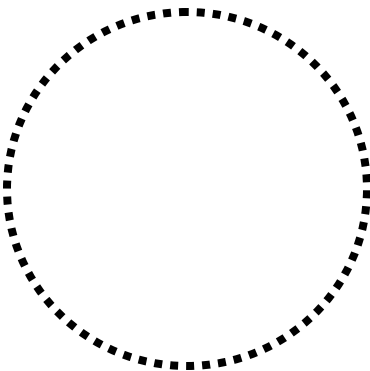
**RESPONSE ACTION PLAN**  
**PART C – SAMPLE COLLECTION METHODS AND PROCEDURES PLAN - ADDENDUM 1**

**ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTION**  
**DOCKET NO. CERC-03-2015-0262DC**

Draper Aden Associates prepared this document in accordance with a contract between Draper Aden Associates (DAA) and Mr. Tom Liesfeld. This document is an addendum to the document titled "Part C – Sample Collection Methods and Procedures Plan", dated January 2016, by DAA. The Part C document is a module of the complete Response Action Plan (RAP). The RAP meets the requirements of the Administrative Order for Removal Response Action listed above.

The purpose of this document is to present the detailed plan for pre-excavation and testing of the contaminated surficial fill inside the four excavation areas shown in the Response Action Plan design documents. The objective of the pre-excavation efforts are to characterize the material inside the Excavation Area in order to determine the applicable off-site disposal location prior to excavation. The results of chemical testing will be presented to the Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (VADEQ) for review and determination prior to the initial excavation of each Area.

"I certify that the information presented herein, is true and correct to the best of my knowledge."



---

William A. Salomone, P.E.  
Virginia Professional Engineers License No: 0402053577  
*Project Coordinator*  
Draper Aden Associates



## 1.0 BACKGROUND

The Response Action Plan (RAP) meets the requirements of the Administrative Order for Removal Response Action (Order) and consists of multiple modules:

- Part A - Plan Overview
- Part B - Site Characterization Plan
- Part C - Sample Collection Methods and Procedures Plan (SCMAPP)
- Part D - Quality Assurance Project Plan (QAPP)
- Part E - Health and Safety Plan (HASP)
- Part F - Erosion and Sediment Control Plan / Grading Plan
- Part G - Stormwater Management Plan (VSMP) + Stormwater Pollution Prevention Plan (SWPPP)

The Part C Sample Collection Methods and Procedures Plan module of the RAP prescribes protocols for obtaining samples for chemical analyses that will be conducted during construction to meet the requirements of the Order. The SCMAPP, Part C, provides protocols for field procedures to be conducted during all phases necessary toward meeting the requirement of the Order, including site characterization, and post-excavation verification sampling.

This document (Part C-Addendum 1) supplements the approved SCMAPP and has been developed in coordination EPA and the VADEQ and is subject to review by these agencies.

For Addendum 1, stockpiling of waste for characterization as described in the SCMAPP is replaced with a pre-excavation sampling and testing plan. Addendum 1 includes provisions for determining the acceptability for excavated material to be transported to Weanak Land LLC. (WL), located in Charles City County, VA. If approved, after the completion of pre-excavation testing, the ~~WL~~[New Kent Wood Preservatives Inc](#) material will be transported to the WL property and managed under a beneficial use determination (BUD). The VADEQ approved the BUD in a letter to Mr. Charles Carter (WL) from Mr. Jason Miller (VADEQ) dated August 17, 2017 (Attachment 1).

## 2.0 SUMMARY

Addendum 1 included herein, presents the soil sampling procedures for composite soil sampling for waste characterization. Addendum 1 does not affect the sampling



procedures described for purposes of *suitability of soils to be used as backfill*, or for *post-excavation sampling*, which is intended to verify the waste delineation.

Section 2.4 of the SCMAPP states the following:

*During the excavation phase of the program, discrete samples of soil may be obtained from stockpiled soils and combined to form at least one composite sample from each stockpile in order to determine if such soils meet the requirement for classification as hazardous waste, based on the toxicity characteristic. Each composite sample will consist of material obtained from eight or more locations. Such samples will be extracted using the Toxicity Characteristic Leaching Procedure and chemically analyzed for the parameters required by the facility, to which the soils will be delivered.*

Under Addendum 1, stockpiling of excavated soils will not be conducted. Composite soil samples will be taken from each Excavation Area prior to the removal excavation being initiated.

Pre-excavation sampling and chemical testing will be completed within four defined Excavation Areas to determine waste classification of the material. Composite samples collected from the pre-excavated site will be chemically analyzed for criteria required by the intended receiving facility. If samples from any Area do not meet the criteria of the receiving facility, the samples will be extracted using the Toxicity Characteristic Leaching Procedure in accordance with the SCMPP.

Scheduling of the pre-excavation sampling will be conducted in coordination with the EPA and VADEQ.

### **3.0 PRE-EXCAVATION SOIL SAMPLING PROCEDURES**

1. DAA will conduct the soil sampling tests at a frequency of two grab samples per 2,500 square feet within each of the four delineated Excavation Areas (EA1, EA2, EA3 and EA4). (see Attachment 2). Within each 2,500 sq. ft. grid space, the Contractor will excavate a test pit to a maximum depth of 2 feet below ground surface (bgs) and DAA will collect two grab samples at each grid space.
2. One grab sample will be obtained at a depth of 0-12" and one grab sample will be collected at a depth of 12-24". Collected samples will be labelled and homogenized into one sample for each of the two sample depths per Area.



3. The Contractor will backfill all test pit excavations after sampling has concluded.

## **4.0 ANALYSIS**

Soil samples will be chemically analyzed by Air, Water, & Soil laboratory, Inc., in Richmond, VA. (AWS) in accordance with the screening criteria for beneficial use at Weanack Land, LLC. (VPA permit 000579). The screening criteria required for WL is presented in the VPA permit. AWS meets the criteria for a testing lab in accordance with the Order.

As part of the WL criteria, soil samples will be chemically analyzed for agricultural quality parameters, with the purpose of determining its suitability for upland placement and conversion to agricultural uses. These analyses will be performed by Virginia Tech Soil Testing laboratory in Blacksburg, Virginia.

## **5.0 CHARACTERIZATION**

If chemical results meet the WL criteria and as approved by the EPA, then the material from the corresponding Excavation Area sampled will be considered acceptable for beneficial use at Weanack Land. The Contractor will excavate and transport material from each Excavation Area approved for WL, to the Weanack Land site to be managed under the WL BUD.

Samples having chemical results that do not meet the WL criteria, will be extracted for the Toxicity Characteristic Leaching Procedure (TCLP) criteria in accordance with the SCMAPP. Material that is not deemed hazardous will be evaluated for disposal at a municipal landfill.



DRAFT

**ATTACHMENT 1**

**BENEFICIAL USE DETERMINATION APPROVAL  
LETTER  
(VADEQ TO WEANACK LAND, LLC)**



DRAFT

**ATTACHMENT 2**

**OVERALL PRE-EXCAVATION TEST PIT GRID  
PLAN**



## William Salomone

---

**From:** Charles Carter <charles@remadeland.com>  
**Sent:** Friday, October 20, 2017 7:41 PM  
**To:** William Salomone  
**Cc:** 'Ruth Scharr'  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3  
**Attachments:** 20170817P DEQ BUD Approval NKWP.pdf

Bill,

Yes, I'm awaiting the results of the additional testing to complete the submittal to DEQ. I didn't see anything in the data provided on Areas 1 & 3 that exceeds the allowed levels under the permit. Also, see BUD letter from DEQ attached.

Once I fill out the xls (SSL spreadsheet with sample results vs Exclusion Criteria in VPA00579 DEQ permit) and get a few details, the letter can be quickly sent. Relevant sections of the VPA00579 permit I will address (note: with BUD, please read "Dredge Material" as "BUD Material"):

*Special Condition Part I.A.1. of VPA00579 states: Dredge material may be disposed at the Weanack Land Reclamation Project if testing indicates that parameter concentrations are equal to or less than the Exclusion Criteria in the following table [Source Monitoring Table in VPA00579].*

*Special Condition Part I.A.2. of VPA00579 states: Dredged material to be disposed at the Weanack Land Reclamation Project shall be characterized by composite sampling. The sampling and compositing protocols and the sampling results shall be submitted to the Virginia Department of Environmental Quality for review and approval prior to disposal. The source of the dredged material and the volume of material to be disposed at Weanack shall also be submitted.*

<i>Source of Dredged Material:</i>	(Company/location name/address, project/permit number, watershed/HUC)
<i>Volume of Dredged Material:</i>	(# cubic yards)
<i>Composite Samples Analyzed:</i>	(number of samples for volume above)
<i>Sampling and Compositing Protocols:</i>	(describe)

I will copy and coordinate with you on the letter, but provided there are no exceedances or extraordinary circumstances, the permit and BUD indicate that we may proceed. That said, I'll be submitting the results and information above to DEQ and responding to any requests.

Let me know if you need anything further. Look forward to talking with you soon.

All the best,

Charles



---

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Friday, October 20, 2017 2:59 PM  
**To:** Charles Carter <[charles@remadeland.com](mailto:charles@remadeland.com)>  
**Cc:** Ruth Scharr ([scharr.ruth@epa.gov](mailto:scharr.ruth@epa.gov)) <[scharr.ruth@epa.gov](mailto:scharr.ruth@epa.gov)>  
**Subject:** FW: NKWP- Pre-Excavation Testing- EA3

Charles,

We should have the results of additional testing by early next week. After that we will discuss the material disposal options.

Please see email from Ruth (EPA) below.

Thank you,

Bill

---

**From:** Scharr, Ruth [<mailto:Scharr.Ruth@epa.gov>]  
**Sent:** Friday, October 20, 2017 2:44 PM  
**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>  
**Cc:** Harris, Devlin (DEQ) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3

Bill, Yes I think we should get a copy of the letter from DEQ to Mr. Carter approving the material from the site for Beneficial Use.

Ruth

---

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Friday, October 20, 2017 2:36 PM  
**To:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
**Cc:** Harris, Devlin (DEQ) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3

Ruth,

The plan is that Jon will submit an updated schedule once all the chemical testing results are in, and he is given direction and approval as to where to dispose the material.

Will you need an additional written approval from VA DEQ for the placement at Weanack Land?

Thank you,

Bill

---

**From:** Scharr, Ruth [<mailto:Scharr.Ruth@epa.gov>]  
**Sent:** Friday, October 20, 2017 2:25 PM



**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>  
**Cc:** Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>; Charles Carter <[charles@remadeland.com](mailto:charles@remadeland.com)>  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3

So, is the plan that Jon will be updating the schedule after all results are in. If so when do we expect them all to be reported to you.

Thanks. Ruth

Right now, I am planning to go to WV November 7 and 8 returning on November 9<sup>th</sup>.

---

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Friday, October 20, 2017 2:21 PM  
**To:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
**Cc:** Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>; Charles Carter <[charles@remadeland.com](mailto:charles@remadeland.com)>  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3

Ruth,

As I understand it, Mr. Carter will submit the results to DEQ in regards to beneficial use demonstration for his VPA permit.

Thank you,

Bill

---

**From:** Scharr, Ruth [<mailto:Scharr.Ruth@epa.gov>]  
**Sent:** Friday, October 20, 2017 2:15 PM  
**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>  
**Cc:** [tliesfeld@aol.com](mailto:tliesfeld@aol.com); Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>; Charles Carter <[charles@remadeland.com](mailto:charles@remadeland.com)>; Bill Hase <[bhase@daa.com](mailto:bhase@daa.com)>  
**Subject:** RE: NKWP- Pre-Excavation Testing- EA3

Bill, Thanks. So is it Mr. Carter who will be submitting the results to DEQ for their review and approval.

Ruth

---

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Friday, October 20, 2017 1:41 PM  
**To:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
**Cc:** [tliesfeld@aol.com](mailto:tliesfeld@aol.com); Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)) <[Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)>; Charles Carter <[charles@remadeland.com](mailto:charles@remadeland.com)>; Bill Hase <[bhase@daa.com](mailto:bhase@daa.com)>  
**Subject:** NKWP- Pre-Excavation Testing- EA3

Ruth,

Please see attached letter with the chemical testing results of the pre-excavation in area EA3. Please let me know if you have any questions or comments.



Thank you,

Bill

**William A. Salomone, P.E.**

Senior Project Engineer

**Draper Aden Associates**

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## William Salomone

---

**From:** Charles Carter <charles@remadeland.com>  
**Sent:** Wednesday, October 25, 2017 11:52 AM  
**To:** William Salomone  
**Subject:** Chat with Ruth Sharr/EPA

Bill,

Ruth Sharr from EPA called me a little while ago and we had a nice talk. I explained and she accepted that I do not need further DEQ approvals to accept the material but I do require the SSL spreadsheet to be filled out correctly.

I will send DEQ the spreadsheet as a matter of course and ask for confirmation, but that's a CYA for me so that down the road, there's no lack of 'awareness' in the DEQ file and that I've been following protocol. I will also include a segment on the NKWP project and any subsequent relevant data in my annual report for 2017.

Long story short, we're good to go once all the data is in the spreadsheet and I confirm it meets criteria and standards for testing. It'll take me a while to input all the data and verify the detection levels, methods, surrogate recovery, blank/spike/field tests, etc. Probably a couple days if I don't have too much going on.

Charles



## William Salomone

---

**From:** Haskin, David <DHaskin@republicservices.com>  
**Sent:** Thursday, November 2, 2017 3:29 PM  
**To:** William Salomone  
**Subject:** RE: NKWP - Special Waste Profile Application

Bill,  
The waste has been approved for acceptance. Shall I prepare a disposal agreement for East Coast Athletics?

**David Haskin**  
Special Waste Executive

124 Greene Drive, Yorktown, VA 23692  
e [dhaskin@republicservices.com](mailto:dhaskin@republicservices.com)  
c 804.479.0196 f 480.718.4127  
w [www.RepublicServices.com](http://www.RepublicServices.com)

Old Dominion Landfill – 2001 Charles City Road, Henrico, VA 23231  
King & Queen Landfill – 4443 Iris Road, Little Plymouth, VA 23091  
Honeygo Run Reclamation – 10710 Philadelphia Road, Perry Hall, MD 21128  
Carter Valley Landfill – 2825 Carters Valley Road, Church Hill, TN 37642



We'll handle it from here.™

---

---

**From:** William Salomone [<mailto:wsalomone@daa.com>]  
**Sent:** Wednesday, November 01, 2017 2:41 PM  
**To:** Haskin, David  
**Cc:** Jon Lamb ([jondlamb@gmail.com](mailto:jondlamb@gmail.com))  
**Subject:** NKWP - Special Waste Profile Application

David,

I have attached a completed Waste Application for review. The results of chemical analysis for the material that is proposed for disposal are attached to the Application (Sample ID EA-2-TCLP). I have also attached a copy of the following reference documents:

- EPA Response Action Order
- Sample Collection Plan (SCMAPP)
- Site Excavation Plan showing the limits of the material that will be excavated.



We propose to dispose of approximately 901 cy of soil excavated from the upper layer (0" to 12") from Excavation Area 2 ("EA2") only.

Please let me know if you have any questions or need additional information.

Thank you,

Bill

**William A. Salomone, P.E.**

Senior Project Engineer

**Draper Aden Associates**

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# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
50861718039

Expiration Date  
10/20/2018

### I. Decision Request:

☒ Initial ☐ Recertification ☐ Change

Disposal Facility: 5086 - King & Queen Landfill

Generator Name: East Coast Athletics, LLC

Generator Site Address: 4101 South Mountcastle Road

City: Providence Forge

County:

State: VA

Zip:

Name of Waste: New Kent Wood Products-Gravel and Sand-Fill

Estimated Annual Volume: 901 Cubic Yards

### II. Special Waste Department Decision:

☒ Approved ☐ Rejected

Management Method(s): ☒ Landfill ☐ Solidification ☐ Bioremediation ☐ Transfer Facility

Problematic Special Waste according to Republic? ☐ Yes ☒ No

If yes, which one?

Approved by Special Waste Review Committee? ☐ Yes ☐ No ☒ Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: Joseph M. Sorokach

Date: 11/2/2017

Name (Printed): Joseph Sorokach

### III. Facility Decision:

☐ Approved ☐ Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Name (Printed): \_\_\_\_\_

Date: 11/2/2017





Requested Disposal Facility: 5086 King and Queen Sanitary LF VA

Waste Profile #

50861718039

Sales Rep #: 108

**I. Generator Information**

Generator Name: East Coast Athletics, LLC			
Generator Site Address: 4101 South Mountcastle Road			
City: Providence Forge	County: New Kent	State: Virginia	Zip: 23140
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): <input type="checkbox"/> 4101 South Mountcastle Road			
City: Providence Forge	County:	State: Virginia	Zip: 23140
Generator Contact Name: Jon Lamb		Email: jondlamb@gmail.com	
Phone Number: (757) 645-7529	Ext:	Fax Number:	

**II. Billing Information**

Bill To: East Coast Athletics, LLC		Contact Name: Jon Lamb	
Billing Address: 6800 Mill Trail Road Charles City, VA 23030		Email: jondlamb@gmail.com	
City: Charles City	State: Virginia	Zip: 23030	Phone: (757) 645-7529

**III. Waste Stream Information**

Name of Waste: New Kent Wood Products - Gravel and Sand - Fill	
Process Generating Waste: Soil/gravel material to be excavated to 12" below grade per EPA Admin. Order (No CERC-03-2015-0262DC). Wood preserving operations conducted at the site from 1978 to ~1996 where wood was treated with chromated-copper-arsenic (CCA). The Order identifies removal of soils containing arsenic and chromium above 30 mg/kg (ppm) and 63 mg/kg respectively. The approved Removal Response includes the excavation and replacement of constituent-contaminated soils from the surface to a maximum depth of 24". Per the Order, excavated material to be disposed at an "approved facility".	
Type of Waste:	<input type="checkbox"/> INDUSTRIAL PROCESS WASTE <input checked="" type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume:	901 Cubic Yards
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

**IV. Representative Sample Certification**☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input checked="" type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample: <input type="checkbox"/> COMPOSITE SAMPLE <input checked="" type="checkbox"/> GRAB SAMPLE	
Sample Date: 10/6/2017	
Sample ID Numbers: Sample ID: EA-2-TCLP  (See attached analysis. The chain of custody provided at the end of report incorrectly indicates that the sample is a "composite", however the sample was collected as a "grab" as correctly identified on the laboratory results pages)	





Waste Profile #

50861718039

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)			
1. Silty Sand		60-75			
2. VDOT #3 stone		25-30			
3.					
4.					
5.					
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Black	None	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	95	N/A	N/A °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Jon D. Lamb

Owner

Authorized Representative Name And Title (Type or Print)

East Coast Athletics, LLC

Company Name

Authorized Representative Signature

11/1/2017

Date





1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

## Certificate of Analysis

### Final Report

Laboratory Order ID 17J0277

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro, GA 30830

Date Received: October 6, 2017 17:20  
Date Issued: October 20, 2017 14:56  
Project Number: R15434R-12  
Purchase Order:

Submitted To: Thomas Liesfeld

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Enclosed are the results of analyses for samples received by the laboratory on 10/06/2017 17:20. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars  
Laboratory Manager

#### End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Air Water & Soil Laboratories, Inc.







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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
859 Ben Hatcher Rd  
Waynesboro GA, 30830  
Submitted To: Thomas Liesfeld Project Number: R15434R-12  
Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### ANALYTICAL REPORT FOR SAMPLES

Laboratory Order ID 17J0277

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EA-1-TCLP	17J0277-01	Soil	10/06/2017 11:30	10/06/2017 17:20
EA-2-TCLP	17J0277-02	Soil	10/06/2017 11:00	10/06/2017 17:20
EA-3-TCLP	17J0277-03	Soil	10/06/2017 10:30	10/06/2017 17:20
EA-4-TCLP	17J0277-04	Soil	10/06/2017 10:00	10/06/2017 17:20





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-1-TCLP

Laboratory Sample ID: 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Metals by 6000/7000 Series Methods</b>									
TCLP Silver	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Arsenic	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Barium	01	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Cadmium	01	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Chromium	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
TCLP Mercury	01	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:50	RCV
TCLP Lead	01	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:26	CWO
<b>TCLP Selenium</b>	01	SW6010C	<b>0.266 mg/L</b>		0.250	1	10/10/17 07:30	10/10/17 14:26	CWO
<b>TCLP Extraction Fluid, Metals</b>	01	SW1311	<b>1 #</b>		--	1	10/09/17 14:30	10/10/17 07:41	RCV
<b>TCLP Volatile Organic Compounds by GCMS</b>									
<b>TCLP Extraction Fluid, ZHE</b>	01	SW1311	<b>1 #</b>		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 1,2-Dichloroethane	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 1,4-Dichlorobenzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP 2-Butanone (MEK)	01	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Benzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Carbon tetrachloride	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Chlorobenzene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Chloroform	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Tetrachloroethylene (PCE)	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Trichloroethylene	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
TCLP Vinyl chloride	01	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:21	JDW
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	<i>01</i>	<i>SW8260B</i>	<i>106 %</i>		<i>70-120</i>		<i>10/10/17 00:00</i>	<i>10/10/17 10:21</i>	<i>JDW</i>





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-1-TCLP

Laboratory Sample ID: 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Volatile Organic Compounds by GCMS</b>									
Surr: 4-Bromofluorobenzene (Surr)	01	SW8260B	95.2 %		75-120		10/10/17 00:00	10/10/17 10:21	JDW
Surr: Dibromofluoromethane (Surr)	01	SW8260B	101 %		80-119		10/10/17 00:00	10/10/17 10:21	JDW
Surr: Toluene-d8 (Surr)	01	SW8260B	100 %		85-120		10/10/17 00:00	10/10/17 10:21	JDW
<b>TCLP Semivolatile Organic Compounds</b>									
TCLP Extraction Fluid, SV Organics	01	SW1311	1 #		--	1	10/11/17 14:48	10/11/17 14:48	PMP
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
TCLP 2,4,5-Trichlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP 2,4,6-Trichlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP 2,4-Dinitrotoluene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachlorobenzene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachlorobutadiene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Hexachloroethane	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP m+p-Cresols	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Nitrobenzene	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP o+m+p-Cresols	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP o-Cresol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Pentachlorophenol	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
TCLP Pyridine	01	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 20:39	SKS
Surr: 2,4,6-Tribromophenol (Surr)	01	SW8270D	57.6 %		20-86		10/13/17 09:13	10/13/17 20:39	SKS
Surr: 2-Fluorobiphenyl (Surr)	01	SW8270D	50.2 %		23-87		10/13/17 09:13	10/13/17 20:39	SKS
Surr: 2-Fluorophenol (Surr)	01	SW8270D	18.9 %		10-52		10/13/17 09:13	10/13/17 20:39	SKS
Surr: Nitrobenzene-d5 (Surr)	01	SW8270D	48.7 %		10-98.5		10/13/17 09:13	10/13/17 20:39	SKS
Surr: Phenol-d5 (Surr)	01	SW8270D	11.8 %		5-33		10/13/17 09:13	10/13/17 20:39	SKS





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-1-TCLP

Laboratory Sample ID: 17J0277-01

Grab Date/Time: 10/06/2017 11:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Semivolatile Organic Compounds by GC/MS</b>									
Surr: <i>p</i> -Terphenyl-d14 (Surr)	01	SW8270D	65.3 %		27-133		10/13/17 09:13	10/13/17 20:39	SKS
<b>TCLP Organochlorine Herbicides by GC/ECD</b>									
TCLP 2,4,5-TP (Silvex)	01	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 01:50	CVH
TCLP 2,4-D	01	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 01:50	CVH
Surr: DCAA (Surr)	01	SW8151A	130 %	S	60-112		10/17/17 14:43	10/19/17 01:50	CVH
<b>TCLP Organochlorine Pesticides and PCBs by GC/ECD</b>									
TCLP Chlordane	01	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Endrin	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP gamma-BHC (Lindane)	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Heptachlor	01	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Heptachlor Epoxide	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Methoxychlor	01	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:01	10/17/17 13:01	LBH
TCLP Toxaphene	01	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:01	10/17/17 13:01	LBH
Surr: TCMX	01	SW8081B	60.0 %		18-112		10/17/17 13:01	10/17/17 13:01	LBH
Surr: DCB	01	SW8081B	85.0 %		27-131		10/17/17 13:01	10/17/17 13:01	LBH





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. **EA-2-TCLP**

Laboratory Sample ID: 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Metals by 6000/7000 Series Methods</b>									
TCLP Silver	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Arsenic	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Barium	02	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Cadmium	02	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Chromium	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Mercury	02	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:52	RCV
TCLP Lead	02	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Selenium	02	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:28	CWO
TCLP Extraction Fluid, Metals	02	SW1311	1 #		--	1	10/09/17 14:30	10/10/17 07:41	RCV
<b>TCLP Volatile Organic Compounds by GCMS</b>									
TCLP Extraction Fluid, ZHE	02	SW1311	1 #		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 1,2-Dichloroethane	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 1,4-Dichlorobenzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP 2-Butanone (MEK)	02	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Benzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Carbon tetrachloride	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Chlorobenzene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Chloroform	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Tetrachloroethylene (PCE)	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Trichloroethylene	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
TCLP Vinyl chloride	02	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 10:45	JDW
Surr: 1,2-Dichloroethane-d4 (Surr)	02	SW8260B	103 %		70-120		10/10/17 00:00	10/10/17 10:45	JDW





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. **EA-2-TCLP**

Laboratory Sample ID: 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Volatile Organic Compounds by GCMS</b>									
Surr: 4-Bromofluorobenzene (Surr)	02	SW8260B	93.7 %		75-120		10/10/17 00:00	10/10/17 10:45	JDW
Surr: Dibromofluoromethane (Surr)	02	SW8260B	99.5 %		80-119		10/10/17 00:00	10/10/17 10:45	JDW
Surr: Toluene-d8 (Surr)	02	SW8260B	101 %		85-120		10/10/17 00:00	10/10/17 10:45	JDW
<b>TCLP Semivolatile Organic Compounds</b>									
TCLP Extraction Fluid, SV Organics	02	SW1311	1 #		--	1	10/11/17 14:48	10/11/17 14:48	PMP
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
TCLP 2,4,5-Trichlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP 2,4,6-Trichlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP 2,4-Dinitrotoluene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachlorobenzene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachlorobutadiene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Hexachloroethane	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP m+p-Cresols	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Nitrobenzene	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP o+m+p-Cresols	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP o-Cresol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Pentachlorophenol	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
TCLP Pyridine	02	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:12	SKS
Surr: 2,4,6-Tribromophenol (Surr)	02	SW8270D	88.4 %	S	20-86		10/13/17 09:13	10/13/17 21:12	SKS
Surr: 2-Fluorobiphenyl (Surr)	02	SW8270D	65.7 %		23-87		10/13/17 09:13	10/13/17 21:12	SKS
Surr: 2-Fluorophenol (Surr)	02	SW8270D	26.3 %		10-52		10/13/17 09:13	10/13/17 21:12	SKS
Surr: Nitrobenzene-d5 (Surr)	02	SW8270D	65.4 %		10-98.5		10/13/17 09:13	10/13/17 21:12	SKS
Surr: Phenol-d5 (Surr)	02	SW8270D	29.2 %		5-33		10/13/17 09:13	10/13/17 21:12	SKS





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. **EA-2-TCLP**

Laboratory Sample ID: 17J0277-02

Grab Date/Time: 10/06/2017 11:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Semivolatile Organic Compounds by GC/MS</b>									
Surr: <i>p</i> -Terphenyl-d14 (Surr)	02	SW8270D	69.7 %		27-133		10/13/17 09:13	10/13/17 21:12	SKS
<b>TCLP Organochlorine Herbicides by GC/ECD</b>									
TCLP 2,4,5-TP (Silvex)	02	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:12	CVH
TCLP 2,4-D	02	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:12	CVH
Surr: DCAA (Surr)	02	SW8151A	100 %		60-112		10/17/17 14:43	10/19/17 02:12	CVH
<b>TCLP Organochlorine Pesticides and PCBs by GC/ECD</b>									
TCLP Chlordane	02	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Endrin	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP gamma-BHC (Lindane)	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Heptachlor	02	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Heptachlor Epoxide	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Methoxychlor	02	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:18	10/17/17 13:18	LBH
TCLP Toxaphene	02	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:18	10/17/17 13:18	LBH
Surr: TCMX	02	SW8081B	55.0 %		18-112		10/17/17 13:18	10/17/17 13:18	LBH
Surr: DCB	02	SW8081B	80.0 %		27-131		10/17/17 13:18	10/17/17 13:18	LBH





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-3-TCLP

Laboratory Sample ID: 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Metals by 6000/7000 Series Methods</b>									
TCLP Silver	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Arsenic	03RE1	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/11/17 13:56	BG
TCLP Barium	03	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Cadmium	03	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Chromium	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Mercury	03	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 13:53	RCV
TCLP Lead	03	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:38	CWO
TCLP Selenium	03	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:38	CWO
<b>TCLP Extraction Fluid, Metals</b>	03	SW1311	<b>1 #</b>		--	1	10/09/17 14:30	10/10/17 07:41	RCV
<b>TCLP Volatile Organic Compounds by GCMS</b>									
<b>TCLP Extraction Fluid, ZHE</b>	03	SW1311	<b>1 #</b>		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 1,2-Dichloroethane	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 1,4-Dichlorobenzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP 2-Butanone (MEK)	03	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Benzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Carbon tetrachloride	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Chlorobenzene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Chloroform	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Tetrachloroethylene (PCE)	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Trichloroethylene	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
TCLP Vinyl chloride	03	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:08	JDW
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	03	SW8260B	98.9 %		70-120		10/10/17 00:00	10/10/17 11:08	JDW





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-3-TCLP

Laboratory Sample ID: 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Volatile Organic Compounds by GCMS</b>									
Surr: 4-Bromofluorobenzene (Surr)	03	SW8260B	94.3 %		75-120		10/10/17 00:00	10/10/17 11:08	JDW
Surr: Dibromofluoromethane (Surr)	03	SW8260B	97.7 %		80-119		10/10/17 00:00	10/10/17 11:08	JDW
Surr: Toluene-d8 (Surr)	03	SW8260B	102 %		85-120		10/10/17 00:00	10/10/17 11:08	JDW
<b>TCLP Semivolatile Organic Compounds</b>									
TCLP Extraction Fluid, SV Organics	03	SW1311	1 #		--	1	10/11/17 14:48	10/11/17 14:48	PMP
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
TCLP 2,4,5-Trichlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP 2,4,6-Trichlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP 2,4-Dinitrotoluene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachlorobenzene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachlorobutadiene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Hexachloroethane	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP m+p-Cresols	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Nitrobenzene	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP o+m+p-Cresols	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP o-Cresol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Pentachlorophenol	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
TCLP Pyridine	03	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 21:44	SKS
Surr: 2,4,6-Tribromophenol (Surr)	03	SW8270D	48.2 %		20-86		10/13/17 09:13	10/13/17 21:44	SKS
Surr: 2-Fluorobiphenyl (Surr)	03	SW8270D	43.8 %		23-87		10/13/17 09:13	10/13/17 21:44	SKS
Surr: 2-Fluorophenol (Surr)	03	SW8270D	17.6 %		10-52		10/13/17 09:13	10/13/17 21:44	SKS
Surr: Nitrobenzene-d5 (Surr)	03	SW8270D	44.2 %		10-98.5		10/13/17 09:13	10/13/17 21:44	SKS
Surr: Phenol-d5 (Surr)	03	SW8270D	20.6 %		5-33		10/13/17 09:13	10/13/17 21:44	SKS





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-3-TCLP

Laboratory Sample ID: 17J0277-03

Grab Date/Time: 10/06/2017 10:30

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
Surr: <i>p</i> -Terphenyl-d14 (Surr)	03	SW8270D	54.3 %		27-133		10/13/17 09:13	10/13/17 21:44	SKS
<b>TCLP Organochlorine Herbicides by GC/ECD</b>									
TCLP 2,4,5-TP (Silvex)	03	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:34	CVH
TCLP 2,4-D	03	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:34	CVH
Surr: DCAA (Surr)	03	SW8151A	95.0 %		60-112		10/17/17 14:43	10/19/17 02:34	CVH
<b>TCLP Organochlorine Pesticides and PCBs by GC/ECD</b>									
TCLP Chlordane	03	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Endrin	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP gamma-BHC (Lindane)	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Heptachlor	03	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Heptachlor Epoxide	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Methoxychlor	03	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:36	10/17/17 13:36	LBH
TCLP Toxaphene	03	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:36	10/17/17 13:36	LBH
Surr: TCMX	03	SW8081B	55.0 %		18-112		10/17/17 13:36	10/17/17 13:36	LBH
Surr: DCB	03	SW8081B	80.0 %		27-131		10/17/17 13:36	10/17/17 13:36	LBH





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### Final Report

Client Name: Thomas Liesfeld  
859 Ben Hatcher Rd  
Waynesboro GA, 30830

Date Issued: 10/20/2017 14:56

Submitted To: Thomas Liesfeld

Project Number: R15434R-12

Client Site I.D.: NKWP / Weanack Land Reclamation Criteria

Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-4-TCLP

Laboratory Sample ID: 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Metals by 6000/7000 Series Methods</b>									
TCLP Silver	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Arsenic	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Barium	04	SW6010C	<5.00 mg/L		5.00	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Cadmium	04	SW6010C	<0.0400 mg/L		0.0400	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Chromium	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Mercury	04	SW7470A	<0.008 mg/L		0.008	1	10/10/17 08:20	10/10/17 14:00	RCV
TCLP Lead	04	SW6010C	<0.100 mg/L		0.100	1	10/10/17 07:30	10/10/17 14:44	CWO
TCLP Selenium	04	SW6010C	<0.250 mg/L		0.250	1	10/10/17 07:30	10/10/17 14:44	CWO
<b>TCLP Extraction Fluid, Metals</b>	04	SW1311	<b>1 #</b>		--	1	10/09/17 14:30	10/10/17 07:41	RCV
<b>TCLP Volatile Organic Compounds by GCMS</b>									
<b>TCLP Extraction Fluid, ZHE</b>	04	SW1311	<b>1 #</b>		--	1	10/09/17 15:00	10/10/17 09:04	KCS
TCLP 1,1-Dichloroethylene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 1,2-Dichloroethane	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 1,4-Dichlorobenzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP 2-Butanone (MEK)	04	SW8260B	<0.20 mg/L		0.20	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Benzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Carbon tetrachloride	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Chlorobenzene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Chloroform	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Tetrachloroethylene (PCE)	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Trichloroethylene	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
TCLP Vinyl chloride	04	SW8260B	<0.02 mg/L		0.02	1	10/10/17 00:00	10/10/17 11:31	JDW
<i>Surr: 1,2-Dichloroethane-d4 (Surr)</i>	<i>04</i>	<i>SW8260B</i>	<i>97.9 %</i>		<i>70-120</i>		<i>10/10/17 00:00</i>	<i>10/10/17 11:31</i>	<i>JDW</i>





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## Certificate of Analysis

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 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-4-TCLP

Laboratory Sample ID: 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Volatile Organic Compounds by GCMS</b>									
Surr: 4-Bromofluorobenzene (Surr)	04	SW8260B	95.6 %		75-120		10/10/17 00:00	10/10/17 11:31	JDW
Surr: Dibromofluoromethane (Surr)	04	SW8260B	96.2 %		80-119		10/10/17 00:00	10/10/17 11:31	JDW
Surr: Toluene-d8 (Surr)	04	SW8260B	103 %		85-120		10/10/17 00:00	10/10/17 11:31	JDW
<b>TCLP Semivolatile Organic Compounds</b>									
TCLP Extraction Fluid, SV Organics	04	SW1311	1 #	--		1	10/11/17 14:48	10/11/17 14:48	PMP
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
TCLP 2,4,5-Trichlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP 2,4,6-Trichlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP 2,4-Dinitrotoluene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachlorobenzene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachlorobutadiene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Hexachloroethane	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP m+p-Cresols	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Nitrobenzene	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP o+m+p-Cresols	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP o-Cresol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Pentachlorophenol	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
TCLP Pyridine	04	SW8270D	<0.02 mg/L		0.02	1	10/13/17 09:13	10/13/17 22:16	SKS
Surr: 2,4,6-Tribromophenol (Surr)	04	SW8270D	95.0 %	S	20-86		10/13/17 09:13	10/13/17 22:16	SKS
Surr: 2-Fluorobiphenyl (Surr)	04	SW8270D	72.7 %		23-87		10/13/17 09:13	10/13/17 22:16	SKS
Surr: 2-Fluorophenol (Surr)	04	SW8270D	35.6 %		10-52		10/13/17 09:13	10/13/17 22:16	SKS
Surr: Nitrobenzene-d5 (Surr)	04	SW8270D	73.3 %		10-98.5		10/13/17 09:13	10/13/17 22:16	SKS
Surr: Phenol-d5 (Surr)	04	SW8270D	35.9 %	S	5-33		10/13/17 09:13	10/13/17 22:16	SKS





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

Laboratory Order ID: 17J0277

#### Analytical Results

Sample I.D. EA-4-TCLP

Laboratory Sample ID: 17J0277-04

Grab Date/Time: 10/06/2017 10:00

Parameter	Samp ID	Method	Result	Qual	Reporting Limit	D.F.	Sample Prep Date/Time	Analysis Date/Time	Analyst
<b>TCLP Semivolatile Organic Compounds by GCMS</b>									
Surr: <i>p</i> -Terphenyl-d14 (Surr)	04	SW8270D	72.8 %		27-133		10/13/17 09:13	10/13/17 22:16	SKS
<b>TCLP Organochlorine Herbicides by GC/ECD</b>									
TCLP 2,4,5-TP (Silvex)	04	SW8151A	<0.0005 mg/L		0.0005	1	10/17/17 14:43	10/19/17 02:56	CVH
TCLP 2,4-D	04	SW8151A	<0.001 mg/L		0.001	1	10/17/17 14:43	10/19/17 02:56	CVH
Surr: DCAA (Surr)	04	SW8151A	90.0 %		60-112		10/17/17 14:43	10/19/17 02:56	CVH
<b>TCLP Organochlorine Pesticides and PCBs by GC/ECD</b>									
TCLP Chlordane	04	SW8081B	<0.030 mg/L		0.030	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Endrin	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP gamma-BHC (Lindane)	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Heptachlor	04	SW8081B	<0.005 mg/L	C	0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Heptachlor Epoxide	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Methoxychlor	04	SW8081B	<0.005 mg/L		0.005	1	10/17/17 13:53	10/17/17 13:53	LBH
TCLP Toxaphene	04	SW8081B	<0.500 mg/L		0.500	1	10/17/17 13:53	10/17/17 13:53	LBH
Surr: TCMX	04	SW8081B	45.0 %		18-112		10/17/17 13:53	10/17/17 13:53	LBH
Surr: DCB	04	SW8081B	70.0 %		27-131		10/17/17 13:53	10/17/17 13:53	LBH





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## Certificate of Analysis

### Final Report

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859 Ben Hatcher Rd  
Waynesboro GA, 30830  
Submitted To: Thomas Liesfeld Project Number: R15434R-12  
Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### Analytical Summary

Preparation Method:

Preparation Method:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		Preparation Method:	SW1311 Metals		
17J0277-01	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-02	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-03	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	
17J0277-04	100 g / 2000 mL	SW1311	BAJ0252	SAJ0235	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Semivolatile Organic Compounds		Preparation Method:	SW1311 SVOC		
17J0277-01	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-02	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-03	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063
17J0277-04	100 mL / 2000 mL	SW1311	BAJ0619	SAJ0536	AI70063

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Volatile Organic Compounds by GCMS		Preparation Method:	SW1311 ZHE		
17J0277-01	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-02	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-03	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012
17J0277-04	15.0 g / 300 mL	SW1311	BAJ0259	SAJ0240	AJ70012

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
TCLP Metals by 6000/7000 Series Methods		Preparation Method:	SW3010A		
17J0277-01	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-01RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051
17J0277-02	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-03	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-03RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051





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Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
17J0277-04	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0270	AJ70045
17J0277-04RE1	10.0 mL / 50.0 mL	SW6010C	BAJ0253	SAJ0306	AJ70051

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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<b>TCLP Semivolatile Organic Compounds by GCMS</b>		<b>Preparation Method:</b>	<b>SW3510C</b>		
17J0277-01	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-02	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-03	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063
17J0277-04	100 mL / 1.00 mL	SW8270D	BAJ0399	SAJ0368	AI70063

<b>TCLP Organochlorine Pesticides and PCBs by GC/ECD</b>		<b>Preparation Method:</b>	<b>SW3510C</b>		
17J0277-01	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-02	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-03	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117
17J0277-04	100 mL / 1.00 mL	SW8081B	BAJ0443	SAJ0459	AI70117

<b>TCLP Organochlorine Herbicides by GC/ECD</b>		<b>Preparation Method:</b>	<b>SW3510C</b>		
17J0277-01	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-02	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-03	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086
17J0277-04	100 mL / 5.00 mL	SW8151A	BAJ0497	SAJ0513	AJ70086

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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<b>TCLP Volatile Organic Compounds by GCMS</b>		<b>Preparation Method:</b>	<b>SW5030B</b>		
17J0277-01	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-02	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-03	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017
17J0277-04	0.250 mL / 5.00 mL	SW8260B	BAJ0324	SAJ0290	AI70017

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
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<b>TCLP Metals by 6000/7000 Series Methods</b>		<b>Preparation Method:</b>	<b>SW7470A</b>		
17J0277-01	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044
17J0277-02	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044





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Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
17J0277-03	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044
17J0277-04	1.00 mL / 20.0 mL	SW7470A	BAJ0255	SAJ0255	AJ70044





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### TCLP Metals by 6000/7000 Series Methods - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0252 - SW1311 Metals

##### Blank (BAJ0252-BLK1)

Prepared: 10/09/2017 Analyzed: 10/10/2017

Extraction Fluid, Metals 2 # 0 #

##### Blank (BAJ0252-BLK2)

Prepared: 10/09/2017 Analyzed: 10/10/2017

Extraction Fluid, Metals 1 # 0 #

#### Batch BAJ0253 - SW3010A

##### Blank (BAJ0253-BLK1)

Prepared & Analyzed: 10/10/2017

Arsenic	<0.100 mg/L	0.100	mg/L
Barium	<5.00 mg/L	5.00	mg/L
Cadmium	<0.0400 mg/L	0.0400	mg/L
Chromium	<0.100 mg/L	0.100	mg/L
Lead	<0.100 mg/L	0.100	mg/L
Selenium	<0.250 mg/L	0.250	mg/L
Silver	<0.100 mg/L	0.100	mg/L

##### LCS (BAJ0253-BS1)

Prepared & Analyzed: 10/10/2017

Arsenic	2.60 mg/L	0.100	mg/L	2.50 mg/L	104	80-120
Barium	<5.00 mg/L	5.00	mg/L	2.50 mg/L	106	80-120
Cadmium	2.64 mg/L	0.0400	mg/L	2.50 mg/L	105	80-120
Chromium	2.65 mg/L	0.100	mg/L	2.50 mg/L	106	80-120
Lead	2.60 mg/L	0.100	mg/L	2.50 mg/L	104	80-120
Selenium	2.56 mg/L	0.250	mg/L	2.50 mg/L	103	80-120
Silver	0.517 mg/L	0.100	mg/L	0.500 mg/L	103	80-120

##### LCS Dup (BAJ0253-BSD1)

Prepared & Analyzed: 10/10/2017

Arsenic	2.58 mg/L	0.100	mg/L	2.50 mg/L	103	80-120	0.989	20
Barium	<5.00 mg/L	5.00	mg/L	2.50 mg/L	106	80-120	0.194	20
Cadmium	2.63 mg/L	0.0400	mg/L	2.50 mg/L	105	80-120	0.190	20
Chromium	2.64 mg/L	0.100	mg/L	2.50 mg/L	106	80-120	0.326	20
Lead	2.57 mg/L	0.100	mg/L	2.50 mg/L	103	80-120	1.40	20
Selenium	2.47 mg/L	0.250	mg/L	2.50 mg/L	98.8	80-120	3.74	20





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Metals by 6000/7000 Series Methods - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0253 - SW3010A

##### LCS Dup (BAJ0253-BSD1)

Prepared & Analyzed: 10/10/2017

Silver	0.519 mg/L	0.100	mg/L	0.500	0.103 mg/L	104	80-120	0.365	20
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##### Matrix Spike (BAJ0253-MS1)

Source: 17J0277-03

Prepared & Analyzed: 10/10/2017

Arsenic	2.69 mg/L	0.100	mg/L	2.50	0.103 mg/L	103	75-125
Barium	<5.00 mg/L	5.00	mg/L	2.50	<5.00 mg/L	115	75-125
Cadmium	2.58 mg/L	0.0400	mg/L	2.50	<0.0400 mg/L	103	75-125
Chromium	2.61 mg/L	0.100	mg/L	2.50	<0.100 mg/L	104	75-125
Lead	2.53 mg/L	0.100	mg/L	2.50	<0.100 mg/L	101	75-125
Selenium	2.71 mg/L	0.250	mg/L	2.50	<0.250 mg/L	108	75-125
Silver	0.526 mg/L	0.100	mg/L	0.500	<0.100 mg/L	105	75-125

##### Matrix Spike Dup (BAJ0253-MSD1)

Source: 17J0277-03

Prepared & Analyzed: 10/10/2017

Arsenic	2.65 mg/L	0.100	mg/L	2.50	0.103 mg/L	102	75-125	1.46	20
Barium	<5.00 mg/L	5.00	mg/L	2.50	<5.00 mg/L	114	75-125	0.421	20
Cadmium	2.59 mg/L	0.0400	mg/L	2.50	<0.0400 mg/L	104	75-125	0.343	20
Chromium	2.62 mg/L	0.100	mg/L	2.50	<0.100 mg/L	105	75-125	0.292	20
Lead	2.53 mg/L	0.100	mg/L	2.50	<0.100 mg/L	101	75-125	0.154	20
Selenium	2.69 mg/L	0.250	mg/L	2.50	<0.250 mg/L	108	75-125	0.842	20
Silver	0.527 mg/L	0.100	mg/L	0.500	<0.100 mg/L	105	75-125	0.267	20

#### Batch BAJ0255 - SW7470A

##### Blank (BAJ0255-BLK1)

Prepared & Analyzed: 10/10/2017

Mercury	<0.008 mg/L	0.008	mg/L
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##### LCS (BAJ0255-BS1)

Prepared & Analyzed: 10/10/2017

Mercury	0.052 mg/L	0.008	mg/L	0.0500	mg/L	103	80-120
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### TCLP Metals by 6000/7000 Series Methods - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch BAJ0255 - SW7470A</b>										
<b>LCS Dup (BAJ0255-BSD1)</b>				Prepared & Analyzed: 10/10/2017						
Mercury	0.050 mg/L	0.008	mg/L	0.0500	mg/L	100	80-120	3.13	20	
<b>Matrix Spike (BAJ0255-MS1)</b>				Source: 17J0277-03 Prepared & Analyzed: 10/10/2017						
Mercury	0.050 mg/L	0.008	mg/L	0.0500	<0.008 mg/L	100	80-120			
<b>Matrix Spike Dup (BAJ0255-MSD1)</b>				Source: 17J0277-03 Prepared & Analyzed: 10/10/2017						
Mercury	0.051 mg/L	0.008	mg/L	0.0500	<0.008 mg/L	102	80-120	1.24	20	





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### TCLP Volatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0259 - SW1311 ZHE

##### Blank (BAJ0259-BLK1)

Prepared: 10/09/2017 Analyzed: 10/10/2017

Extraction Fluid, ZHE 1 # 0 #

#### Batch BAJ0324 - SW5030B

##### Blank (BAJ0324-BLK1)

Prepared & Analyzed: 10/10/2017

1,1-Dichloroethylene	<0.02 mg/L	0.02	mg/L							
1,2-Dichloroethane	<0.02 mg/L	0.02	mg/L							
1,4-Dichlorobenzene	<0.02 mg/L	0.02	mg/L							
2-Butanone (MEK)	<0.20 mg/L	0.20	mg/L							
Benzene	<0.02 mg/L	0.02	mg/L							
Carbon tetrachloride	<0.02 mg/L	0.02	mg/L							
Chlorobenzene	<0.02 mg/L	0.02	mg/L							
Chloroform	<0.02 mg/L	0.02	mg/L							
Tetrachloroethylene (PCE)	<0.02 mg/L	0.02	mg/L							
Trichloroethylene	<0.02 mg/L	0.02	mg/L							
Vinyl chloride	<0.02 mg/L	0.02	mg/L							
Surr: 1,2-Dichloroethane-d4 (Surr)	1.03		mg/L	1.00		103	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.946		mg/L	1.00		94.6	75-120			
Surr: Dibromofluoromethane (Surr)	0.994		mg/L	1.00		99.4	80-119			
Surr: Toluene-d8 (Surr)	1.01		mg/L	1.00		101	85-120			

##### LCS (BAJ0324-BS1)

Prepared & Analyzed: 10/10/2017

1,1-Dichloroethylene	39.8 ug/L	20	ug/L	50.0	ug/L	79.5	70-130
1,2-Dichloroethane	44.8 ug/L	20	ug/L	50.0	ug/L	89.6	70-130
1,4-Dichlorobenzene	44.1 ug/L	20	ug/L	50.0	ug/L	88.2	75-125
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	ug/L	87.4	30-150
Benzene	43.0 ug/L	20	ug/L	50.0	ug/L	86.0	80-120
Carbon tetrachloride	42.2 ug/L	20	ug/L	50.0	ug/L	84.5	65-140
Chlorobenzene	42.8 ug/L	20	ug/L	50.0	ug/L	85.7	80-120
Chloroform	42.5 ug/L	20	ug/L	50.0	ug/L	84.9	65-135
Tetrachloroethylene (PCE)	57.0 ug/L	20	ug/L	50.0	ug/L	114	45-150





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### TCLP Volatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0324 - SW5030B

##### LCS (BAJ0324-BS1)

Prepared & Analyzed: 10/10/2017

Trichloroethylene	42.0 ug/L	20	ug/L	50.0	ug/L	84.0	70-125			
Vinyl chloride	34.5 ug/L	20	ug/L	50.0	ug/L	69.0	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	1.04		mg/L	1.00	mg/L	104	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.960		mg/L	1.00	mg/L	96.0	75-120			
Surr: Dibromofluoromethane (Surr)	0.990		mg/L	1.00	mg/L	99.0	80-119			
Surr: Toluene-d8 (Surr)	0.999		mg/L	1.00	mg/L	99.9	85-120			

##### Matrix Spike (BAJ0324-MS1)

Source: 17J0277-04

Prepared & Analyzed: 10/10/2017

1,1-Dichloroethylene	41.1 ug/L	20	ug/L	50.0	< 20 ug/L	82.2	70-130			
1,2-Dichloroethane	43.7 ug/L	20	ug/L	50.0	< 20 ug/L	87.4	70-130			
1,4-Dichlorobenzene	44.1 ug/L	20	ug/L	50.0	< 20 ug/L	88.2	75-125			
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 ug/L	83.2	30-150			
Benzene	43.1 ug/L	20	ug/L	50.0	< 20 ug/L	86.2	80-120			
Carbon tetrachloride	42.9 ug/L	20	ug/L	50.0	< 20 ug/L	85.7	65-140			
Chlorobenzene	42.9 ug/L	20	ug/L	50.0	< 20 ug/L	85.7	80-120			
Chloroform	42.5 ug/L	20	ug/L	50.0	< 20 ug/L	84.9	65-135			
Tetrachloroethylene (PCE)	58.2 ug/L	20	ug/L	50.0	< 20 ug/L	116	45-150			
Trichloroethylene	42.2 ug/L	20	ug/L	50.0	< 20 ug/L	84.4	70-125			
Vinyl chloride	35.4 ug/L	20	ug/L	50.0	< 20 ug/L	70.8	50-145			
Surr: 1,2-Dichloroethane-d4 (Surr)	1.00		mg/L	1.00	mg/L	100	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.954		mg/L	1.00	mg/L	95.4	75-120			
Surr: Dibromofluoromethane (Surr)	1.01		mg/L	1.00	mg/L	101	80-119			
Surr: Toluene-d8 (Surr)	1.00		mg/L	1.00	mg/L	100	85-120			

##### Matrix Spike Dup (BAJ0324-MSD1)

Source: 17J0277-04

Prepared & Analyzed: 10/10/2017

1,1-Dichloroethylene	46.0 ug/L	20	ug/L	50.0	< 20 ug/L	92.0	70-130	11.3	30	
1,2-Dichloroethane	48.2 ug/L	20	ug/L	50.0	< 20 ug/L	96.3	70-130	9.74	30	
1,4-Dichlorobenzene	50.4 ug/L	20	ug/L	50.0	< 20 ug/L	101	75-125	13.4	30	
2-Butanone (MEK)	< 200 ug/L	200	ug/L	50.0	< 200 ug/L	97.8	30-150	16.1	30	
Benzene	49.3 ug/L	20	ug/L	50.0	< 20 ug/L	98.6	80-120	13.3	30	
Carbon tetrachloride	49.5 ug/L	20	ug/L	50.0	< 20 ug/L	98.9	65-140	14.2	30	
Chlorobenzene	48.9 ug/L	20	ug/L	50.0	< 20 ug/L	97.7	80-120	13.1	30	





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 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Volatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0324 - SW5030B

#### Matrix Spike Dup (BAJ0324-MSD1)

Source: 17J0277-04

Prepared & Analyzed: 10/10/2017

Chloroform	47.6 ug/L	20	ug/L	50.0	< 20 ug/L	95.1	65-135	11.3	30	
Tetrachloroethylene (PCE)	66.4 ug/L	20	ug/L	50.0	< 20 ug/L	133	45-150	13.1	30	
Trichloroethylene	49.0 ug/L	20	ug/L	50.0	< 20 ug/L	98.0	70-125	15.0	30	
Vinyl chloride	38.4 ug/L	20	ug/L	50.0	< 20 ug/L	76.9	50-145	8.22	30	
<hr/>										
Surr: 1,2-Dichloroethane-d4 (Surr)	0.968		mg/L	1.00	mg/L	96.8	70-120			
Surr: 4-Bromofluorobenzene (Surr)	0.956		mg/L	1.00	mg/L	95.6	75-120			
Surr: Dibromofluoromethane (Surr)	0.980		mg/L	1.00	mg/L	98.0	80-119			
Surr: Toluene-d8 (Surr)	1.02		mg/L	1.00	mg/L	102	85-120			





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### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

##### Blank (BAJ0399-BLK1)

Prepared & Analyzed: 10/13/2017

2,4,5-Trichlorophenol	<0.02 mg/L	0.02	mg/L							
2,4,6-Trichlorophenol	<0.02 mg/L	0.02	mg/L							
2,4-Dinitrotoluene	<0.02 mg/L	0.02	mg/L							
Hexachlorobenzene	<0.02 mg/L	0.02	mg/L							
Hexachlorobutadiene	<0.02 mg/L	0.02	mg/L							
Hexachloroethane	<0.02 mg/L	0.02	mg/L							
m+p-Cresols	<0.02 mg/L	0.02	mg/L							
Nitrobenzene	<0.02 mg/L	0.02	mg/L							
o+m+p-Cresols	<0.02 mg/L	0.02	mg/L							
o-Cresol	<0.02 mg/L	0.02	mg/L							
Pentachlorophenol	<0.02 mg/L	0.02	mg/L							
Pyridine	<0.02 mg/L	0.02	mg/L							
Surr: 2,4,6-Tribromophenol (Surr)	0.988		mg/L	1.00		98.8	20-86			S
Surr: 2-Fluorobiphenyl (Surr)	0.382		mg/L	0.500		76.3	23-87			
Surr: 2-Fluorophenol (Surr)	0.388		mg/L	1.00		38.8	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.368		mg/L	0.500		73.5	10-98.5			
Surr: Phenol-d5 (Surr)	0.386		mg/L	1.00		38.6	5-33			S
Surr: p-Terphenyl-d14 (Surr)	0.365		mg/L	0.500		73.1	27-133			

##### LCS (BAJ0399-BS1)

Prepared & Analyzed: 10/13/2017

1,2,4-Trichlorobenzene	0.42 mg/L	0.01	mg/L	1.00	mg/L	41.9	21.8-66.7			
1,2-Dichlorobenzene	0.43 mg/L	0.01	mg/L	1.00	mg/L	43.1	22-60			
1,3-Dichlorobenzene	0.37 mg/L	0.01	mg/L	1.00	mg/L	36.8	22-60			
1,4-Dichlorobenzene	0.41 mg/L	0.01	mg/L	1.00	mg/L	41.5	13-68			
2,4,6-Trichlorophenol	0.46 mg/L	0.02	mg/L	1.00	mg/L	46.3	50-115			L
2,4-Dichlorophenol	0.46 mg/L	0.01	mg/L	1.00	mg/L	46.5	50-105			L
2,4-Dimethylphenol	0.44 mg/L	0.0005	mg/L	1.00	mg/L	44.2	30-110			
2,4-Dinitrophenol	0.80 mg/L	0.05	mg/L	1.00	mg/L	79.8	15-140			
2,4-Dinitrotoluene	0.72 mg/L	0.02	mg/L	1.00	mg/L	71.9	21-99			
2,6-Dinitrotoluene	0.94 mg/L	0.01	mg/L	1.00	mg/L	93.7	15-140			
2-Chloronaphthalene	0.43 mg/L	0.01	mg/L	1.00	mg/L	42.7	45-105			L





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### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

#### LCS (BAJ0399-BS1)

Prepared & Analyzed: 10/13/2017

2-Chlorophenol	0.42 mg/L	0.01	mg/L	1.00	mg/L	42.3	15-74			
2-Nitrophenol	0.49 mg/L	0.01	mg/L	1.00	mg/L	49.0	40-115			
4,6-Dinitro-2-methylphenol	0.79 mg/L	0.05	mg/L	1.00	mg/L	79.2	40-130			
4-Bromophenyl phenyl ether	0.65 mg/L	0.01	mg/L	1.00	mg/L	65.5	15-110			
4-Chlorophenyl phenyl ether	0.51 mg/L	0.01	mg/L	1.00	mg/L	50.7	15-110			
4-Nitrophenol	0.30 mg/L	0.05	mg/L	1.00	mg/L	30.4	0-125			
Acenaphthene	0.45 mg/L	0.01	mg/L	1.00	mg/L	45.4	27.7-85.5			
Acenaphthylene	0.49 mg/L	0.01	mg/L	1.00	mg/L	49.0	50-105			L
Anthracene	0.72 mg/L	0.01	mg/L	1.00	mg/L	71.6	55-110			
Benzo (a) anthracene	0.77 mg/L	0.00005	mg/L	1.00	mg/L	77.1	55-110			
Benzo (a) pyrene	0.74 mg/L	0.01	mg/L	1.00	mg/L	73.9	55-110			
Benzo (b) fluoranthene	0.82 mg/L	0.01	mg/L	1.00	mg/L	81.7	45-120			
Benzo (g,h,i) perylene	0.65 mg/L	0.01	mg/L	1.00	mg/L	64.6	40-125			
Benzo (k) fluoranthene	0.73 mg/L	0.01	mg/L	1.00	mg/L	72.6	45-125			
bis (2-Chloroethoxy) methane	0.49 mg/L	0.01	mg/L	1.00	mg/L	48.8	40-125			
bis (2-Chloroethyl) ether	0.45 mg/L	0.01	mg/L	1.00	mg/L	45.4	40-125			
2,2'-Oxybis (1-chloropropane)	0.39 mg/L	0.01	mg/L	1.00	mg/L	39.4	40-125			L
bis (2-Ethylhexyl) phthalate	0.71 mg/L	0.01	mg/L	1.00	mg/L	70.6	40-125			
Butyl benzyl phthalate	0.66 mg/L	0.01	mg/L	1.00	mg/L	66.0	45-115			
Carbazole	1.04 mg/L	0.002	mg/L	1.00	mg/L	104	0-200			
Chrysene	0.78 mg/L	0.01	mg/L	1.00	mg/L	77.6	55-110			
Dibenz (a,h) anthracene	0.64 mg/L	0.01	mg/L	1.00	mg/L	64.1	40-125			
Diethyl phthalate	0.59 mg/L	0.01	mg/L	1.00	mg/L	59.4	40-120			
Dimethyl phthalate	0.53 mg/L	0.01	mg/L	1.00	mg/L	53.2	25-125			
Di-n-butyl phthalate	0.99 mg/L	0.01	mg/L	1.00	mg/L	99.0	55-115			
Di-n-octyl phthalate	0.71 mg/L	0.01	mg/L	1.00	mg/L	71.1	35-135			
Fluoranthene	0.85 mg/L	0.01	mg/L	1.00	mg/L	85.4	55-115			
Fluorene	0.53 mg/L	0.01	mg/L	1.00	mg/L	52.9	50-110			
Hexachlorobenzene	0.76 mg/L	0.02	mg/L	1.00	mg/L	76.2	25-125			
Hexachlorobutadiene	0.45 mg/L	0.02	mg/L	1.00	mg/L	44.8	25-125			
Hexachlorocyclopentadiene	0.31 mg/L	0.01	mg/L	1.00	mg/L	31.3	25-125			





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830

Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

##### LCS (BAJ0399-BS1)

Prepared & Analyzed: 10/13/2017

Hexachloroethane	0.39 mg/L	0.02	mg/L	1.00	mg/L	38.8	25-125			
Indeno (1,2,3-cd) pyrene	0.65 mg/L	0.01	mg/L	1.00	mg/L	65.3	45-125			
Isophorone	0.44 mg/L	0.01	mg/L	1.00	mg/L	43.5	10-110			
Naphthalene	0.43 mg/L	0.01	mg/L	1.00	mg/L	42.6	40-100			
Nitrobenzene	0.42 mg/L	0.02	mg/L	1.00	mg/L	42.1	40-100			
n-Nitrosodimethylamine	0.21 mg/L	0.01	mg/L	1.00	mg/L	21.1	25-110			L
n-Nitrosodi-n-propylamine	0.42 mg/L	0.01	mg/L	1.00	mg/L	42.2	12-97			
n-Nitrosodiphenylamine	0.51 mg/L	0.01	mg/L	1.00	mg/L	51.3	12-97			
p-Chloro-m-cresol	0.45 mg/L	0.01	mg/L	1.00	mg/L	44.8	10-91			
Pentachlorophenol	0.82 mg/L	0.02	mg/L	1.00	mg/L	81.9	30-109			
Phenanthrene	0.74 mg/L	0.01	mg/L	1.00	mg/L	73.7	50-115			
Phenol	0.21 mg/L	0.02	mg/L	1.01	mg/L	20.6	0-115			
Pyrene	0.64 mg/L	0.01	mg/L	1.00	mg/L	63.8	27-110			
Pyridine	0.47 mg/L	0.02	mg/L	1.00	mg/L	47.1	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.814		mg/L	1.00	mg/L	81.4	20-86			
Surr: 2-Fluorobiphenyl (Surr)	0.212		mg/L	0.500	mg/L	42.3	23-87			
Surr: 2-Fluorophenol (Surr)	0.163		mg/L	1.00	mg/L	16.3	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.216		mg/L	0.500	mg/L	43.1	10-98.5			
Surr: Phenol-d5 (Surr)	0.178		mg/L	1.00	mg/L	17.8	5-33			
Surr: p-Terphenyl-d14 (Surr)	0.334		mg/L	0.500	mg/L	66.7	27-133			

##### Matrix Spike (BAJ0399-MS1)

Source: 17J0277-01

Prepared & Analyzed: 10/13/2017

1,2,4-Trichlorobenzene	0.71 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.0	21.8-66.7			M
1,2-Dichlorobenzene	0.73 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.3	22-60			M
1,3-Dichlorobenzene	0.62 mg/L	0.01	mg/L	1.00	<0.01 mg/L	62.2	22-60			M
1,4-Dichlorobenzene	0.69 mg/L	0.01	mg/L	1.00	<0.01 mg/L	69.2	22-60			M
2,4,6-Trichlorophenol	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.2	50-115			
2,4-Dichlorophenol	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.5	50-105			
2,4-Dimethylphenol	0.77 mg/L	0.0005	mg/L	1.00	<0.0005 mg/L	77.2	30-110			
2,4-Dinitrophenol	0.95 mg/L	0.05	mg/L	1.00	<0.05 mg/L	95.4	15-140			
2,4-Dinitrotoluene	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.3	17-111			





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## Certificate of Analysis

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 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

#### Matrix Spike (BAJ0399-MS1)

Source: 17J0277-01

Prepared & Analyzed: 10/13/2017

2,6-Dinitrotoluene	1.06 mg/L	0.01	mg/L	1.00	<0.01 mg/L	106	15-140			
2-Chloronaphthalene	0.77 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.3	45-105			
2-Chlorophenol	0.74 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.8	19-64			M
2-Nitrophenol	0.86 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.5	40-115			
4,6-Dinitro-2-methylphenol	0.88 mg/L	0.05	mg/L	1.00	<0.05 mg/L	88.4	40-130			
4-Bromophenyl phenyl ether	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.8	15-110			
4-Chlorophenyl phenyl ether	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	15-110			
4-Nitrophenol	0.38 mg/L	0.05	mg/L	1.00	<0.05 mg/L	37.7	0-125			
Acenaphthene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.8	24-90			
Acenaphthylene	0.84 mg/L	0.01	mg/L	1.00	<0.01 mg/L	83.7	50-105			
Anthracene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.5	55-110			
Benzo (a) anthracene	0.81 mg/L	0.00005	mg/L	1.00	<0.00005 mg/L	81.4	55-110			
Benzo (a) pyrene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	55-110			
Benzo (b) fluoranthene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.4	45-120			
Benzo (g,h,i) perylene	0.77 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.5	40-125			
Benzo (k) fluoranthene	0.82 mg/L	0.01	mg/L	1.00	<0.01 mg/L	82.0	45-125			
bis (2-Chloroethoxy) methane	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.0	40-125			
bis (2-Chloroethyl) ether	0.79 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.7	40-125			
2,2'-Oxybis (1-chloropropane)	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.5	40-125			
bis (2-Ethylhexyl) phthalate	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.9	40-125			
Butyl benzyl phthalate	0.66 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.1	45-115			
Carbazole	1.10 mg/L	0.002	mg/L	1.00	<0.002 mg/L	110	0-200			
Chrysene	0.75 mg/L	0.01	mg/L	1.00	<0.01 mg/L	74.8	55-110			
Dibenz (a,h) anthracene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.9	40-125			
Diethyl phthalate	0.72 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.8	40-120			
Dimethyl phthalate	0.73 mg/L	0.01	mg/L	1.00	<0.01 mg/L	73.1	25-125			
Di-n-butyl phthalate	1.06 mg/L	0.01	mg/L	1.00	<0.01 mg/L	106	55-115			
Di-n-octyl phthalate	0.66 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.0	35-135			
Fluoranthene	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	85.1	55-115			
Fluorene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.0	50-110			
Hexachlorobenzene	0.87 mg/L	0.02	mg/L	1.00	<0.02 mg/L	87.2	25-125			





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## Certificate of Analysis

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 Waynesboro GA, 30830  
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 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

##### Matrix Spike (BAJ0399-MS1)

Source: 17J0277-01

Prepared & Analyzed: 10/13/2017

Hexachlorobutadiene	0.77 mg/L	0.02	mg/L	1.00	<0.02 mg/L	77.5	25-125			
Hexachlorocyclopentadiene	0.64 mg/L	0.01	mg/L	1.00	<0.01 mg/L	63.9	25-125			
Hexachloroethane	0.70 mg/L	0.02	mg/L	1.00	<0.02 mg/L	69.7	25-125			
Indeno (1,2,3-cd) pyrene	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.8	45-125			
Isophorone	0.79 mg/L	0.01	mg/L	1.00	<0.01 mg/L	79.2	10-110			
Naphthalene	0.70 mg/L	0.01	mg/L	1.00	<0.01 mg/L	70.2	40-100			
Nitrobenzene	0.75 mg/L	0.02	mg/L	1.00	<0.02 mg/L	74.6	40-100			
n-Nitrosodimethylamine	0.85 mg/L	0.01	mg/L	1.00	<0.01 mg/L	84.7	25-110			
n-Nitrosodi-n-propylamine	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	77.5	12-97			
n-Nitrosodiphenylamine	0.63 mg/L	0.01	mg/L	1.00	<0.01 mg/L	62.8	12-97			
p-Chloro-m-cresol	0.78 mg/L	0.01	mg/L	1.00	<0.01 mg/L	78.1	10-91			
Pentachlorophenol	0.89 mg/L	0.02	mg/L	1.00	<0.02 mg/L	88.8	27-109			
Phenanthrene	0.80 mg/L	0.01	mg/L	1.00	<0.01 mg/L	80.4	50-115			
Phenol	0.35 mg/L	0.02	mg/L	1.01	<0.02 mg/L	34.8	0-115			
Pyrene	0.67 mg/L	0.01	mg/L	1.00	<0.01 mg/L	66.9	23-110			
Pyridine	0.81 mg/L	0.02	mg/L	1.00	<0.02 mg/L	81.3	0-200			
Surr: 2,4,6-Tribromophenol (Surr)	0.935		mg/L	1.00	mg/L	93.5	20-86			S
Surr: 2-Fluorobiphenyl (Surr)	0.363		mg/L	0.500	mg/L	72.5	23-87			
Surr: 2-Fluorophenol (Surr)	0.367		mg/L	1.00	mg/L	36.7	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.374		mg/L	0.500	mg/L	74.7	10-98.5			
Surr: Phenol-d5 (Surr)	0.349		mg/L	1.00	mg/L	34.9	5-33			S
Surr: p-Terphenyl-d14 (Surr)	0.333		mg/L	0.500	mg/L	66.5	27-133			

##### Matrix Spike Dup (BAJ0399-MSD1)

Source: 17J0277-01

Prepared & Analyzed: 10/13/2017

1,2,4-Trichlorobenzene	0.39 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.3	21.8-66.7	57.5	20	P
1,2-Dichlorobenzene	0.40 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.9	22-60	59.0	20	P
1,3-Dichlorobenzene	0.34 mg/L	0.01	mg/L	1.00	<0.01 mg/L	34.2	22-60	58.3	20	P
1,4-Dichlorobenzene	0.38 mg/L	0.01	mg/L	1.00	<0.01 mg/L	37.9	22-60	58.5	20	P
2,4,6-Trichlorophenol	0.45 mg/L	0.02	mg/L	1.00	<0.02 mg/L	45.0	50-115	57.3	20	M, P
2,4-Dichlorophenol	0.46 mg/L	0.01	mg/L	1.00	<0.01 mg/L	46.2	50-105	58.6	20	M, P
2,4-Dimethylphenol	0.43 mg/L	0.0005	mg/L	1.00	<0.0005 mg/L	43.0	30-110	56.8	20	P





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 Waynesboro GA, 30830

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### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

#### Matrix Spike Dup (BAJ0399-MSD1)

Source: 17J0277-01

Prepared & Analyzed: 10/13/2017

2,4-Dinitrophenol	0.69 mg/L	0.05	mg/L	1.00	<0.05 mg/L	68.7	15-140	32.6	20	P
2,4-Dinitrotoluene	0.55 mg/L	0.02	mg/L	1.00	<0.02 mg/L	54.8	17-111	39.0	20	P
2,6-Dinitrotoluene	0.71 mg/L	0.01	mg/L	1.00	<0.01 mg/L	71.1	15-140	39.5	20	P
2-Chloronaphthalene	0.42 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.2	45-105	58.8	20	M, P
2-Chlorophenol	0.41 mg/L	0.01	mg/L	1.00	<0.01 mg/L	41.0	19-64	57.0	20	P
2-Nitrophenol	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.0	40-115	58.1	20	P
4,6-Dinitro-2-methylphenol	0.62 mg/L	0.05	mg/L	1.00	<0.05 mg/L	62.2	40-130	34.8	20	P
4-Bromophenyl phenyl ether	0.57 mg/L	0.01	mg/L	1.00	<0.01 mg/L	57.2	15-110	39.0	20	P
4-Chlorophenyl phenyl ether	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.6	15-110	48.3	20	P
4-Nitrophenol	0.23 mg/L	0.05	mg/L	1.00	<0.05 mg/L	23.5	0-125	46.5	20	P
Acenaphthene	0.44 mg/L	0.01	mg/L	1.00	<0.01 mg/L	43.9	24-90	55.8	20	P
Acenaphthylene	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	50-105	55.6	20	M, P
Anthracene	0.56 mg/L	0.01	mg/L	1.00	<0.01 mg/L	56.2	55-110	33.1	20	P
Benzo (a) anthracene	0.56 mg/L	0.00005	mg/L	1.00	<0.00005 mg/L	56.3	55-110	36.5	20	P
Benzo (a) pyrene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	53.6	55-110	37.0	20	M, P
Benzo (b) fluoranthene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	54.0	45-120	36.9	20	P
Benzo (g,h,i) perylene	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.8	40-125	45.5	20	P
Benzo (k) fluoranthene	0.57 mg/L	0.01	mg/L	1.00	<0.01 mg/L	56.8	45-125	36.3	20	P
bis (2-Chloroethoxy) methane	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	46.7	40-125	58.1	20	P
bis (2-Chloroethyl) ether	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.9	40-125	58.9	20	P
2,2'-Oxybis (1-chloropropane)	0.37 mg/L	0.01	mg/L	1.00	<0.01 mg/L	36.6	40-125	58.1	20	M, P
bis (2-Ethylhexyl) phthalate	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.4	40-125	32.1	20	P
Butyl benzyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.4	45-115	33.1	20	P
Carbazole	0.77 mg/L	0.002	mg/L	1.00	<0.002 mg/L	76.8	0-200	35.1	20	P
Chrysene	0.54 mg/L	0.01	mg/L	1.00	<0.01 mg/L	53.6	55-110	33.0	20	M, P
Dibenz (a,h) anthracene	0.50 mg/L	0.01	mg/L	1.00	<0.01 mg/L	50.3	40-125	43.0	20	P
Diethyl phthalate	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.7	40-120	38.3	20	P
Dimethyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	25-125	42.8	20	P
Di-n-butyl phthalate	0.62 mg/L	0.01	mg/L	1.00	<0.01 mg/L	61.9	55-115	52.6	20	P
Di-n-octyl phthalate	0.47 mg/L	0.01	mg/L	1.00	<0.01 mg/L	47.3	35-135	33.1	20	P
Fluoranthene	0.61 mg/L	0.01	mg/L	1.00	<0.01 mg/L	61.4	55-115	32.5	20	P





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### TCLP Semivolatile Organic Compounds by GCMS - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0399 - SW3510C

Matrix Spike Dup (BAJ0399-MSD1)	Source: 17J0277-01			Prepared & Analyzed: 10/13/2017						
Fluorene	0.49 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.9	50-110	45.9	20	M, P
Hexachlorobenzene	0.62 mg/L	0.02	mg/L	1.00	<0.02 mg/L	61.9	25-125	33.9	20	P
Hexachlorobutadiene	0.41 mg/L	0.02	mg/L	1.00	<0.02 mg/L	41.4	25-125	60.7	20	P
Hexachlorocyclopentadiene	0.30 mg/L	0.01	mg/L	1.00	<0.01 mg/L	29.9	25-125	72.6	20	P
Hexachloroethane	0.35 mg/L	0.02	mg/L	1.00	<0.02 mg/L	35.1	25-125	66.1	20	P
Indeno (1,2,3-cd) pyrene	0.50 mg/L	0.01	mg/L	1.00	<0.01 mg/L	49.9	45-125	43.8	20	P
Isophorone	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.8	10-110	59.7	20	P
Naphthalene	0.40 mg/L	0.01	mg/L	1.00	<0.01 mg/L	39.8	40-100	55.4	20	M, P
Nitrobenzene	0.41 mg/L	0.02	mg/L	1.00	<0.02 mg/L	40.7	40-100	58.8	20	P
n-Nitrosodimethylamine	0.25 mg/L	0.01	mg/L	1.00	<0.01 mg/L	24.7	25-110	110	20	M, P
n-Nitrosodi-n-propylamine	0.41 mg/L	0.01	mg/L	1.00	<0.01 mg/L	40.7	12-97	62.3	20	P
n-Nitrosodiphenylamine	0.43 mg/L	0.01	mg/L	1.00	<0.01 mg/L	42.6	12-97	38.4	20	P
p-Chloro-m-cresol	0.44 mg/L	0.01	mg/L	1.00	<0.01 mg/L	43.5	10-91	56.9	20	P
Pentachlorophenol	0.63 mg/L	0.02	mg/L	1.00	<0.02 mg/L	62.9	27-109	34.1	20	P
Phenanthrene	0.58 mg/L	0.01	mg/L	1.00	<0.01 mg/L	58.2	50-115	32.1	20	P
Phenol	0.19 mg/L	0.02	mg/L	1.01	<0.02 mg/L	19.3	0-115	57.3	20	P
Pyrene	0.48 mg/L	0.01	mg/L	1.00	<0.01 mg/L	48.4	23-110	32.0	20	P
Pyridine	0.17 mg/L	0.02	mg/L	1.00	<0.02 mg/L	17.4	0-200	130	20	P
Surr: 2,4,6-Tribromophenol (Surr)	0.655		mg/L	1.00	mg/L	65.5	20-86			
Surr: 2-Fluorobiphenyl (Surr)	0.194		mg/L	0.500	mg/L	38.9	23-87			
Surr: 2-Fluorophenol (Surr)	0.191		mg/L	1.00	mg/L	19.1	10-52			
Surr: Nitrobenzene-d5 (Surr)	0.206		mg/L	0.500	mg/L	41.2	10-98.5			
Surr: Phenol-d5 (Surr)	0.196		mg/L	1.00	mg/L	19.6	5-33			
Surr: p-Terphenyl-d14 (Surr)	0.236		mg/L	0.500	mg/L	47.1	27-133			





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## Certificate of Analysis

### Final Report

Client Name: Thomas Liesfeld Date Issued: 10/20/2017 14:56  
 859 Ben Hatcher Rd  
 Waynesboro GA, 30830  
 Submitted To: Thomas Liesfeld Project Number: R15434R-12  
 Client Site I.D.: NKWP / Weanack Land Reclamation Criteria Purchase Order:

### TCLP Organochlorine Herbicides by GC/ECD - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
<b>Batch BAJ0497 - SW3510C</b>										
<b>Blank (BAJ0497-BLK1)</b>				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	<0.0005 mg/L	0.0005	mg/L							
2,4-D	<0.001 mg/L	0.001	mg/L							
Surr: DCAA (Surr)	0.0105		mg/L	0.0100		105	60-112			
<b>Blank (BAJ0497-BLK2)</b>				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	<0.0005 mg/L	0.0005	mg/L							
2,4-D	<0.001 mg/L	0.001	mg/L							
Surr: DCAA (Surr)	0.00850		mg/L	0.0100		85.0	60-112			
<b>LCS (BAJ0497-BS1)</b>				Prepared: 10/17/2017 Analyzed: 10/18/2017						
2,4,5-TP (Silvex)	0.004 mg/L	0.0005	mg/L	0.00500 mg/L		80.0	52-129			
2,4-D	0.004 mg/L	0.001	mg/L	0.00500 mg/L		90.0	53-126			
Surr: DCAA (Surr)	0.0100		mg/L	0.0100 mg/L		100	60-112			
<b>Matrix Spike (BAJ0497-MS1)</b>				Source: 17J0489-01		Prepared: 10/17/2017 Analyzed: 10/19/2017				
2,4,5-TP (Silvex)	0.004 mg/L	0.0005	mg/L	0.00500 <0.0005 mg/L		90.0	52-129			
2,4-D	0.004 mg/L	0.001	mg/L	0.00500 <0.001 mg/L		90.0	53-126			
Surr: DCAA (Surr)	0.00650		mg/L	0.0100 mg/L		65.0	60-112			
<b>Matrix Spike Dup (BAJ0497-MSD1)</b>				Source: 17J0489-01		Prepared: 10/17/2017 Analyzed: 10/19/2017				
2,4,5-TP (Silvex)	0.005 mg/L	0.0005	mg/L	0.00500 <0.0005 mg/L		100	52-129	10.5	20	
2,4-D	0.006 mg/L	0.001	mg/L	0.00500 <0.001 mg/L		110	53-126	20.0	20	
Surr: DCAA (Surr)	0.0125		mg/L	0.0100 mg/L		125	60-112			S





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### TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0443 - SW3510C

##### Blank (BAJ0443-BLK1)

Prepared & Analyzed: 10/17/2017

Chlordane	<0.030 mg/L	0.030	mg/L							
Endrin	<0.005 mg/L	0.005	mg/L							
gamma-BHC (Lindane)	<0.005 mg/L	0.005	mg/L							
Heptachlor	<0.005 mg/L	0.005	mg/L							
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L							
Methoxychlor	<0.005 mg/L	0.005	mg/L							
Toxaphene	<0.500 mg/L	0.500	mg/L							
Surr: TCMX	0.00160		mg/L	0.00200		80.0	18-112			
Surr: DCB	0.00180		mg/L	0.00200		90.0	27-131			

##### LCS (BAJ0443-BS1)

Prepared & Analyzed: 10/17/2017

Endrin	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		90.0	23-134			
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		60.0	23-134			
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		70.0	23-134			
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100 mg/L		90.0	23-134			
Surr: TCMX	0.00130		mg/L	0.00200 mg/L		65.0	18-112			
Surr: DCB	0.00150		mg/L	0.00200 mg/L		75.0	27-131			

##### LCS (BAJ0443-BS2)

Prepared & Analyzed: 10/17/2017

Toxaphene	<0.500 mg/L	0.500	mg/L	0.0250 mg/L		62.4	23-134			
Surr: TCMX	0.00100		mg/L	0.00200 mg/L		50.0	18-112			
Surr: DCB	0.00110		mg/L	0.00200 mg/L		55.0	27-131			

##### LCS (BAJ0443-BS3)

Prepared & Analyzed: 10/17/2017

Chlordane	<0.030 mg/L	0.030	mg/L	0.0250 mg/L		63.6	23-134			
Surr: TCMX	0.00110		mg/L	0.00200 mg/L		55.0	18-112			
Surr: DCB	0.00110		mg/L	0.00200 mg/L		55.0	27-131			





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### TCLP Organochlorine Pesticides and PCBs by GC/ECD - Quality Control

#### Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
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#### Batch BAJ0443 - SW3510C

##### Matrix Spike (BAJ0443-MS1)

Source: 17J0277-04

Prepared & Analyzed: 10/17/2017

Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	70.0	23-134			
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	50.0	23-134			
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134			
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134			
Surr: TCMX	0.00110		mg/L	0.00200	mg/L	55.0	18-112			
Surr: DCB	0.00140		mg/L	0.00200	mg/L	70.0	27-131			

##### Matrix Spike Dup (BAJ0443-MSD1)

Source: 17J0277-04

Prepared & Analyzed: 10/17/2017

Endrin	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134	13.3	20	
Heptachlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134	18.2	20	
Heptachlor Epoxide	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	60.0	23-134	0.00	20	
Methoxychlor	<0.005 mg/L	0.005	mg/L	0.00100	<0.005 mg/L	80.0	23-134	0.00	20	
Surr: TCMX	0.00110		mg/L	0.00200	mg/L	55.0	18-112			
Surr: DCB	0.00150		mg/L	0.00200	mg/L	75.0	27-131			





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859 Ben Hatcher Rd  
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Submitted To: Thomas Liesfeld Project Number: R15434R-12  
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### Certified Analyses included in this Report

Analyte	Certifications
<b>SW1311 in Non-Potable Water</b>	
Extraction Fluid, SV Organics	VELAP
<b>SW1311 in Solids</b>	
Extraction Fluid, Metals	VELAP
Extraction Fluid, ZHE	VELAP
<b>SW6010C in Non-Potable Water</b>	
Arsenic	VELAP,WVDEP
Barium	VELAP,WVDEP
Cadmium	VELAP,WVDEP
Chromium	VELAP,WVDEP
Lead	VELAP,WVDEP
Selenium	VELAP,WVDEP
Silver	VELAP,WVDEP
<b>SW7470A in Non-Potable Water</b>	
Mercury	VELAP,WVDEP
<b>SW8081B in Non-Potable Water</b>	
Chlordane	VELAP
Endrin	VELAP
gamma-BHC (Lindane)	VELAP
Heptachlor	VELAP
Heptachlor Epoxide	VELAP
Methoxychlor	VELAP
Toxaphene	VELAP
<b>SW8151A in Non-Potable Water</b>	
2,4,5-TP (Silvex)	VELAP
2,4-D	VELAP
<b>SW8260B in Non-Potable Water</b>	
1,1-Dichloroethylene	NC,VELAP
1,2-Dichloroethane	NC,VELAP
1,4-Dichlorobenzene	NC,VELAP
2-Butanone (MEK)	NC,VELAP
Benzene	NC,VELAP
Carbon tetrachloride	NC,VELAP
Chlorobenzene	NC,VELAP
Chloroform	NC,VELAP
Tetrachloroethylene (PCE)	NC,VELAP





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### Certified Analyses included in this Report

Analyte	Certifications
Trichloroethylene	NC,VELAP
Vinyl chloride	NC,VELAP
<b>SW8270D in Non-Potable Water</b>	
2,4,6-Trichlorophenol	VELAP
2,4-Dinitrotoluene	VELAP
Hexachlorobenzene	VELAP
Hexachlorobutadiene	VELAP
Hexachloroethane	VELAP
Nitrobenzene	VELAP
o-Cresol	VELAP
Pentachlorophenol	VELAP

Code	Description	Lab Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2017
NC	North Carolina DENR	495	12/31/2017
PADEP	NELAC-Pennsylvania	001	10/31/2017
VELAP	NELAC-Virginia Certificate #9439	460021	06/14/2018
WVDEP	West Virginia DEP	350	11/30/2017





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Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

### Summary of Data Qualifiers

C Continuing calibration verification response for this analyte is outside specifications.

L LCS recovery is outside of established acceptance limits

M Matrix spike recovery is outside established acceptance limits

P Duplicate analysis does not meet the acceptance criteria for precision

S Surrogate recovery was outside acceptance criteria

RPD Relative Percent Difference

Qual Qualifiers

-RE Denotes sample was re-analyzed

D.F. Dilution Factor. Please also see the Preparation Factor in the Analysis Summary section.

TIC Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library .  
A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

PCBs, Total Total PCBs are defined as the sum of detected Aroclors 1016, 1221, 1232, 1248, 1254, 1260, 1262, and 1268.



CHAIN OF CUSTODY															
CLIENT: LIESFELD FARMS				CONSULTANT: DRAPER ADEN ASSOCIATES				COPY COA TO CONSULTANT? YES							
ATTN: THOMAS LIESFELD				ATTN: WILLIAM A SALOMONE (WSALOMONE@DAA.COM)				COPY INVOICE TO CONSULTANT? YES							
STREET: 859 BEN HATCHER ROAD				STREET: 8090 VILLA PARK DRIVE				PROJECT: NKWP / WEANACK LAND RECLAMATION CRITERIA							
CITY: WAYNESBORO, GA 30830				CITY: RICHMOND, VIRGINIA 23228				LOCATION: NEW KENT, VIRGINIA							
PHONE: 804-833-4286				PHONE: 804-264-2228				LABORATORY: AIR, WATER, & SOIL LABORATORIES							
TURN AROUND: STANDARD				P.O. #: R15434R-12				ANALYSES REQUESTED							
LAB USE ONLY  SAMPLE INFORMATION  10/6/17				COMPOSITE  NO. OF JARS  MATRIX				see attached table (exclusion criteria column only)  Full TCLP				COMMENTS (SAMPLING INTERVAL)			
LAB ID				SAMPLE ID				DATE				TIME			
				EA-1-TCLP				11:30				X   S X			
				EA-2-TCLP				11:00				X   S X			
				EA-3-TCLP				1030				X   S X			
				EA-4-TCLP				1000				X   S X			
												PLEASE HOLD TCLP SOILS - PENDING ANALYSIS FIRST RUN			
SAMPLE BY: [Signature]				PRINTED NAME: Bradley Fitzwater				NOTES: Level 2 data package. Please report all concentrations in mg/kg (dry weight). All dry weight analyses shall be total analysis.							
RELINQUISHED BY: [Signature]				RECEIVED BY: [Signature]				DATE: 10/6/17				TIME: 17:20			
TEMP:				PH:				CONTENTS: A = AIR; S=SOIL; G=GROUNDWATER; WW=WASTEWATER				REASON FOR TRANSPORT: TO LABORATORY OF CHEMICAL ANALYSIS			

1.30C Sealed  
On Ice

v130325002

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### Final Report

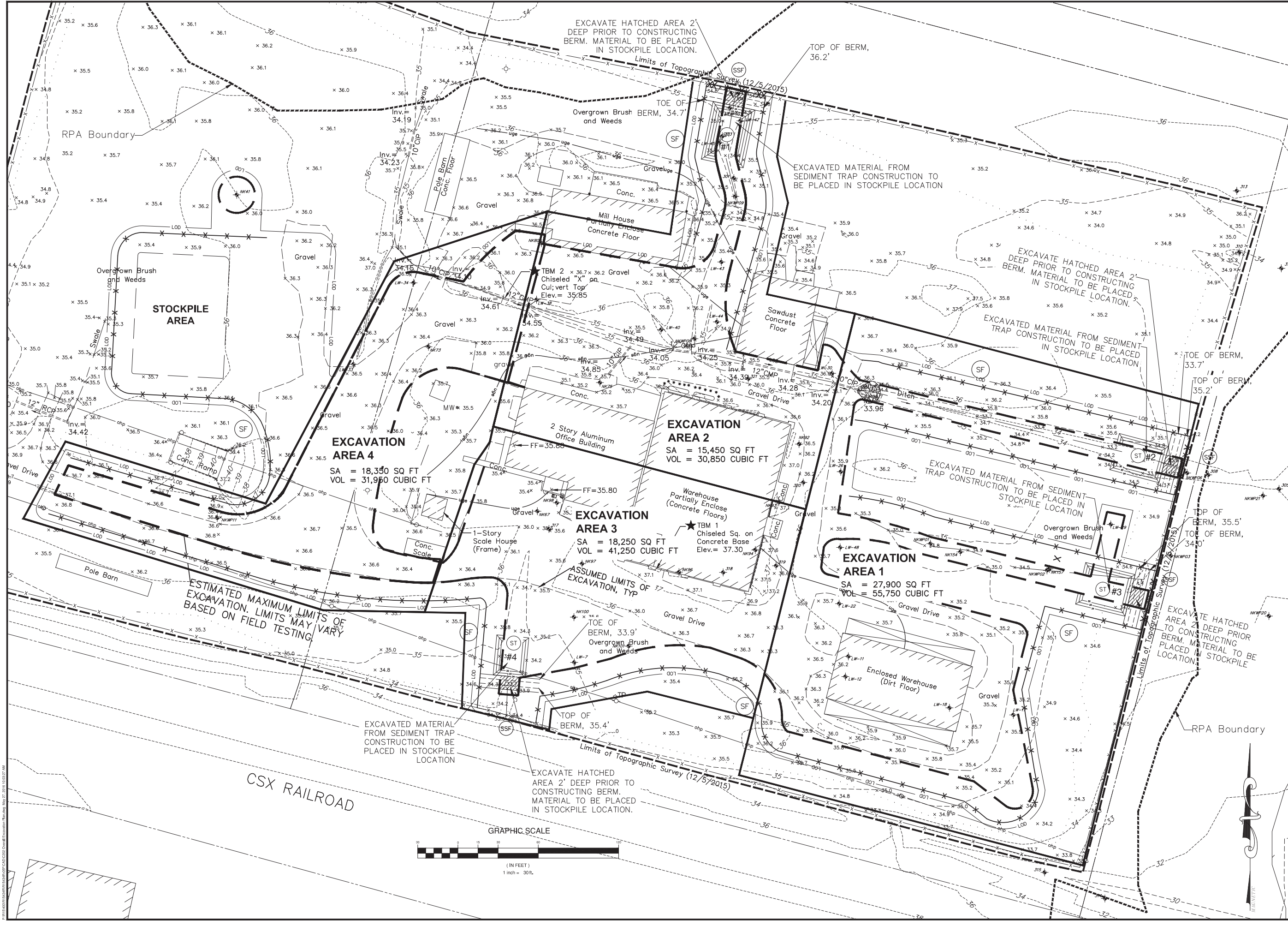
Client Name:	Thomas Liesfeld 859 Ben Hatcher Rd Waynesboro GA, 30830	Date Issued:	10/20/2017 14:56
Submitted To:	Thomas Liesfeld	Project Number:	R15434R-12
Client Site I.D.:	NKWP / Weanack Land Reclamation Criteria	Purchase Order:	

## Sample Conditions Checklist

Samples Received at:	1.30°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	Yes
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

### Work Order Comments





COMMONWEALTH OF VIRGINIA  
WILLIAM G. HASE  
Lic. No. 21807  
05/04/2016  
PROFESSIONAL ENGINEER

**Draper Aden Associates**  
Engineering • Surveying • Environmental Services  
Blacksburg, VA  
Charlottesville, VA  
Hampton Roads, VA  
Coats, NC  
Richmond, VA  
8800 Villa Park Drive  
804-264-2228 Fax: 804-264-8773  
www.daa.com

**OVERALL EXCAVATION PLAN  
RESPONSE ACTION PLAN  
L-WOOD, INC.  
SOUTHERN PINE SPECIALISTS**  
NEW KENT COUNTY, VIRGINIA

REVISIONS  
MAY 4, 2016  
PER COUNTY COMMENTS  
CONSTRUCTION ISSUE  
5/15/2017

DESIGNED BY: WGH  
DRAWN BY: MQD  
CHECKED BY: DCM  
SCALE: 1" = 30'  
DATE: 5/04/2016  
PROJECT NUMBER:  
R15434R-05F  
**C202**



**BEFORE THE UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III**

**IN THE MATTER OF:**

New Kent Wood Preservatives, Inc. Site  
Providence Forge, New Kent County,  
Virginia

L-Wood, Inc. Southern Pine Specialists,

**Respondent**

Proceeding Under Section 106(a)  
of the Comprehensive Environmental  
Response, Compensation, and  
Liability Act of 1980, as amended,  
42 U.S.C. § 9606(a)

**Docket No. CERC-03-2015-0262DC**

I hereby certify that the  
within is a true and correct copy  
of the original Administrative Order for  
filed in this matter. Removal Response Action

Bruce E. Pospisil  
**Attorney for U.S. EPA**

**ADMINISTRATIVE ORDER  
FOR REMOVAL RESPONSE ACTION**

SEP 30 2015

Having determined the necessity for implementation of response activities at or relating to the New Kent Wood Preservatives, Inc. Site in Providence Forge, New Kent County, Virginia, the United States Environmental Protection Agency ("EPA"), hereby Orders as follows:

**I. JURISDICTION AND GENERAL PROVISIONS**

- 1.1 This Administrative Order for Removal Response Action ("Order") is issued pursuant to the authority vested in the President of the United States by Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606; delegated to the EPA Administrator by Executive Order No. 12,580, 52 Fed. Reg. 2923 (January 29, 1987); and further delegated to the Director of the Hazardous Site Cleanup Division, EPA Region III. This Order pertains to property located at 4101 South Mountcastle Road, Providence Forge, New Kent County, Virginia. The property will hereinafter be referred to as the "New Kent Wood Preservatives, Inc. Site" or "the Site", and is further described in paragraph 3.2 below.
- 1.2 The Respondent shall undertake all actions required by, and comply with all requirements of, this Order including any modifications hereto ("the Work").



- 1.3 The Work shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 C.F.R. Part 300; and CERCLA.
- 1.4 This Order is issued to L-Wood, Inc. Southern Pine Specialists ("Respondent").

## **II. STATEMENT OF PURPOSE**

- 2.1 In issuing this Order, the objective of EPA is to protect the public health and welfare and the environment by ensuring that a proper removal response action, as defined in Section 101(23) of CERCLA, 42 U.S.C. § 9601(23), is conducted to remove sources of contamination to the environment at the Site to prevent the potential for human exposure to contaminated soils and the continued migration of contaminated soil from the Site to the wetlands and stream system adjacent to the Site.

## **III. FINDINGS OF FACT**

- 3.1 L-Wood, Inc. Southern Pine Specialists ("L-Wood" or "Respondent"), a Virginia corporation, was incorporated on April 28, 1988.
- 3.2 Respondent owns the property located at 4101 South Mountcastle Road., Providence Forge, New Kent County, Virginia, which comprises the Site. The Site includes 14.664 acres and consists of two adjacent parcels (Parcel Numbers/Tax Map Numbers 40-9B and 40-9C). The Site is located approximately 1,500 feet south of the intersection of U.S. Route 60 and Route 615 in a rural area of New Kent County, Virginia. Land use is a mixture of industrial, agricultural, and residential.
- 3.3 Beginning in about 1978 and continuing through approximately 1996, various businesses operated a wood preserving facility at the Site. Beginning in about 1978, New Kent Wood Preservatives, Inc. ("New Kent") owned and operated the Site. In about 1983, New Kent was merged into Mid-Land Timber Products Company ("Mid-Land"). In about 1985, Holland Forest Products Company acquired the Site from Mid-Land and operated the wood treating business. In about 1987, Kel-Wood Timber Products Company ("Kel-Wood") purchased the facility. Kel-Wood subsequently filed for bankruptcy and was liquidated.
- 3.4 On or about August 25, 1988, Respondent acquired the Site from the bankruptcy estate of Kel-Wood and has owned it for approximately 27 years, through the present.
- 3.5 From about 1988 until approximately 1996, Respondent operated a wood preserving facility at the Site. Respondent treated lumber with a pressure vacuum system, impregnating the wood with chromate copper arsenate ("CCA"). The CCA solution contains chromium, copper, and arsenic. Lumber was placed in a cylinder with the pre-mixed CCA and water was forced into the cylinder. Once the cylinder was full, the



solution was drawn off by vacuum and the treated wood was removed and placed on the drip pad to dry.

- 3.6 On or around September 3, 1987, Respondent filed a "Notification of Hazardous Waste Activity" with EPA, declaring that it was a generator of hazardous waste listed or identified under 40 C.F.R. Part 261. Respondent identified itself as a Small Quantity Generator under the Resource Conservation and Recovery Act ("RCRA"), also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992. EPA's RCRA Information System lists information for the facility for the years 1988 through 1992, and indicates that the facility used arsenic, copper, and chromium.
- 3.7 Since 1985, there have been a number of inspections and assessments of the wood preserving facility at the Site by the Commonwealth of Virginia, including in August 1985, June 1988, October 1988, September 1991, December 1992, and June 1993. Various environmental concerns were observed and identified during these inspections, including: (1) wood fragments observed in drainage ditches leaving the property, (2) elevated levels of chromium in groundwater, (3) elevated levels of arsenic and chromium in soil adjacent to the former primary drip pad, in drainage ditches, and in wetlands adjacent to the facility, and (4) elevated levels of arsenic, chromium and copper in soil at the facility.
- 3.8 In April 1996, EPA conducted sampling at the Site, which revealed elevated concentrations of arsenic and chromium in soil and groundwater, indicating migration of these chemicals from on-site soils into the underlying groundwater table. Arsenic was also detected in an elevated concentration in the surface water and sediment samples collected from Schiminee Creed at the discharge point of an on-site drainage ditch, indicating arsenic migration from the Site into adjacent surface waters.
- 3.9 In or around September 1998, an inspector from the Virginia Department of Environmental Quality (VADEQ) visited the facility and determined that it had been closed since 1996. A follow-up inspection in April 2000 confirmed that the wood preserving facility had shut down.
- 3.10 In May 2012, a contractor for VADEQ issued a "Final Site Reassessment Report" for the Site, which summarizes background information, describes source characteristics, and describes groundwater, surface water, soil, and air migration pathways for contamination at the Site.
- 3.11 In or around June and September 2014, and February 2015, the EPA Region III Superfund Eastern Response Branch of the Office of Preparedness and Response, Hazardous Site Cleanup Division, conducted removal assessment sampling activities to determine if conditions at the Site warranted a removal action. Media sampled included soil and groundwater.



- 3.12 In September 2014, the EPA Region III Site Assessment/Non-NPL Federal Facilities Branch of the Office of Federal Facility Remediation and Site Assessment, Hazardous Site Cleanup Division, conducted an Expanded Site Inspection. Media sampled included soil, surface water, and sediment. The Site Assessment Branch incorporated data from the sampling conducted by the Eastern Response Branch in June and September 2014 for the removal assessment into the Expanded Site Inspection Report.
- 3.13 The sampling conducted by EPA in June and September 2014 and February 2015 detected contamination in the soil surrounding the former process area, which includes the former treatment building, former primary drip pad, and former secondary drip pad, as indicated on Figure 1, attached hereto as Exhibit A. Contaminated soil was also found in the surface water drainage features inside and outside the fence line of the facility. There is one drainage feature on the northern side, one drainage feature in the northeastern corner, and two drainage features on the eastern side of the facility. Figure 1 (Exhibit A), not to scale, identifies these areas.
- 3.14 The sampling conducted by EPA in 2014 and 2015 detected arsenic and chromium in soil at elevated concentrations exceeding their respective EPA human health risk-based screening levels ("RSLs") for industrial soils. The RSLs for arsenic and hexavalent chromium are 3 milligrams/kilogram ("mg/kg") and 6.3 mg/kg, respectively. The concentrations of copper in the soil did not exceed the RSL for copper of 4,700 mg/kg, for industrial soils; therefore, copper does not pose an unacceptable human health risk under a commercial worker scenario.

Exposure to the hazardous substances detected at the Site by direct contact, ingestion, or inhalation may cause a variety of adverse human health effects. Arsenic and chromium, which are associated with the wood preserving process, were detected in soil and groundwater at concentrations that could pose unacceptable risks to human health under conditions of long-term exposure. In addition, sediment samples collected downgradient of the Site exhibited elevated levels of these same metals, indicating that off-site migration has occurred. The concentrations of arsenic in the surface soil could pose an unacceptable cancer risk to current on-site workers under conditions of long-term exposure. In addition, the elevated levels of hexavalent chromium in the soil contribute to overall human health risks at the Site. Arsenic was detected in groundwater above both its Maximum Contaminant Level ("MCL") of .010 milligrams/liter, codified at 40 C.F.R. § 141.62(b), and established pursuant to Section 1412(b)(4)(B) of the Safe Drinking Water Act, 42 U.S.C. § 300g-1(b)(4)(B), and its risk-based concentration for tap water.

- 3.15 The sediment samples collected by EPA in 2014 from the wetlands surrounding the Site identified elevated concentrations of arsenic up to 50 times, chromium up to 24 times, and copper up to 8 times the EPA Region III Biological Technical Assistance Group ("BTAG") Regional Screening Levels for ecological risk. The EPA Region III BTAG



Regional Screening Levels for ecological risk for arsenic, chromium, and copper are 9.8 mg/kg, 43.4 mg/kg, and 31.6 mg/kg, respectively.

The levels and the extent of the contamination present in the onsite soils and the drainage features present a potential ecological risk primarily to avian and mammalian receptors. The metals concentrations detected in the soil at the Site may result in negative impacts on growth and reproduction of Site vegetation, birds, and small mammals. The continued migration of heavy metals into the wetlands and the tributary of Schminoe Creek may potentially impact wildlife habitats immediately surrounding the Site. Concentrations of the metals detected in wetland water and sediments can negatively impact aquatic invertebrates, an important component of the aquatic food chain, and may lead to organ damage, growth depression, food avoidance, and impaired feeding efficiency in fish.

- 3.16 On or around June 18, 2015, the Associate Director of the Office of Enforcement of the EPA Region III Hazardous Site Cleanup Division, sent a general notice letter and information request letter to Respondent. In the letter, EPA notified Respondent that Respondent may incur, or may have incurred, liability under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), with respect to the Site. In the letter, EPA also described the investigations of the contamination at the Site and notified Respondent of potential response activities at the Site which Respondent might be asked to perform or pay for at a later date if EPA were to perform them. In addition, in the letter EPA requested information relating to the ability of Respondent to pay for or perform a cleanup at the Site. EPA requested that Respondent contact EPA to indicate its willingness or unwillingness to participate in future cleanup actions concerning the Site. In an email dated July 6, 2015, to the EPA Project Coordinator (identified in Paragraph 9.2 of this Order), Respondent indicated a willingness to participate in future cleanup actions concerning the Site. In the email dated July 6, 2015, Respondent did not provide the requested information relating to the ability of Respondent to pay for or perform a cleanup at the Site. In an email dated August 3, 2015, to the EPA Project Coordinator, Respondent requested a bill with all Site-related costs and stated that Respondent wanted to address such costs. EPA has not yet prepared a bill for previous Site-related costs, and such costs are not addressed in this Order.
- 3.17 Arsenic, chromium, and copper are hazardous substances within the meaning of CERCLA because they are listed in Section 302.4 of the NCP, 40 C.F.R. § 302.4.
- 3.18 Based on the information described above, on July 31, 2015, the Associate Director of the Office of Preparedness and Response in the EPA Region III Hazardous Site Cleanup Division determined that a threat to public health, welfare and/or the environment and an imminent and substantial endangerment exists due to the actual or threatened release of hazardous substances from the Site.



#### **IV. CONCLUSIONS OF LAW**

- 4.1 The Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
- 4.2 Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
- 4.3 Arsenic, chromium, and copper are "hazardous substances" within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), because they are listed at 40 C.F.R. § 302.4.
- 4.4 "Hazardous substances," as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), have been disposed of at the Site and are currently present there.
- 4.5 The presence of hazardous substances at the Site and the past, present, and/or potential migration of hazardous substances from the Site constitutes an actual and/or threatened "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
- 4.6 Respondent is liable under Section 107 of CERCLA based on the following:
  - (a) Respondent is an "owner or operator of a vessel or a facility," that is, the Site, within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1); and
  - (b) Respondent is a "person who at the time of disposal of any hazardous substance owned or operated any facility [the Site] at which such hazardous substances were disposed of" within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).
- 4.7 EPA has determined that the Respondent is liable under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

#### **V. DETERMINATIONS**

Based on the Findings of Fact and Conclusions of Law set forth above, and the Administrative Record supporting this Order, EPA has determined that:

- 5.1 The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.
- 5.2 The Work is necessary to protect the public health and welfare and the environment.



- 5.3 Because there is a threat to public health or welfare or the environment, a removal action is appropriate to abate, minimize, stabilize, mitigate or eliminate the release or threat of release of hazardous substances at or from the Site.

#### **VI. PARTIES BOUND**

- 6.1 This Order shall apply to and be binding upon Respondent and its agents, successors, and assigns. Neither a change in ownership or corporate or partnership status of Respondent, nor a change in ownership or control of the Site, shall in any way alter Respondent's responsibilities under this Order.
- 6.2 No change in ownership of any property covered by this Order shall in any way alter, diminish, or otherwise affect any of Respondent's obligations and responsibilities under this Order.
- 6.3 In the event of any change in ownership or control of the Site, Respondent shall notify EPA in writing at least thirty (30) calendar days in advance of such change and shall provide a copy of this Order to the transferee in interest of the Site prior to any agreement for transfer.
- 6.4 In the event that the Respondent files for or is placed into bankruptcy, the Respondent shall notify EPA within three (3) days of such event.
- 6.5 Respondent shall provide a copy of this Order to all contractors, subcontractors, supervisory personnel, laboratories and consultants retained by Respondent to conduct any portion of the Work to be performed by Respondent pursuant to this Order. Respondent shall require in any and all contracts related to this Site that the Work that is the subject of such contract be performed within the time and in the manner set forth in this Order.

#### **VII. NOTICE TO THE STATE**

- 7.1 Notice of issuance of this Order has been given to the Commonwealth of Virginia pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

#### **VIII. RESPONSE ACTION PLAN DEVELOPMENT AND IMPLEMENTATION**

- 8.1 Respondent shall commence and complete performance of the following response action within the time periods specified herein.
- 8.2 Within fifteen (15) business days of the Effective Date of this Order, Respondent shall notify EPA in writing of the identity and qualifications of the contractor, subcontractor,



supervisory personnel, and other persons who will be primarily responsible for developing the Response Action Plan ("RAP") required by this Section. Respondent shall further notify EPA in writing of the identity and qualifications of all contractors, subcontractors, supervisory personnel and other persons selected by Respondent who will conduct all or any portion of the response action no less than ten (10) days prior to commencement of the response action to be performed by such persons. Respondent shall ensure that all contractors, subcontractors, supervisory personnel and/or other persons retained to perform response actions shall meet the applicable Occupational Safety and Health Administration ("OSHA") requirements as defined in 29 C.F.R.

§ 1910.120. The Respondent's selection of all contractors, subcontractors, supervisory personnel and other persons who will perform response action; the Respondent's Project Coordinator designated pursuant to Section IX; and any replacements to any such persons are subject to disapproval by EPA at any time. In the event of any such disapproval by EPA, Respondent shall notify EPA within five (5) calendar days of receipt of such EPA disapproval of the Respondent's selection of the person(s) who will replace the one(s) disapproved by EPA. If a person's selection is disapproved by EPA, they shall not perform such specified response action.

**8.3 Respondent shall accomplish the following items:**

- a. Provide site security sufficient to preclude access by persons not conducting or overseeing the response action required by this Order;
- b. Install temporary erosion and sedimentation control measures to prevent the migration of hazardous substances into the wetlands and the stream system during the response action in accordance with the Virginia Erosion and Sediment Control Regulations, 9VAC25-840-10 to 9VAC25-840-110.
- c. Assess and evaluate whether the soil contained within the former secondary drip pad area ("Secondary Drip Pad Area") is contaminated above Site cleanup levels for arsenic and/or total chromium, identified in Paragraph 8.3.d. below. The Secondary Drip Pad Area is located on the southeast side of the Site and is shown on Figure 1, attached hereto as Exhibit A. This assessment and evaluation may include the use of X-Ray Fluorescence ("XRF") technology. Temporarily remove stored untreated wood from the Secondary Drip Pad Area to properly assess whether contamination is present in the soil in that area.
- d. Excavate soil that is contaminated above the Site cleanup levels for arsenic (30 mg/kg) and/or total chromium (63 mg/kg) from:
  - (i) the former process area of the Site (which includes soil in and around the areas where the wood treatment operation took place, including the former



primary drip pad, the former treatment building/office, and the Secondary Drip Pad Area) (collectively, the "Former Process Area"), and

- (ii) the three main drainage ditches ("Main Drainage Ditches"),

to prevent the potential for human exposure to contaminated soil and to prevent the continued migration of contaminated soil to the wetlands and stream system. The Former Process Area and Main Drainage Ditches are shown on Figure 1, attached hereto as Exhibit A. Excavate soil to no more than twenty-four (24) inches below grade.

- e. Conduct post-excavation sampling at the base of the excavation to confirm that contamination has been reduced to levels at or below the Site cleanup levels identified in Paragraph 8.3.d, above. This assessment may include the use of XRF technology to analyze soil on-site; however, if Respondent uses XRF technology, then at least ten (10) percent of the soil locations evaluated using the XRF technology in the final lift shall be sampled and sent to an off-site laboratory for confirmation of the XRF results.

If the post-excavation sampling at the base of the excavation indicates that arsenic and total chromium are present above the Site cleanup levels at twenty-four (24) inches below grade, then prior to backfilling, place an appropriate warning barrier, such as orange plastic fencing, at that depth, to warn people that potential exposure to hazardous substances may occur and that personal protective equipment should be worn to minimize any potential exposure to hazardous substances, if working at that depth.

- f. Backfill all excavated areas in the Former Process Area to original grade or to a grade that facilitates proper drainage from the Site with clean, uncontaminated soil. The clean, uncontaminated soil shall be amended with up to 5% clean organic matter (such as composted yard material) to reduce the bioavailability of any residual contamination. Restore the three Main Drainage Ditches impacted by any removal activities so that the slope is no steeper than a 3:1 slope.
- g. Install permanent erosion and sedimentation controls (e.g., crush and run) in the area surrounding the Former Process Area and vegetative cover in the three Main Drainage Ditches at completion of the response action to stabilize Site soils.
- h. Properly dispose off-site any soil and waste material excavated as a result of the Work described above in accordance with applicable requirements of RCRA, 42 U.S.C. §§ 6901-6992; Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); and Section 300.440 of the NCP, 40 C.F.R. § 300.440.



- i. Provide site specific health and safety measures, including preparation and implementation of a Health and Safety Plan ("HASP") for actions to be performed at the Site, to protect the health and safety of workers, other personnel, and the public from the hazardous substances and work-related health and safety hazards during performance of the response action specified herein. The HASP shall, as appropriate, provide for proper decontamination of personnel and equipment, monitoring and control of off-site migration of hazardous substances during the performance of activities at the Site and protection of public health from exposure to hazardous substances during the conduct of activities at the Site pursuant to this Order. Health and safety requirements in the HASP shall be at least as stringent as those set forth in Occupational Safety and Health Administration and EPA requirements, including but not limited to, requirements contained in 29 C.F.R. § 1910.120 and/or EPA Standard Operating Safety Guides (July 5, 1988).
- j. Obtain a Hazardous Waste Generator Identification Number if any soil and/or waste material excavated as a result of the response actions described in this Section VIII is determined to be "hazardous waste" in accordance with RCRA.

8.4 Within thirty (30) business days of the Effective Date of this Order, Respondent shall submit to EPA for approval a RAP detailing the response action to be implemented for the items specified in paragraph 8.3 above. To the extent that information concerning the details of a particular item does not yet exist so that it can be described in the RAP, the RAP shall set forth an expeditious schedule and plan for submittal of RAP supplement(s) to EPA for approval, which supplement(s) shall fully detail such items. All references to the review, approval, and enforcement of the RAP shall also be applicable to any RAP supplement(s). The RAP shall include, among other things, a schedule for the expeditious performance of the response action required by this Order. The RAP shall be consistent with the NCP and shall be subject to approval by EPA according to the provisions of paragraphs 8.5 and 8.9 below.

8.5 EPA will review the RAP and notify Respondent of EPA's approval or disapproval of the RAP. In the event of disapproval, EPA will specify the deficiencies in writing. The Respondent shall respond to and correct the deficiencies identified by EPA and resubmit the RAP to EPA within ten (10) business days of receipt of EPA disapproval or such longer time as may be specified by EPA in its discretion. Approval, disapproval and/or modification by EPA of the subsequent RAP submission shall be according to the provisions of paragraph 8.9 below. Approval of the RAP shall not limit EPA's authority under the terms of this Order to require Respondent to conduct activities consistent with this Order to accomplish the Work outlined in paragraph 8.3 of this Order.

8.6 Within ten (10) business days of receipt from EPA of written approval to proceed with implementation of the EPA-approved RAP ("written approval to proceed"), the Respondent shall commence implementation of such RAP and complete it in accordance



with the RAP and the schedule therein. In the event EPA determines that any portion of the response action performed is deficient, and EPA requires Respondent to correct or re-perform such response action pursuant to this Order, Respondent shall correct or re-perform the response action or portion of the response action in accordance with a schedule provided by EPA.

- 8.7 Beginning seven (7) calendar days subsequent to the date of receipt of EPA approval of the RAP and every seven (7) calendar days thereafter or longer as may be determined by the EPA Project Coordinator designated pursuant to Section IX, and until EPA advises Respondent that the Work is complete, the Respondent shall provide EPA with a progress report for each preceding 7-day period or, if applicable, the period specified in writing by the EPA Project Coordinator. The progress reports shall include, at a minimum: 1) a description of the response action completed and the actions that have been taken toward achieving compliance with this Order; 2) a description of all data anticipated and activities scheduled for the next seven (7) calendar days or, if applicable, the period specified in writing by the EPA Project Coordinator; 3) a description of any problems encountered or anticipated; 4) any actions taken to prevent or mitigate such problems; 5) a schedule for completion of such actions; 6) copies of all analytical data received during the reporting period; and 7) all modifications to the response action, RAP and schedule made in accordance with Section XV of this Order during the reporting period.
- 8.8 Documents, including plans, reports, sampling results and other correspondence to be submitted pursuant to this Order, shall be sent by certified or overnight mail to the EPA Project Coordinator designated pursuant to Section IX.
- 8.9 All reports, plans, specifications, schedules and attachments required by this Order are subject to EPA approval and shall be incorporated into this Order upon approval by EPA. In the event that EPA approves a portion of the RAP, report or other item required to be submitted to EPA under this Order, the approved portion shall be enforceable under this Order. In the event of conflict between this Order and any document attached hereto, incorporated in or enforceable hereunder, the provisions of this Order shall control. In the event that EPA disapproves any required submission, EPA will (1) specify the deficiencies in writing, and/or (2) submit its own modifications to the Respondent to accomplish the Work outlined in paragraph 8.3 above. Respondent shall amend and submit to EPA a revised submission that responds to and corrects the specified deficiencies within seven (7) business days of receipt of EPA disapproval or such longer time as may be specified by EPA in its discretion. In the event that EPA submits its own modifications to the Respondent, the Respondent is hereby required to incorporate such modifications. Any non-compliance with EPA-approved plans, reports, specifications, schedules, attachments, or submission of deficient revisions following EPA disapproval, or non-compliance with an EPA required modification shall be considered a failure to comply with a requirement of this Order. Determination(s) of non-compliance will be made by EPA.



- 8.10 In addition to the information and documents otherwise required by this Order, Respondent shall provide to EPA, upon written request, any and all information and documents in its possession, custody or control related to the Site including, but not limited to, Site analytical data (including raw data); Site safety data; Site monitoring data; operational logs; copies of all hazardous waste manifests (including copies of all hazardous waste manifests signed upon receipt of the hazardous wastes by a licensed treatment, storage or disposal facility); the identity of treatment, storage and/or disposal facilities used; the identity of transporters used; the identity of any contractors, subcontractors and supervisory personnel used; information and documents concerning Respondent's compliance with Quality Assurance and Quality Control requirements of this Order; information and documents relating to Respondent's efforts to secure access; and information and documents relating to any project delays. Nothing herein shall be interpreted as limiting the inspection and information-gathering authority of EPA under Federal law.
- 8.11 Within forty-five (45) calendar days of the date Respondent concludes it has completed implementation of the RAP and the items identified in paragraph 8.3, above, or longer as may be determined by the EPA Project Coordinator designated pursuant to Section IX, Respondent shall submit a written Final Report to EPA subject to EPA approval described in 8.9 above. The Final Report shall detail the work undertaken to implement the RAP and the items identified in paragraph 8.3, above, and shall be certified by Respondent in accordance with the terms of Section XVIII, below. EPA will review the adequacy of Respondent's implementation of the RAP and accomplishment of items specified in paragraph 8.3 above. EPA will notify Respondent, in writing, of any discrepancies in the Final Report or deficiencies in the execution of the RAP and the items identified in paragraph 8.3, above, and the actions required to correct such discrepancies or deficiencies. Within seven (7) business days of receipt of notification by EPA, or as otherwise specified by EPA in its discretion, Respondent shall, as directed by EPA, amend the Final Report, develop an additional plan or amend the existing RAP to address such discrepancies or deficiencies. Any additional plan or amendment will be subject to the approval procedures outlined in paragraphs 8.5 and 8.9 above. Respondent shall perform all actions approved by EPA in a manner consistent with the NCP and all applicable Federal laws and regulations, as required by the NCP.
- 8.12 Respondent shall not handle or remove any hazardous substances from the Site except in conformance with the terms of this Order and all applicable Federal, State and local laws and regulations, as required by the NCP. Any hazardous substance, pollutant or contaminant transferred for disposal off-site as a result of this Order must be taken to a facility acceptable under EPA's Off-Site Policy (58 Fed. Reg. 49200 (September 22, 1993)) in accordance with any rule or regulation promulgated pursuant to Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3).



- 8.13 Respondent shall not commence any Work except in conformance with the terms of this Order. Respondent shall not commence implementation of the RAP developed hereunder until receiving written EPA approval to proceed pursuant to paragraph 8.6. Any additional plan or amendment will be subject to the approval procedures outlined in paragraphs 8.5 and 8.9 above.
- 8.14 Respondent shall immediately notify EPA's Project Coordinator and the National Response Center [(800) 424-8802] and any other party required by law in the event of any action or occurrence during the pendency of this Order which causes or threatens to cause an additional release of hazardous substances, pollutants or contaminants on, at or from the Site, or which may create a danger to public health, welfare or the environment.
- 8.15 In the event that EPA believes that response actions or other activities at the Site by Respondent is causing or may cause a release of hazardous substances, or are a threat to public health or welfare or the environment, EPA may, in its discretion, immediately halt or modify such response actions or other activities to eliminate or mitigate such releases or threats.

#### **IX. DESIGNATED PROJECT COORDINATORS**

- 9.1 Respondent shall designate a Project Coordinator and shall notify EPA of such designation no later than ten (10) calendar days after the Effective Date of this Order. Designation of a Project Coordinator shall not relieve the Respondent of its obligation to comply with all requirements of this Order. The Respondent's Project Coordinator shall be a technical and/or managerial representative of the Respondent and may be a contractor and/or consultant; provided, however, the Respondent's Project Coordinator shall not be its legal representative in this matter. The Project Coordinator for EPA designated pursuant to this Section and the Project Coordinator for the Respondent shall be responsible for overseeing the Work. To the maximum extent possible, communications between the Respondent and EPA and all documents concerning the activities performed pursuant to the terms and conditions of this Order, including plans, reports, approvals and other correspondence, shall be directed to the Project Coordinators.

- 9.2 The Project Coordinator for EPA is:

Ruth Scharr  
On-Scene Coordinator (Mailcode 3HS31)  
Hazardous Site Cleanup Division  
U.S. Environmental Protection Agency  
701 Mapes Road  
Fort Meade, MD 20755-5350  
scharr.ruth@epa.gov



(215) 756-7897

- 9.3 Respondent shall have the right to change its Project Coordinator. Such a change shall be accomplished by notifying the EPA Project Coordinator in writing at least five (5) calendar days prior to the change.
- 9.4 EPA shall have the right to change its Project Coordinator at any time without prior notice to Respondent. EPA's intent is to notify the Respondent as soon as practicable following any change of its Project Coordinator.
- 9.5 The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of Work except when such stoppage or delay is specifically required by EPA.
- 9.6 The EPA Project Coordinator shall have the authority to halt or modify Work or other activities performed by Respondent at the Site in order to eliminate a release or threat of release of hazardous substances. Such direction by the EPA Project Coordinator may be given verbally or in writing. If such direction is given verbally, the EPA Project Coordinator will later memorialize such direction in writing.

#### **X. QUALITY ASSURANCE**

- 10.1 The Respondent shall use quality assurance, quality control, and chain of custody procedures in accordance with the following documents while conducting all sample collection and analysis activities required by this Order:
- (a) "EPA NEIC Policies and Procedures Manual" (EPA Document 330/9-78-001-R (revised November 1984));
  - (b) "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," (QAMS-005/80 (December 1980)); and
  - (c) "QA/QC Guidance for Removal Activities," (EPA/540/G-90/004 (April 1990)).
- 10.2 The Respondent shall consult with EPA in planning for, and prior to, all sampling and analysis required by the approved RAP. The Respondent shall use a laboratory(s) which has a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

#### **XI. SITE ACCESS**

- 11.1 As of the Effective Date of this Order, Respondent shall provide to EPA and its employees, agents, consultants, contractors and other authorized and/or designated



representatives, for the purposes of conducting and/or overseeing the Work, access to all property owned or controlled by Respondent wherein Work must be undertaken. Such access shall permit EPA and its employees, agents, consultants, contractors and other authorized and designated representatives to conduct all activities described in paragraph 11.3 of this Order.

- 11.2 To the extent that property wherein Work must be undertaken is presently owned or controlled by parties other than the Respondent, the Respondent shall use its best efforts to obtain Site access agreements from the present owners. Such access agreements shall be finalized as soon as practicable but no later than twenty (20) calendar days after receiving EPA's written approval to proceed. Such agreements shall provide reasonable access for Respondent and its employees, agents, consultants, contractors and other authorized and designated representatives to conduct the Work, and for EPA and its designated representatives to conduct the activities outlined in paragraph 11.3 below. In the event that any property owner refuses to provide such access or access agreements are not obtained within the time designated above, whichever occurs sooner, the Respondent shall notify EPA at that time, in writing, of all efforts to obtain access and the circumstances of the failure to obtain such access. EPA may then take steps to provide such access.
- 11.3 In accordance with law and regulation, as appropriate, EPA and its employees, agents, contractors, consultants and other authorized and designated representatives shall have the authority to enter and freely move about the location where the response actions and/or Work is being performed at all reasonable times for the purposes of, inter alia: inspecting Work, records, operating logs and contracts related to the Site; reviewing the progress of the Respondent in carrying out the terms of this Order; conducting such tests as EPA deems necessary; using a camera, sound recording or other documentary type equipment; and verifying the data submitted to EPA by the Respondent. The Respondent shall permit such persons to inspect and copy all records, files, photographs, documents and other writings, including all sampling and monitoring data, in any way pertaining to the Work.
- 11.4 Respondent may make a claim of business confidentiality for information submitted pursuant to this Order in the manner described in 40 C.F.R. § 2.203(b). Such an assertion shall be adequately substantiated in accordance with 40 C.F.R. § 2.204(e)(4) at the time the assertion is made. Information subject to a confidentiality claim shall be made available to the public by EPA only in accordance with the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim of business confidentiality accompanies the information when it is submitted or made available to EPA, the submitted information may be made available to the public by EPA without further notice to Respondent. All submitted information, including information claimed as confidential, may be disclosed by EPA to its authorized or designated representatives, pursuant to applicable law and regulation.



- 11.5 The Respondent may withhold those records and documents covered by any privilege or protection recognized under federal law and applied by federal courts in actions commenced by the United States. In the event that the Respondent withholds a document as privileged, the Respondent shall provide EPA with the title of the document, the date of the document, the name(s) of the author(s) and addressee(s)/recipient(s), a description of the nature of the document and identification of the privilege asserted at the time such document is required to be provided to EPA.
- 11.6 No claim of confidentiality or privilege shall be made regarding any data required to be submitted pursuant to this Order including, but not limited to, sampling, analytical, monitoring, hydrogeologic, scientific, chemical or engineering data, or documents or information evidencing conditions at or around the Site. Nor shall such claims be made for Site safety data; Site monitoring data; operational logs; hazardous waste manifests; identities of treatment, storage and/or disposal facilities used; identities of transporters used; identities of any contractors or subcontractors used in performing work required by this Order.
- 11.7 Notwithstanding any provision of this Order, EPA retains all of its access and information-gathering authorities and rights under CERCLA and any other applicable statute and regulation.

## **XII. RESERVATION OF RIGHTS**

- 12.1 Except as expressly provided in this Order, EPA reserves all rights, claims, interests and defenses it may otherwise have, and nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, including the right to seek injunctive relief and/or the imposition of statutory penalties.
- 12.2 As provided by this Order, EPA expressly reserves its right to disapprove of Work performed by Respondent; to halt Work being performed by Respondent if Respondent has not complied with an approved RAP or this Order, or at any time EPA deems necessary to protect public health, welfare or the environment and to perform such Work; to request or require that Respondent performs response actions in addition to those required by this Order. Further, EPA reserves the right to undertake response action at any time EPA deems appropriate. In the event that EPA requires Respondent, and Respondent declines, to correct and/or re-perform work that has been disapproved by EPA and/or to perform response actions in addition to those required by this Order, EPA reserves the right to undertake such actions and seek reimbursement of the costs incurred and/or to seek any other appropriate relief. In addition, EPA reserves the right to undertake removal and/or remedial actions at any time that such actions are appropriate under the NCP and to seek reimbursement for any costs incurred, and/or take any other action authorized by law.



- 12.3 EPA reserves the right to bring an action against the Respondent for recovery of all recoverable costs incurred by the United States related to this Order which are not reimbursed by the Respondent, as well as any other costs incurred by the United States in connection with response actions conducted at the Site.
- 12.4 This Order concerns certain response actions (Work described in Section VIII, above) concerning the Site. Such response actions might not fully address all contamination at the Site. Subsequent response actions which may be deemed necessary by EPA are not addressed by this Order. EPA reserves all rights including, without limitation, the right to institute legal action against Respondent and/or any other parties, in connection with the performance of any response actions not addressed by this Order.
- 12.5 EPA reserves the right to take enforcement actions, including actions for monetary penalties, for any violation of law, regulation, or of this Order. Failure to comply with this Order subjects Respondent to the assessment of civil penalties of up to \$32,500 per day and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure pursuant to Sections 106(b) and 107(c) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c), and 40 C.F.R. Part 19. EPA may also undertake such other actions as it may deem necessary or appropriate for any purpose including, but not limited to, actions pursuant to Sections 104 and/or 106 of CERCLA, 42 U.S.C. §§ 9604 and 9606.
- 12.6 Nothing in this Order shall limit the authority of the EPA On-Scene Coordinator as outlined in the NCP and CERCLA.

### **XIII. OTHER CLAIMS**

- 13.1 Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation not bound by this Order for any liability it may have relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any hazardous substances, hazardous wastes, pollutants or contaminants found at, taken to, or taken from the Site.
- 13.2 This Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2).
- 13.3 Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by Respondent, or Respondent's employees, agents, contractors, or consultants engaged to carry out any action or activity pursuant to this Order, nor shall EPA or the United States be held out as a party to any contract entered into by Respondent or by Respondent's employees, agents, contractors, or consultants engaged to carry out the requirements of this Order.



- 13.4 Nothing herein shall constitute or be construed as a satisfaction or release from liability of Respondent or any other person.

#### **XIV. OTHER LAWS**

- 14.1 All Work shall be undertaken in accordance with the requirements of all applicable and/or relevant and appropriate local, State and Federal laws and regulations, as required by the NCP.

#### **XV. SUBSEQUENT MODIFICATION**

- 15.1 This Order may be modified or amended by EPA. Such amendments shall be in writing and shall have as their effective date the date on which such amendments are signed by EPA. Modifications to the EPA-approved RAP and its implementation may be made by EPA including the EPA Project Coordinator. Such modifications shall be memorialized in writing by the EPA Project Coordinator.
- 15.2 Any reports, plans, specifications, schedules, or other submissions required by this Order are, upon approval by EPA, incorporated into this Order. Any non-compliance with such EPA-approved reports, plans, specifications, schedules, or other submissions shall be considered non-compliance with the requirements of this Order. Determinations of non-compliance will be made by EPA.
- 15.3 No informal advice, guidance, suggestions or comments by EPA regarding reports, plans, specifications, schedules or other submissions by the Respondent or the requirements of this Order will be construed as relieving the Respondent of its obligation to obtain formal approval when required by this Order, and to comply with the requirements of this Order unless formally modified.

#### **XVI. LIABILITY OF THE UNITED STATES GOVERNMENT**

- 16.1 Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondent or of its employees, agents, servants, receivers, successors or assigns, or of any persons including, but not limited to firms, corporations, subsidiaries, contractors or consultants in carrying out the Work, nor shall the United States Government or any agency thereof be held out as a party to any contract entered into by Respondent in carrying out the Work.

#### **XVII. FAILURE TO PERFORM/PERFORMANCE EVENTS**

- 17.1 In the event of an inability or anticipated inability on the part of Respondent to perform any of the actions or Work required by this Order in the time and manner required herein,



the Respondent's Project Coordinator shall notify EPA orally as soon as possible but no later than within twenty-four (24) hours of the time Respondent becomes aware or should have become aware of such event (or, if the event occurs on a Friday or Saturday, no later than immediately on the following Monday) and in writing no later than seven (7) calendar days after Respondent becomes aware, or should have become aware, of such delay or anticipated delay. Such written notification shall be certified by a responsible official of Respondent in accordance with Section XVIII of this Order and shall describe fully the nature of the delay, including how it may affect the Work, RAP and schedule; the actions that will be or have been taken to mitigate, prevent, and/or minimize further delay; and the timetable according to which future actions to mitigate, prevent and/or minimize the delay will be taken. Such notification shall not relieve Respondent of any obligation of this Order. The Respondent shall adopt all reasonable measures to avoid and minimize such delay.

- 17.2 Failure by Respondent to carry out any requirement of this Order in accordance with the terms and conditions specified herein may result in the unilateral performance of the required actions by EPA pursuant to applicable authorities, an action to recover treble damages pursuant to CERCLA, and/or the initiation of an enforcement action against Respondent to require Respondent to perform such actions, in addition to any other relief that may be available to EPA pursuant to applicable law.
- 17.3 Nothing in this paragraph or any other provision of this Order shall be construed so as to limit any powers EPA may have under CERCLA, the NCP, or any other law or regulation.

#### **XVIII. CERTIFICATION OF COMPLIANCE**

- 18.1 (a) Unless otherwise required by the terms of this Order, any notice, report, certification, data presentation or other document submitted by Respondent under or pursuant to this Order which discusses, describes, demonstrates or supports any finding or makes any representation concerning Respondent's compliance or non-compliance with any requirement(s) of this Order shall be certified by the Respondent, a responsible official of the Respondent or by the Project Coordinator for the Respondent. The term "responsible official" means: (i) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The responsible official of a partnership or sole proprietorship means the general partner or the proprietor, respectively.



- (b) The written Final Report required by paragraph 8.11 of this Order, and any written notification described in paragraph 17.1 of this Order shall be certified by the Respondent or a responsible official of the Respondent.

18.2 The certification required by paragraph 18.1 of this Order shall be in the following form:

Except as provided below, I certify that the information contained in or accompanying this (type of submission) is true, accurate, and complete.

As to (the/those) portion(s) of this (type of submission), for which I cannot personally verify (its/their) accuracy, I certify under the penalty of law that this (type of submission) and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name (print): \_\_\_\_\_

Title: \_\_\_\_\_

- 18.3 Submission of documents pursuant to this Order which are found by EPA to contain false information shall constitute a failure to comply with this Order and shall subject Respondent to, among other things, penalties whether or not a responsible official of Respondent has certified the document.

### **XIX. SHIPMENT OF HAZARDOUS SUBSTANCES**

- 19.1 Respondent shall, prior to any off-site shipment of hazardous substances from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's Project Coordinator of such shipment of hazardous substances. However, the notification to EPA of shipments shall not apply to any such off-site shipments when the total volume of all such shipments will not exceed ten (10) cubic yards. Notifications to states in those circumstances shall be governed by applicable state law.
- 19.2 The notification required by paragraph 19.1 shall be in writing and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the



hazardous substances; and (4) the method of transportation of the hazardous substances. Respondent shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state or to a facility in another state.

- 19.3 The identity of the receiving facility and state will be determined by Respondent unless disapproved by EPA. Respondent shall provide all relevant information, including information required by paragraph 19.2, above, relating to the off-site shipments as soon as practicable but no later than one (1) business day before the hazardous substances are actually shipped.

#### **XX. OPPORTUNITY TO CONFER AND EFFECTIVE DATE**

- 20.1 Within seven (7) days after the date that EPA transmits an executed copy of this Order to Respondent, Respondent may, in writing, request a conference with EPA to be held before the Effective Date to discuss this Order, including its applicability, the factual findings and the determinations upon which it is based, the appropriateness of any actions Respondent is ordered to take, or any other relevant and material issues or contentions that Respondent may have regarding this Order. If a conference is requested, Respondent shall use best efforts to make itself available for the conference to be held expeditiously at a time mutually agreeable to Respondent and EPA.
- 20.2 At any conference held pursuant to a request by Respondent, Respondent may participate personally and/or be represented by an attorney or other representative. A conference under this Section may be held by means of an in-person meeting, by telephone or telephonic video conferencing, if such equipment is available and compatible as between EPA and Respondent, or by a combination of one or more of these options. Respondent may also submit written comments or statements of position on any matter pertinent to this Order no later than the date of the conference, or at least five (5) days prior to the Effective Date if Respondent does not request a conference. This conference is not an evidentiary hearing, does not constitute a proceeding to challenge this Order, and does not give Respondent a right to seek review of this Order. Any request for a conference or written comments or statements should be submitted to:

Gwen E. Pospisil (3RC41)  
Office of Regional Counsel  
U.S. Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103-2029  
215-814-2678  
[pospisil.gwen@epa.gov](mailto:pospisil.gwen@epa.gov)



- 20.3 Except for Paragraph 20.1, which is effective on the date this Order is signed, the Effective Date of this Order shall be the fourteenth (14<sup>th</sup>) day following the date EPA transmits an executed copy of the Order to Respondent, unless a conference is requested as provided in Paragraph 20.1 of this Order. If a conference is requested, the Effective Date of this Order shall be the fourteenth (14<sup>th</sup>) day following the day of the conference unless such Effective Date is changed in writing in a letter to Respondent from EPA.

### **XXI. NOTICE OF INTENT TO COMPLY**

- 21.1 On or before the Effective Date, Respondent shall notify EPA in writing of Respondent's intent to comply with this Order. Such written notice shall be sent to:

Ruth Scharr  
On-Scene Coordinator (Mailcode 3HS31)  
Hazardous Site Cleanup Division  
U.S. Environmental Protection Agency  
701 Mapes Road  
Fort Meade, MD 20755-5350  
(215) 756-7897  
[scharr.ruth@epa.gov](mailto:scharr.ruth@epa.gov)

Respondent's written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondent's assertions. Failure of Respondent to provide such notification within this time period shall, as of the Effective Date, be treated as a violation of this Order by Respondent.

### **XXII. ADMINISTRATIVE RECORD**

- 22.1 The Administrative Record upon which this Order is issued is available for review by Respondent's representatives at its request. Requests to review the Administrative Record shall be submitted to the EPA Project Coordinator designated pursuant to Section IX of this Order.

### **XXIII. RECORD RETENTION**

- 23.1 Respondent shall preserve all documents and information relating to the Work performed under this Order, or relating to the hazardous substances found at or released from the Site, for six (6) years following completion of the response action required by this Order. In addition, Respondent shall also retain, as appropriate, monthly reports on analytical services pursuant to OSWER Directive No. 9240.0-2B, "Extending the Tracking of



Analytical Services to Potentially Responsible Party-Lead Superfund Sites," (July 6, 1992). At the end of this six-year period and thirty (30) days before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the originals or copies of such documents and information to EPA.


#### **XXIV. DEFINITIONS**

- 25.1 "Business days" as used in this Order shall mean every day of the week except Saturdays, Sundays, and federal holidays.
- 25.2 "Calendar days" as used in this Order shall mean every day of the week, including Saturdays, Sundays, and federal holidays.
- 25.3 "Days" as used herein shall mean "calendar days" unless specified otherwise.
- 25.4 "Effective Date" as used herein shall be the effective date of this Order as provided in Section XX.
- 25.5 All terms not defined herein shall have the meanings set forth in CERCLA and the NCP.

#### **XXV. NOTICE OF COMPLETION**

- 26.1 When EPA determines, after EPA's review and approval of the Final Report required pursuant to paragraph 8.11 of this Order, that the response action specified in Section VIII of this Order has been fully performed in accordance with the requirements of this Order, and upon receipt of penalties hereunder, with the exception of any continuing obligations required by this Order, including those requirements specified in Sections XII ("Reservation of Rights"), XIII ("Other Claims"), XVI ("Liability of the United States Government"), and XXIII ("Record Retention"), EPA will provide a notice of completion to the Respondent.

**IT IS SO ORDERED.**

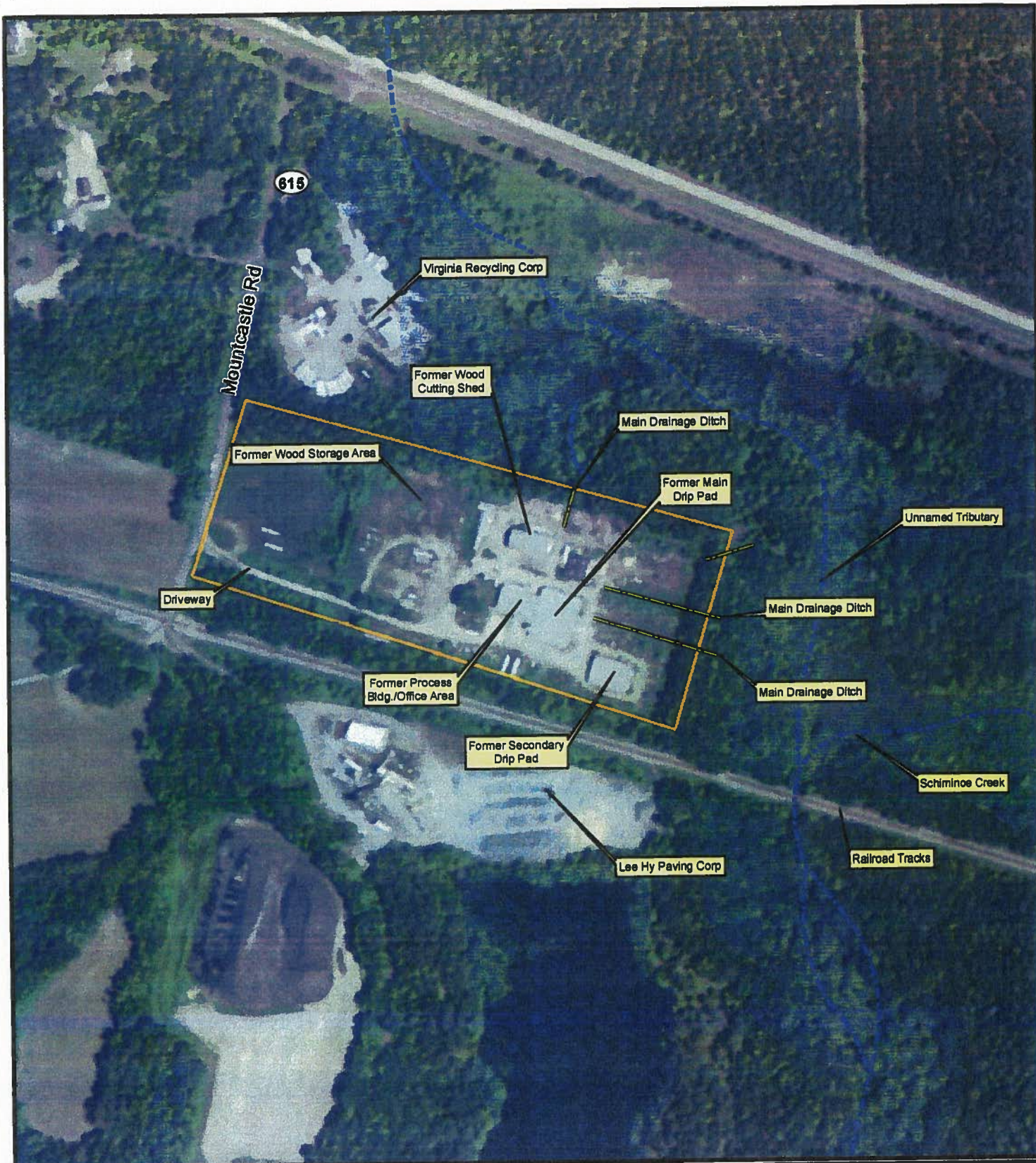
  
**CECIL RODRIGUES**  
Director, Hazardous Site Cleanup Division  
U.S. Environmental Protection Agency  
Region III

9/30/2015  
Date



## **EXHIBIT A**





# Legend

- Site Boundary
- ❧ NWI Wetlands
- Inferred stream channel from Topographic Map
- ===== Drainage Ditch

Imagery: ESRI, USGS  
Mapping Service, 2013



Coordinate System:  
WGS84 UTM Zone 18N Feet

0 350  
Feet

New Kent Wood Preservatives, Inc  
Providence Forge, New Kent County, VA

Figure 1  
Site Layout Map

TDD#: WS03-12-09-001  
Contract: EP-S3-10-05  
Prepared: 7/21/2015





**NEW KENT WOOD PRESERVATIVES, INC. SITE  
PROVIDENCE FORGE, NEW KENT COUNTY, VIRGINIA**

**RESPONSE ACTION PLAN  
PART C**

**SAMPLE COLLECTION METHODS AND PROCEDURES PLAN**

**ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTION  
DOCKET NO. CERC-03-2015-0262DC**

Prepared for:  
**L-WOOD, INC., SOUTHERN PINE SPECIALISTS**  
Respondent  
Waynesboro, Georgia

Prepared by:  
**DRAPER ADEN ASSOCIATES**  
Richmond, Virginia

Issued November 25, 2015  
Revised January 15, 2016



**NEW KENT WOOD PRESERVATIVES, INC. SITE  
PROVIDENCE FORGE, NEW KENT COUNTY, VIRGINIA**

**RESPONSE ACTION PLAN  
PART C  
SAMPLE COLLECTION METHODS AND PROCEDURES PLAN**

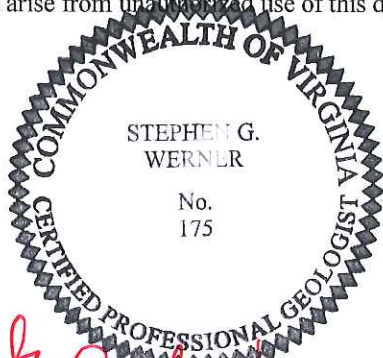
**ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTION  
DOCKET NO. CERC-03-2015-0262DC**


Draper Aden Associates prepared this document, including all attachments, in accordance with a contract between Draper Aden Associates and Mr. Tom Liesfeld (L-Wood Southern Pine Specialists).

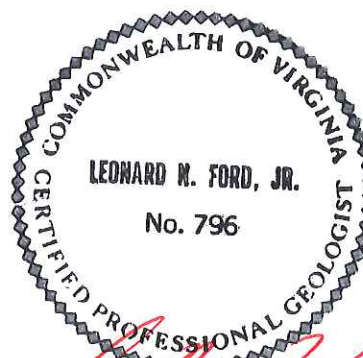
Draper Aden Associates prepared this document in accordance with generally accepted standards of environmental practice for the exclusive use of L-Wood Southern Pine Specialists, for specific application to the referenced site. No warranty is either expressed or implied. In accepting this report, L-Wood Southern Pine Specialists acknowledges that the liability incurred by Draper Aden Associates is limited to the fees paid to Draper Aden Associates to perform the subject task.


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\_\_\_\_\_  
Stephen G. Werner (PG)  
Project Coordinator



  
\_\_\_\_\_  
Leonard N. Ford, Jr. (PhD, PG)  
Program Manager



## **TABLE OF CONTENTS**

### **SUMMARY**

#### **1.0 SAMPLE LOGISTICS**

#### **2.0 SOIL SAMPLING PROCEDURES**

#### **3.0 DECONTAMINATION**

#### **4.0 FIELD QUALITY CONTROL**



## **APPENDICES**

C1     TABLES - FORMS



**NEW KENT WOOD PRESERVATIVES, INC. SITE  
PROVIDENCE FORGE, NEW KENT COUNTY, VIRGINIA**

**RESPONSE ACTION PLAN  
PART C  
SAMPLE COLLECTION METHODS AND PROCEDURES PLAN**

**ADMINISTRATIVE ORDER FOR REMOVAL RESPONSE ACTION  
DOCKET NO. CERC-03-2015-0262DC**

**SUMMARY**

The *Sample Collection Methods and Procedures Plan* (SCMAPP) prescribes protocols for obtaining samples for chemical analyses that shall be conducted during the course of meeting the requirements of the *Administrative Order for Removal Response Action* (“Order”).

The SCMAPP is intended to provide protocols for field procedures to be conducted during all phases necessary toward meeting the requirement of the Order (including site characterization, and post-excavation verification sampling).



## **1.0 SAMPLE LOGISTICS**

Information concerning the management of samples is provided in this SECTION.

### **1.1 Sample Identification**

The samples will be identified based on project name (“*LW*”), location (numerical location, as to be determined in the field), and depth interval (“*12*” for 0-12 inches, and “*24*” for 12-24 inches).

For example, samples obtained at location 1 from depths of 0-12 inches and 12-24 inches will be identified as “*LW-1-12*” and “*LW-1-24*,” respectively.

### **1.2 Sample Containers**

Requirements for sample containers are presented on TABLE C1 and TABLE C2 (APPENDIX C1).

### **1.3 Sample Handling and Control**

Samples will be delivered by hand to the selected laboratory under chain-of-custody control, in accordance with RAP PART D (Quality Assurance Project Plan).

### **1.4 Sample Documentation**

The sampling team or individual performing a particular sampling activity is required to keep field notes. Field notes will be prepared during the sampling process.

The record will describe the sample, to include: sample designation, sampling date and time, location, physical description, sample preservation methods used (if applicable), field measurements, name of sampler and comments (as warranted).



## 2.0 SOIL SAMPLING PROCEDURES

The following soil sampling activities will be conducted during the project:

- *discrete soil* sampling for *delineating* the distribution of constituents (pre-excavation site characterization sampling, verification sampling)
- *composite soil* sampling for *waste characterization*
- *composite soil* sampling for assessing the suitability of soils to be used as backfill at the site
- *composite sawdust* sampling for assessment of suitability as an organic *soil amendment*

The soil sampling program is based upon obtaining soil material in 12-inch intervals from the surface of the ground, during both the pre-excavation site characterization program and during the verification sampling program.

### 2.1 Direct Push Sampling

During the pre-excavation site characterization phase of the project, direct push sampling using Geoprobe® equipment will be performed under the observation of designated project personnel.

Probe rods will be decontaminated prior to arriving at the site.

Continuous soil samples will be obtained from the ground surface to a depth of 24 inches using pre-cleaned, factory-packaged, clear acetate sleeves having a length greater than two feet.

Soils will be removed in 12-inch sections (0-12" and 12-24") and placed in labelled plastic bags and homogenized. A representative aliquot will be placed in the sample container.

Used sampling sleeves and unused soils will be managed as investigation-derived wastes.

### 2.2 Hand Auger Sampling

Hand-augers will be used during both the pre-excavation site characterization phase of the project and during verification sampling.

Locations not accessible to the direct-push probe will, by necessity, be sampled using hand augers having stainless steel buckets.



Inaccessible areas may include (but are not necessarily limited to) the aisles between stacked wood inside the SDP building and adjacent to the drainage ditches.

Samples will be obtained from depths of 0-12" and 12-24", and placed in labelled plastic bags and homogenized. A representative aliquot will be placed in the sample container.

Hand augers will be decontaminated between sample intervals and sample locations.

### 2.3 Trowel / Shovel / Scoop Sampling

Re-useable stainless steel shovels or trowels may be used in order to obtain sidewall verification samples during the excavation phase of the project.

Re-useable stainless steel shovels, trowels, or scoops may be used in order to obtain discrete samples for use in preparing composite samples (discussed below), as deemed appropriate.

Disposable Teflon or plastic scoops may also be used in order to obtain discrete samples for use in preparing composite samples (discussed below).

### 2.4 Composite Samples

By composite samples, we mean samples comprised of materials obtained from more than one location. Composite samples may be prepared for various purposes, including (but not necessarily limited to) the following:

- During the pre-excavation site characterization phase of the project, discrete soil samples will be combined to form a composite sample in order to determine if such soils, once excavated, are likely to be classified as *hazardous waste*, based on the *toxicity characteristic*.

In this instance, the discrete soil samples to be used in preparing the composite soil sample are those for which portions have already been chemically analyzed for *arsenic* and total *chromium*.

At least *three composite soil samples* will be prepared from among the discrete soil samples that were previously analyzed during the pre-excavation site characterization program:

- one of the three composite samples will be comprised of not less than *three aliquots* of previously analyzed discrete soil samples having concentrations that are comparable to the removal action goals for *arsenic* (30 mg/kg) and *total chromium* (63 mg/kg)



- one of the three composite samples will be comprised of not less than *three aliquots* of previously analyzed discrete soil samples having concentrations that are among the *maximum* observed concentrations of *arsenic* and *total chromium*
- one of the three composite samples will be comprised of not less than *three aliquots* of previously analyzed discrete soil samples having concentrations that are relatively *intermediate* between the maximum observed concentrations of *arsenic* and *total chromium* and their respective removal action goals

Such samples will be extracted using the *Toxicity Characteristic Leaching Procedure* and chemically analyzed for the *metals* listed under RCRA.

- During the pre-excavation site characterization phase of the project, discrete samples of *sawdust*, which is currently stockpiled on the site, will be combined to form at least one composite sample in order to determine if such material may be used as an organic amendment to soils that will be used to backfill drainage areas, subsequent to excavation.

Each composite sample will consist of material obtained from *eight* or more locations.

Such samples will be analyzed for *arsenic* and *total chromium*.

- Prior to the excavation phase of the program, discrete samples of soils will be obtained from the *replacement soil source* and combined to form at least one composite sample in order to determine if such material may be used to backfill excavated areas at the site.

Each composite sample will consist of material obtained from *eight* or more locations.

Such samples will be analyzed for *arsenic* and *total chromium*.

Such samples may also be analyzed for additional parameters, if deemed warranted by the historical use of the site, from which the replacement soils are to be derived.

- During the excavation phase of the program, discrete samples of soil may be obtained from *stockpiled soils* and combined to form at least one composite sample from each stockpile in order to determine if such soils meet the requirement for classification as *hazardous waste*, based on the *toxicity characteristic*.

Each composite sample will consist of material obtained from *eight* or more locations.

Such samples will be extracted using the *Toxicity Characteristic Leaching Procedure* and chemically analyzed for the parameters required by the facility, to which the soils will be delivered.



### **3.0 DECONTAMINATION**

Re-usable sampling equipment may consist of stainless steel hand augers, stainless steel or Teflon trowels, shovels, or scoops. Decontamination procedures will consist of the following:

- Wash with non-phosphate detergent. A brush should be used to thoroughly remove contamination.
- Rinse with potable or distilled water.
- Rinse with 0.1 N nitric acid.
- Double rinse with potable or distilled water.
- Dry with clean paper towels.



## **4.0 FIELD QUALITY CONTROL**

QA/QC requirements for field activities at the Facility are presented in *Response Action Plan Part D: Quality Assurance Project Plan*.



# **APPENDIX C1**

**TABLES**

**FORMS**



**TABLE C1**  
**SPECIFICATIONS FOR SOIL SAMPLES**

**samples for standard extraction**

<b>analyte</b>	<b>removal goal [mg/kg]</b>	<b>method</b>	<b>container</b>	<b>soil preservative</b>	<b>holding time</b>	<b>target reporting level [mg/kg]</b>
<b>arsenic</b>	<b>30</b>	<b>SW6010</b>	<b>4 oz. glass</b>	<b>none</b>	<b>6 months</b>	<b>0.5</b>
<b>chromium</b>	<b>63</b>	<b>SW6010</b>	<b>4 oz. glass</b>	<b>none</b>	<b>6 months</b>	<b>0.5</b>

**The maximum allowable reporting level is given as 10% of the removal goal.**



**TABLE C2**  
**SPECIFICATIONS FOR SOIL SAMPLES**

**samples for TCLP extraction**

<b>analyte</b>	<b>hazardous waste code</b>	<b>threshold concentration [mg/liter]</b>	<b>method</b>	<b>container</b>	<b>soil preservative</b>	<b>holding time</b>	<b>reporting level [mg/liter]</b>
arsenic	D004	5.0	SW6010	4 oz. glass	none	6 months	0.1
barium	D005	100	SW6010	4 oz. glass	none	6 months	0.5
cadmium	D006	1.0	SW6010	4 oz. glass	none	6 months	0.1
chromium	D007	5.0	SW6010	4 oz. glass	none	6 months	0.1
lead	D008	5.0	SW6010	4 oz. glass	none	6 months	0.1
mercury	D009	0.2	SW7470	4 oz. glass	none	28 days	0.008
selenium	D010	1.0	SW6010	4 oz. glass	none	6 months	0.25
silver	D011	5.0	SW6010	4 oz. glass	none	6 months	0.1



[illegible]





# Site Visit Report

<b>Project Name:</b>	<b>Project No:</b>
<b>Date:</b>	
<b>Time:</b>	
<b>Contractor:</b>	<b>Job Supt.</b>
<b>No. of Contractor's Personnel:</b>	
<b>Weather:</b>	<b>PM</b>
<b>By:</b>	
<b>Present:</b>	
<b>cc:</b>	

**Comments:**This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

P:\R15\400\R15434R\R15434R-04E2\REPORTS (RAP Part A - Part E) (round 2)\RAP-C (SCMAPP)\1 - appendix (tables forms)\source files\4 - LW - site visit reporting form.docx



## William Salomone

---

**From:** Charles Carter <charles@remadeland.com>  
**Sent:** Tuesday, November 14, 2017 10:13 AM  
**To:** William Salomone  
**Subject:** RE: VT testing  
**Attachments:** 20171114T DraperAden NKWP ABA testing.xlsx

Yes, it passed. You should get official word soon. See analytical attached sent minutes ago.

---

**From:** William Salomone [mailto:wsalomone@daa.com]  
**Sent:** Tuesday, November 14, 2017 9:48 AM  
**To:** Charles Carter <charles@remadeland.com>  
**Subject:** VT testing

Hi Charles,

Any word from VT on the soil testing?

Thank you,

Bill

### **William A. Salomone, P.E.**

Senior Project Engineer

## Draper Aden Associates

*Engineering • Surveying • Environmental Services*

*Lasting Positive Impact™*

Phone: 804.264.2228 • Direct: 804.237.1858

[Web](#) • [Blog](#) • [Facebook](#) • [Twitter](#) • [LinkedIn](#)



## William Salomone

---

**From:** Scharr, Ruth <Scharr.Ruth@epa.gov>  
**Sent:** Wednesday, November 29, 2017 7:29 AM  
**To:** William Salomone; Watt, Eric; Poster, Mitch; Kendall Dunham  
**Cc:** Devlin Harris (Devlin.Harris@deq.virginia.gov); McCauley, Joanna; Thomas Liesfeld  
**Subject:** RE: New Kent Sampling Moving Forward

Bill, Yes.

Ruth Scharr  
OSC  
Eastern Response Branch

---

**From:** William Salomone [mailto:wsalomone@daa.com]  
**Sent:** Wednesday, November 29, 2017 8:26 AM  
**To:** Scharr, Ruth <Scharr.Ruth@epa.gov>; Watt, Eric <Eric.Watt@tetrattech.com>; Poster, Mitch <Mitch.Poster@tetrattech.com>; Kendall Dunham <kdunham@daa.com>  
**Cc:** Devlin Harris (Devlin.Harris@deq.virginia.gov) <Devlin.Harris@deq.virginia.gov>; McCauley, Joanna <McCauley.Joanna@epa.gov>; Thomas Liesfeld <tliesfeld@aol.com>  
**Subject:** Re: New Kent Sampling Moving Forward  
**Importance:** High

Ruth,

We are under the assumption that we are not required to perform verification sampling on the side walls of the excavation against the concrete building slabs in Excavation Area 2 and 3. The Order does not include removing soils with Arsenic and Chromium exceedances under these structures. Is this a good assumption?

Thank you,

Bill

---

**From:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
**Sent:** Monday, November 27, 2017 2:42 PM  
**To:** Watt, Eric; William Salomone; Poster, Mitch; Kendall Dunham  
**Cc:** Devlin Harris ([Devlin.Harris@deq.virginia.gov](mailto:Devlin.Harris@deq.virginia.gov)); McCauley, Joanna  
**Subject:** RE: New Kent Sampling Moving Forward

Eric, I think you have captured it. I have these thoughts on it too.



1. The excavation will stay within the proposed limits for Areas 1 thru 4 (no excavating beyond silt fence). I believe that those areas beyond the silt fencing may not be approved for Weanack. It is likely all the same dirt, but since DAA collected predisposal samples from designated areas I think any of the area outside of the previously prescribed areas may need pre-disposal sampling too. Bill can comment on this too.
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7. 3. Three XRF readings will be collected at each location and averaged. OK
8. 4. The depth of the black layer will be recorded from each test pit section in each area to document for future work.

Thanks, I prepared this hastily. Please forgive any typos.



Ruth Scharr  
OSC  
Eastern Response Branch

---

**From:** Watt, Eric [<mailto:Eric.Watt@tetrattech.com>]  
**Sent:** Monday, November 27, 2017 2:01 PM  
**To:** William Salomone <[wsalomone@daa.com](mailto:wsalomone@daa.com)>; Poster, Mitch <[Mitch.Poster@tetrattech.com](mailto:Mitch.Poster@tetrattech.com)>;  
[kdunham@daa.com](mailto:kdunham@daa.com)  
**Cc:** Scharr, Ruth <[Scharr.Ruth@epa.gov](mailto:Scharr.Ruth@epa.gov)>  
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Thanks,  
Eric

**Eric Watt, CHMM | Geologist**  
Direct: 302.283.2221 | Mobile: 302.542.2982 | Main: 302.738.7551 | Fax: 302.454.5988  
[eric.watt@tetrattech.com](mailto:eric.watt@tetrattech.com)



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## William Salomone

---

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Ruth Scharr  
OSC  
Eastern Response Branch

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## William Salomone

---

**From:** William Salomone  
**Sent:** Friday, May 11, 2018 1:58 PM  
**To:** Ruth Scharr (scharr.ruth@epa.gov); tliesfeld@aol.com; 'Harris, Devlin'; 'Watt, Eric'; Jon Lamb (jondlamb@gmail.com); Kyle Slater (kyledslater@yahoo.com)  
**Subject:** LWOOD/NKWP -Final Site Walk Meeting Notes  
**Attachments:** 18 0511-LWOOD QA- Final Site Walk.pdf

All,

Thank you for taking time to meet at the site today. It was time well spent in order to move us in the right direction.

Please review my attached notes from the meeting. Let me know if you have any comments on my report.

Thank you,

Bill

**William A. Salomone, P.E.**

Senior Project Engineer

**Draper Aden Associates**

*Engineering • Surveying • Environmental Services*

*Lasting Positive Impact™*

Phone: 804.264.2228 • Direct: 804.237.1858

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# DAILY CONSTRUCTION QUALITY ASSURANCE REPORT

Project	LWOOD/New Kent Wood Products – Response Action	Total Pages:	2
EPA DOCKET	CERC-03-2015-0262DC	Date:	5/11/2018
Location:	Providence Forge, Virginia	DAA Time @ Site:	0900-1100
Client	New Kent County	DAA Project #:	R15434R-12
Contractor(s):	East Coast Athletics, LLC	DAA Personnel:	W. Salomone
Weather:	Mostly Sunny	Temperature:	84 °F

## EQUIPMENT ON SITE:

Description:	# On site	# In Use	Description:	# On site	# In Use
Trackhoe			Track Dump Truck		
Rubber Track Backhoe			Water Truck		
Dozer			Telescopic Forklift		
Front-end Loader			Compact Track Loader		
Track Loader					
Pan / Scraper					
Sheepsfoot Roller					
Smooth Drum Roller					

## OBSERVATIONS: (Describe work performed by contractor, locations, materials, testing, & records) (Include Photos)

The purpose for the site visit today was for a Final Site Walk Meeting. No construction work was completed today.

## SAMPLING & TESTING: (location, type, results, including failures and remedial actions)

## CHANGED CONDITIONS / DELAYS / CONFLICTS ENCOUNTERED:

## DISCUSSIONS WITH CONTRACTOR OR CLIENT:

## MEETINGS:

DAA arrived on site at 0900 for a scheduled Final Site Walk Meeting. The meeting was attended by Tom Liesfeld (Owner), Ruth Scharr (USEPA), Devlin Harris (VADEQ), Eric Watt (TetraTech), Jon Lamb (ECA), Kyle Slater (Slater Excavating) and William Salomone (DAA).

The meeting agenda consisted of the following items.

- Discussion of the completed excavation and removal of contaminated material (8,200 CY), backfill with clean soil and site restoration by ECA.
- The team walked the site to observe the status of the restored conditions. The group observed the finished road and grass surfaces, drainage channels and the three BMP's.
- ECA has completed all work items as listed in the Contract including site restoration. No punch list items remain.
- Jon Lamb (ECA) provided DAA with copies of final load tickets for imported fill.
- New Kent County Responsible Land Disturber Permit: Jon Lamb is the RLD, and will close out the permit with New Kent County.
- VPDES Permit: Mr. Liesfeld holds the VPDES. DAA will assist Mr. Liesfeld with filing a Notice of Termination (NOT) once the site work is complete.
- The team walked the area outside the fence located east of Dry Swale #1 to discuss the removal of material outside of the fence. There are three areas where removal is required. Each area is a drainage way and has potential to have soil migration offsite. The areas are defined as:
  - East of and down gradient from Dry Swale #1 outside the fence.
  - Northeast corner of EA1 outside the fence.
  - Southeast corner of EA1 outside the fence.



# DAILY CONSTRUCTION QUALITY ASSURANCE REPORT

The plan is for surficial soil (0-6") to be removed in these three locations and the area backfilled with clean topsoil. It is anticipated that a maximum of 5 gallons of soil will be removed from each area. Work is scheduled for May 17, 2018. DAA will mark out the sample locations prior to the site work. DAA and ECA will remove soil from each location manually with a hand shovel. Excavated soil will be removed ECA will provide a small loader and a load of topsoil. The USEPA will use an XRF to perform testing of the soil on site. An oven will be used to dry the samples prior to testing.

8. DAA is working on the Final Report. A Draft Report will be submitted to the USEPA and VADEQ for review within 45 days following completion of the Surface Hot Spot removal tasks as described above.
9. DAA discussed the requirements for creating a Deed Covenant for the property following completion of the Order with Mr. Harris. DAA will work with Mr. Liesfeld's attorney to determine a method for creating the Covenant. A boundary survey is required for the Covenant. Mr. Liesfeld will research if a property boundary survey was performed and if so, will send a copy to DAA. The Deed Covenant may follow the Regulations of the Uniform Environmental Covenants Act (UECA). DAA and will collaborate with the VADEQ to get the necessary paperwork completed. The Covenant will contain the following components:
  - A. Description of the property restrictions for development.
  - B. Identify the Owner, Holder and Agency for the UECA.
  - C. Provided a site map showing the metes and Bounds of the property and the locations of the three Dry Swales
  - D. Identify the required frequency for inspections.
10. Final Notice of Completion of the Order letter pending from USEPA. The letter is anticipated after all documents are submitted and approved by USEPA.

## PERSONNEL ON SITE :

**Owner:** Tom Liesfeld  
**DAA:** William Salomone  
**EPA:** Ruth Scharr  
**EPA CONSULTANT:** Eric Watt  
**Contractors:** Jon Lamb, Kyle Slater

## REMARKS: (list other management actions taken to assure compliance)

**Attachments:**

**Total number of attached pages:**

The above report is complete and correct for work performed during the reporting period are in compliance with the contract plans and specifications except as noted above.

**Signature and  
Date**



(William Salomone)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**Date:** September 19, 2018

**Subject:** New Kent Wood Preservatives, Inc. Site  
4101 South Mountcastle Road, Providence Forge, Virginia  
Administrative Order for Removal Response Action  
Docket No. CERC-03-2015-0262DC  
Modification to the Response Action Plan

**From:** Ruth Scharr, On-Scene Coordinator  
Eastern Response Branch (3HS31)



**Thru:** Michael Taylor Towle, Branch Chief  
Eastern Response Branch

**To:** File

BACKGROUND

The September 30, 2015 Administrative Order for Removal Response Action (Order) directs L-Wood, Inc. Southern Pine Specialists to perform certain response activities at the New Kent Wood Preservatives, Inc. Site, located at 4101 South Mountcastle Road, Providence Forge, New Kent County, Virginia. The Order required, among other things, excavation of soil where sample data from the three main drainage ditches exceeded site cleanup levels. The three main drain ditches are depicted on the attached site layout map. These drainage features ultimately discharge water to the wetland located to the north and east of the site. Soil within the main drainage ditches and within the fence line was excavated in accordance with the approved Work Plan using heavy equipment. On May 11, 2018, the OSC, VADEQ, START personnel and RP consultant and removal contractor were onsite to document the completion of the work required by the Work Plan within the fenced area of the Site.

ISSUE

Soil sample locations outside the fence that showed results above a cleanup level, were handled as a hotspot and hand-excavated with the intent of minimizing disturbance within the drainage features. No heavy equipment was used to minimize impact to the upland area or the downgradient wetlands as seen on the site layout map. A total of seven hotspots with arsenic and/or total chromium concentrations above the site cleanup levels of 30 mg/kg and 63 mg/kg, respectively were identified during sampling events completed by the EPA's START contractor in February 2015. The hotspots are identified as locations 305, 308, 310, 311, 313, 314 and 315.



Of the seven hotspots, only two of the locations are located within a main drainage ditch. Hotspot numbers 305 and 308 are located within a main drain ditch emanating from constructed Dry Swale #1. Hotspot numbers 310 and 311 are in a small drainage swale about fifty feet from the northeast corner of the fenced area, and sample 313 was located on the north side outside the northeast corner of the fence. Hotspot location number 313 is downslope from a pile of discarded wood that appears to be from an old deck. Since observed in 2015, the discarded wood pile has become covered with a significant amount of leaves and other vegetative debris making the suspected source of the arsenic less visible. Hotspots 314 and 315 are located on the southeast of the site, a few feet from the fence line, on ground sloping in the direction of the railroad tracks. Although only two of seven locations were in a main drainage ditch, the RP agreed to address the other five hotspot locations that were identified. Attached is Figure 3 Soil Sample Locations 2015.

On May 30, 2018, the RP consultant hand-excavated and removed soil to a depth of approximately twelve inches at each of the seven hotspot locations. The footprint of the excavation consisted of a circular area with a diameter of approximately 24". A minimum of six, 5-gallon buckets of soil were removed from each of the seven hot spot locations. The EPA OSC and START personnel were on site to oversee the work; START performed XRF screening of soil on the sidewalls and bottom of each excavated hotspot. Locations 308, 311, 314, and 315 showed concentrations below site cleanup levels for arsenic and chromium. These areas were backfilled with clean soil and cleared. Soil was removed in a similar manner from locations 305, 310, and 313, however these locations could not be screened because of a heavy rain event that prevented the use of the XRF. The EPA's START personnel dried and analyzed these samples with the XRF the following day. Dried samples for locations: 305, 310 and 313 showed concentrations above site cleanup levels.

On June 21, 2018 the RP consultant hand-excavated additional soil at locations 305, 310 and 313. Using a shovel, the excavation consisted of a donut-shape beginning from the outside edge of the clean soil that was previously backfilled during the May 30, 2018 event, thereby expanding the previously excavated and backfilled hotspots areas. A total of approximately twenty gallons of soil was removed from all three locations. The EPA OSC was onsite to perform XRF screening at the bottom and sidewalls of each excavated hotspot. After the additional soil removal from the sidewall and base of the area of each location, all three locations showed concentrations well above the site cleanup levels. The RP consultant collected a composite sample from each location for lab analysis. Locations 313 and 310 were reported as 89mg/kg and 170 mg/kg Arsenic and 63.4 mg/kg and 92.2 mg/kg Total chromium. The composite sample from location 305, which is in a main drain ditch and closest to the wetland, was reported at 651 mg/kg Arsenic and 586 mg/kg Total Chromium, which was the highest concentrations reported thus far for this location. Attached are Tables 3 and 4 from the Final Trip Report New Kent Wood Preservatives Inc., February 2015 Removal Assessment; prepared by Weston Solutions. These tables support the hypothesis that as we dig deeper we are uncovering higher levels of contaminants in soil. As we dig deeper and wider the chance of damaging the roots of the vegetation is more likely. Damage to root systems will likely result in destabilization of the drainage ditch.



The EPA OSC also performed additional in-situ screening using the XRF at the surface of the soil within the main drainage ditch beyond hot spot location 305, and at locations on the side-slopes of the drainage ditch, and on the ground surface outside the drainage ditch. Several locations within the drainage ditch exceeded the cleanup levels, however, the side-slopes of the drainage ditch and the ground surface outside the drain ditch were either non-detect or below site cleanup levels.

In general, the XRF detected metals concentrations above the site cleanup levels inside the normal flow depth in the drainage channel, and well below the site cleanup levels outside the ditch (above the flow channel) on both side-slopes of the drainage ditch and extending onto the ground surface. Based on these observations, the EPA OSC contacted Bruce Pluta, EPA BTAG Coordinator and Devlin Harris, Site Assessment Program Coordinator, Virginia Department of Environmental Quality for input on how to proceed. It was agreed that additional manual soil removal to expand the area of excavation within the drainage ditch is not a feasible removal action and the use of heavy excavation equipment to remove large volume of soil is not recommended. EPA in consultation with the Commonwealth of Virginia Department of Environmental Quality, believes such excavation poses threat or disturbance which may outweigh the threat posed by leaving the contamination in place.

### ACTIONS

Based on this information the EPA OSC recommends that the approved Response Action Plan be modified to include the following language regarding excavation of soil in the main drain ditches where the main drain ditch extends beyond the fence and into the upland area of the Wetland located on the east side of the Site:

- excavation and replacement of contaminated soil at locations identified in the main drainage ditches, which convey water to the upland area and ultimately the wetlands, are not required beyond the fence line when, in the opinion of EPA in consultation with the Commonwealth of Virginia Department of Environmental Quality, such excavation poses threat or disturbance which may outweigh the threat posed by the contamination.

### CONCLUSION

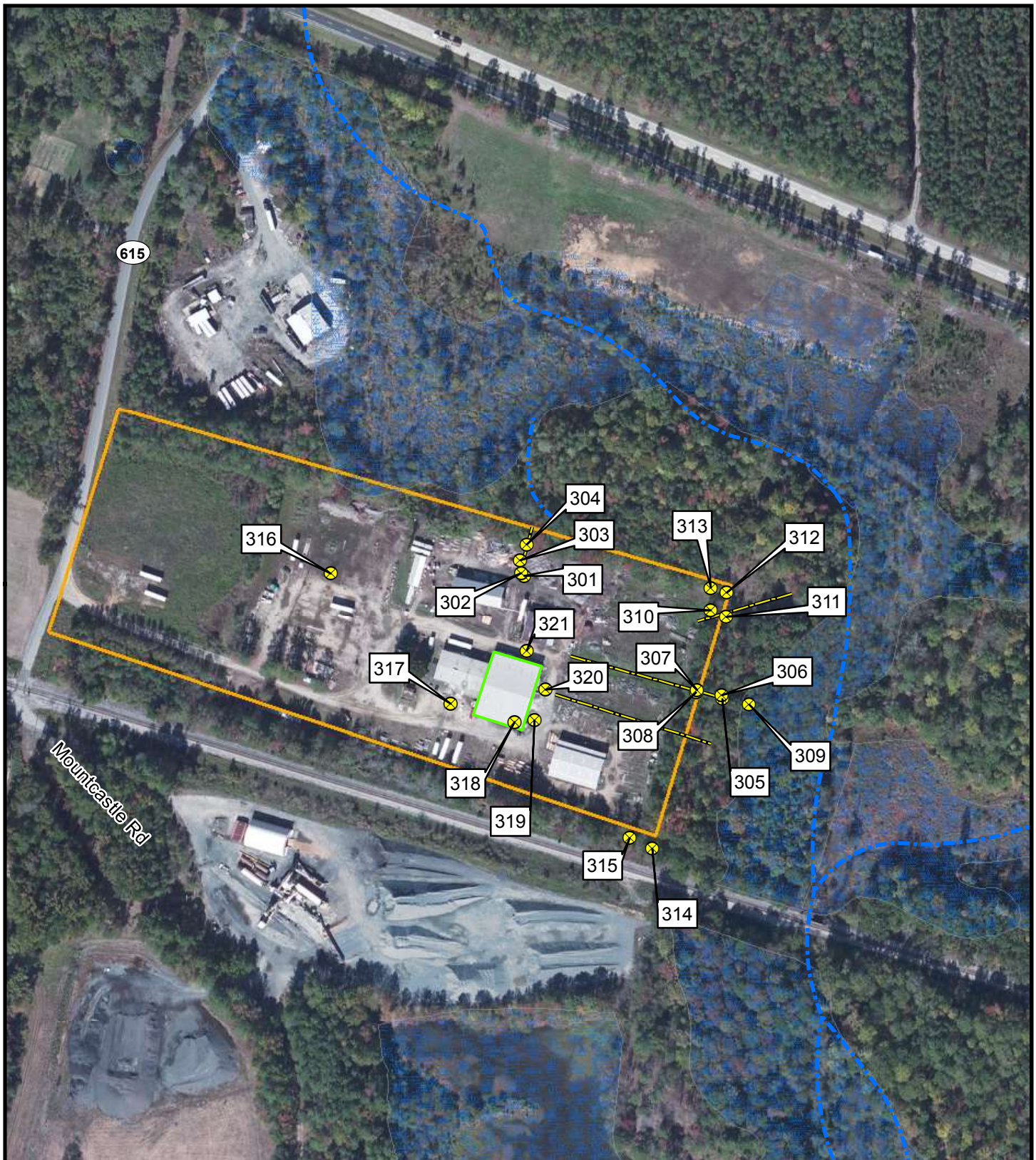
Section 8.3, paragraphs (a.) to (j.) of the Order lists the requirements of the work that the RP must accomplish to protect human health and the environment. Considering the OSC's determination, in consultation with EPA BTAG and VADEQ, the limited areas of contaminated soils which may remain within the ditch beyond the boundary of the fence is positioned such that further response actions in the ditch would pose unacceptable potential for environmental damage not contemplated in the Order. Therefore, the RP has completed the response action required by the Order.

Attachments: Figure 3 Soil Sample Locations  
Table 3 Surface Soil Sample Results Feb 2015  
Table 4 Subsurface Soil Sample Results Feb 2015



cc: Bruce Pluta, EPA BTAG Coordinator  
Michael Towle, EPA Branch Chief  
Devlin Harris, VDEQ Site Assessment Coordinator  
William Salomone, DAA Senior Engineer  
Gwen Posipisil, EPA ORC  
Brian Nishitani, EPA ORC





#### Legend

- Site Boundary
- NWI Wetlands
- Former Drip Pad
- Inferred stream channel from Topographic Map
- Drainage Ditch
- Sample Locations Feb 2015

Imagery: ESRI, USGS  
Mapping Service, 2010



Coordinate System:  
WGS84 UTM Zone 18N Feet

0 200  
Feet

New Kent Wood Preservatives, Inc  
Providence Forge, New Kent County, VA

**Figure 3**  
Soil Sampling Locations  
February 2015

TDD#: WS01-14-05-003  
Contract: EP-S3-10-05  
Prepared: 6/25/2015





**Table 3 Surface Soil Sample Results, February 2015**

Table 3 Surface Soil Sample Results, February 2015 Sample Location	Depth (Inches)	Arsenic	Chromium	Copper	Total Organic Carbon	Hexavalent Chromium	Trivalent Chromium (Calculated)	pH
<b>Eco-SSL Screening Value (most conservative)</b>		<b>18</b>	<b>N/A</b>	<b>28</b>	<b>N/A</b>	<b>130</b>	<b>26</b>	<b>N/A</b>
301	0-6	39.0J	49.3J	30.3J	N/A	3.14UJ	46.16	7.19
302	0-6	8.72J-	12.6J	6.4J	N/A	.829J	11.771	7.61
303	0-6	84.7J	91.0J	64.7J	N/A	6.56UJ	84.44	6.61
303D	0-6	43.8J	60.1J	51.0J	N/A	6.04UJ	54.06	6.56
304	0-6	49.8J	195J	94.9J	51,500J-	3.4UJ	191.6	6.88
305	0-6	246J	331J	166J	73,400J+	4.24J	326.76	5.95
306	0-6	13.6J	13.5J	6.22J	77,40J+	4.1J	9.4	4.71
307	0-6	20.6J	28.5J	20.7J	5,670J+	4.43J	24.07	6.84
308	0-6	130J	90.4J	157J	10,500J+	5.55J	84.85	6.08
309	0-6	27.4J	33.7J	24.6J	15,700J+	7.61J	26.09	6.57
310	0-6	218J	214J	282J	20,800J+	6.82J	207.18	6.53
311	0-6	229J	218J	167J	14,800J+	1.61J	216.39	5.98
312	0-6	2.32J-	4.95J	2.83J	8,820J+	2.19UJ	2.76	5.77
313	0-6	128J+	121J+	158	8,950	2.06J	118.94	6.13
314	0-6	134J+	295J+	75.7	18,200	2.75J	295.25	5.55
314D	0-6	128J+	335J+	84.2	11,900	12.0J	323	6.31
315	0-6	168J+	1,480J+	131	79,400	9.78	1,470.22	5.75
316	0-6	23.8J+	35.5J+	19.2	N/A	1.51J	33.99	8.01
317	0-6	5.62J	9.11J+	4.54	N/A	2.15U	6.96	5.98
318	0-6	49.8J+	70.9J+	39	N/A	4.24	66.66	8.45
319	0-6	156J+	188J+	175	N/A	8.22	179.78	7.75
320	0-6	46.5J+	50.5J+	34.7	3,030J-	3.47	47.03	8.32
321	0-6	174J+	248J+	160	N/A	23.4	224.6	8.41

**Notes:**

All values other than pH are in milligrams per kilogram (mg/kg).

The value reported for trivalent chromium is a calculated value derived by subtracting the hexavalent chromium result from the chromium result.

Screening levels are based on the most conservative Eco-SSLs.

N/A = Not applicable.

D = Duplicate sample.

J = The result reported is an estimated quantity.

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The analyte was positively detected, but the value of the result is an estimate and may be biased low.

U = The analyte was not detected at or above the Reporting Limit.



**Table 4 Subsurface Soil Sample Results, February 2015**

Sample Location	Depth (Inches)	Arsenic	Chromium	Copper	Total Organic Carbon	Hexavalent Chromium	Trivalent Chromium (Calculated)	pH
<b>Eco-SSL Screening Value *</b>		<b>18</b>	<b>N/A</b>	<b>28</b>	<b>N/A</b>	<b>130</b>	<b>26</b>	<b>N/A</b>
305	6-12	43.0J	72.3J	45.8J	6250J+	11.8J	60.5	4.71
306	6-12	24.5J	20.1J	8.28J	4030J+	12.6J	7.5	4.72
307	6-12	14.5J	17.1J	11.8J	12200J+	5.34J	11.76	6.79
308	6-12	48.1J	33.1J	48.2J	3990J+	2.27J	30.83	6.13
310	6-12	48.9J	32.5J	51.0J	N/A	1.23J	31.27	6.48
311	6-12	21.2J	14.9J	20.3J	7100J+	2.84J	12.06	6.51
312	6-12	1.13J-	3.15J	1.97J	4840J+	2.16UJ	0.99	5.48
313	6-12	63.1J+	22.6J+	33	2810	2.17U	20.43	6.15
317	6-12	37.9J+	82.4J+	16.8	N/A	2.16UJ	80.24	6.96
	12-18	1.53J	4.38J+	1.84	N/A	2.13U	2.25	4.86
318	6-12	39.4J+	54.7J+	30	N/A	2.14	52.56	8.16
	12-18	33.0J+	48.3J+	23.5	N/A	5.37	42.93	7.96
319	6-12	102J+	106J+	85.8	N/A	4.67	101.33	7.89
	12-18	46.9J+	61.0J+	37	N/A	2.9	58.1	7.96
320	6-12	64.8J+	68.3J+	44.4	N/A	0.643J	67.657	8.28
	12-18	57.5J+	83.5J+	49.2	N/A	3.26	80.24	8.09
321	6-12	157J+	288J	186	N/A	3.12	284.88	8.54
	12-18	121J+	184J+	106J+	N/A	6.20J-	177.8	8.64

Notes:

\*Most conservative Eco-SSL

All values other than pH are in milligrams per kilogram (mg/kg).

The value reported for trivalent chromium is a calculated value derived by subtracting the hexavalent chromium result from the chromium result. Screening levels are based off of the most conservative Eco-SSLs.

N/A = Not applicable.

D = Duplicate sample.

J = The result reported is an estimated quantity.

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The analyte was positively detected, but the value of the result is an estimate and may be biased low.

U = The analyte was not detected at or above the Reporting Limit.

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Via Electronic Mail &  
Certified Mail

September 19, 2018

Mr. William A. Salomone, P.E.  
Senior Project Engineer  
Draper Aden Associates  
1030 Wilmer Avenue, Suite 100  
Richmond, VA 23227

Re: New Kent Wood Preservatives, Inc. Site  
4101 South Mountcastle Road, Providence Forge, Virginia  
Administrative Order for Removal Response Action (Docket No. CERC-03-2015-0262DC)  
Modification to the Response Action Plan

Dear Mr. Salomone:

The September 30, 2015 Administrative Order for Removal Response Action (Order) directs L-Wood, Inc. Southern Pine Specialists (Respondent) to perform certain response activities at the New Kent Wood Preservatives, Inc. Site, located at 4101 South Mountcastle Road, Providence Forge, New Kent County, Virginia (Site). Among other things, Section 8.3.d. requires Respondent to 'Excavate soil that is contaminated above the Site cleanup levels for arsenic (30 mg/kg) and/or total chromium (63 mg/kg) from: . . . (ii) the three main drainage ditches ("Main Drainage Ditches") . . .'

Pursuant to Section VIII of the Order (Response Action Plan Development and Implementation), Respondent prepared and EPA approved a Response Action Plan (Issued November 25, 2015, Revised January 15, 2016) (RAP). Sampling by EPA's contractor revealed that contamination extended outside the fence and into the upland area of the wetlands, as depicted on Figure 1 of the Order. Specifically, sampling results from location 305 revealed arsenic and total chromium contamination above the stated cleanup levels.

EPA, in consultation with Virginia Department of Environmental Quality, however, believes that attempts for further removal of soil from the main drain ditches within the upland area will likely disturb existing vegetation and destabilize the drainage course. Furthermore, soil composition is such that the bioavailability of the trivalent chromium is limited, thus reducing the potential toxicity of material left in



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place undisturbed. As a result, pursuant to Paragraph 15.1 of the Order (Subsequent Modification), EPA hereby modifies Section 5.0 of the approved RAP (Implementation Overview) as follows (**new text in bold**):

Actions required by the Order will essentially be conducted in **three** phases:

- additional site characterization
- excavation and replacement of contaminated soils **in the former process area of the Site**
- **excavation and replacement of contaminated soil at locations identified in the three main drainage ditches, which convey water to the upland area and ultimately the wetlands, are not required beyond the fence line when, in the opinion of EPA in consultation with the Commonwealth of Virginia Department of Environmental Quality, such excavation poses threat or disturbance which may outweigh the threat posed by the contamination.**

This modification also applies to all drawings or other approved documents which reference Part A, Section 5.0 of the Approved RAP.

Therefore, no further response action is required under this Order.

Please include a copy of this letter in the correspondence section of the Final Report required by paragraph 8.11 of the Order.

Sincerely,



Ruth Scharr  
On-Scene Coordinator  
EPA Project Coordinator

cc: Devlin Harris, VEQ  
Bruce Pluta, BTAG  
Gwen Pospisil, EPA Senior Counsel  
Michael Towle, EPA  
Thomas Liesfeld, Respondent