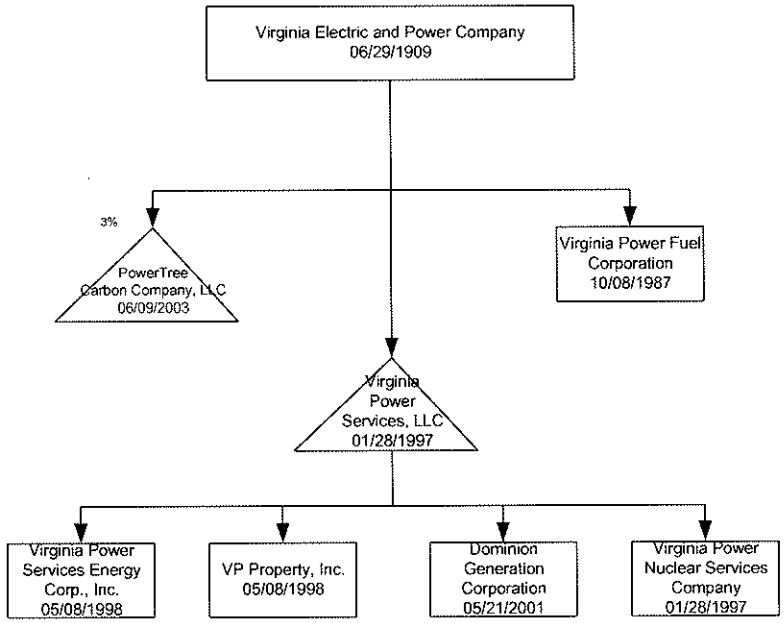
Name	Title
Farrell, Thomas F., II	Chairman
Farrell, Thomas F., II	Chief Executive Officer
Blue, Robert M.	President
Christian, David A.	President and Chief Operating Officer
Heacock, David A.	President and Chief Nuclear Officer
Koonce, Paul D.	President and Chief Operating Officer
McGettrick, Mark F.	Executive Vice President and Chief Financial Officer
McGettrick, Mark F.	Director
Webb, Mark O.	Director
Blevins, P. Rodney	Senior Vice President and Chief Information Officer
Curtis, Katheryn B.	Senior Vice President - Power Generation
Baine, Edward H.	Senior Vice President - Distribution
Doswell, Mary C.	Senior Vice President-Dominion Energy Solutions
Reid, Carter M.	Senior Vice President, Chief Administrative & Compliance Officer and Corporate Secretary
Wohlfarth, Thomas P.	Senior Vice President - Regulatory Affairs
Wood, Fred G., III	Senior Vice President - Financial Management
Stoddard, Daniel G.	Senior Vice President - Nuclear Operations
Chapman, James R.	Senior Vice President - Mergers & Acquisitions and Treasurer
Cardiff, Michele L.	Vice President, Controller and Chief Accounting Officer
Curtis, J. Kevin	Vice President - Technical Solutions
Arnett, Corynne	Vice President - Financial Management
Barker, Kenneth D.	Vice President - Community Partnerships
Eck, James E.	Vice President - Business Development
Faggert, Pamela F.	Chief Environmental Officer and Vice President - Sustainability
Jordan Jr, Arnold J.	Vice President - Shared Services
McKinley, Robert B.	Vice President - Cove Point Construction
Miller, Scott C.	Vice President - Transmission
Mitchell, Mark D.	Vice President - Generation Construction
Webb, Mark O.	Vice President, General Counsel and Chief Risk Officer
Showalter, Alma W.	Vice President - Tax
Merritt, Becky C.	Vice President - Customer Service
Craymer, David	Vice President - Power Generation System Operations
Sartain, Mark D.	Vice President - Nuclear Engineering
Bischof, Gerald T.	Site Vice President - North Anna
Lane, N. Larry	Site Vice President - Surry
Durocher, Edward J.	Controller
Schools Jr., Maxwell R.	Controller
Blakeney, Joshua	Controller
Barnett, Linda F.	Assistant Treasurer
Doggett, Karen W.	Assistant Corporate Secretary
McHugh Jr., William J.	Assistant Treasurer

Newman, John L.	Assistant Treasurer
Wagner, James F.	Assistant Controller
Nawrocki, Alison M.	Assistant Controller
Davis, Richard M.	Assistant Treasurer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01/28/1997

Dominion®

July 22, 2015

Mr. Michael Wang, PE
Regional Dam Safety Engineer
98 Alexandria Pike, Suite 33
Warrenton, VA 20186-2849

Alterations Permit Application
Dominion Ash Pond Dam E (Inventory Number 15321)

Mr. Wang:

Dominion is in the process of mechanically dredging ash from Pond E. The free water in Pond E has been removed and the ash is being dewatered prior to removal. The ash is being mechanically dredged, hauled and placed within the limits of Pond D. During dredging a portion of the upstream slope of the earthen embankment of Pond E was incidentally excavated. In addition, it has been observed that the upstream slope may be steeper than the designed slope of 1.5H:1V in some locations.

It is Dominion's intention to restore the upstream slope to no steeper than 1.5H:1V prior to re-filling the reservoir. A *Geotechnical Engineering Study* of Pond E completed by Schnabel Engineering completed in 2011 found that the soils contained in the Pond E embankment consists of UCSC CL and CH soils. A stability analysis of the embankment completed by Schnabel considering these soil types found that the embankment meets applicable stability criteria with an upstream slope of 1.5H:1V. GAI Consultants has prepared a typical section and repair procedure detailed on the attached.

If you have any questions or desire additional information, please contact me at 804-273-2376.

Sincerely,

Michael Winters, P.E.
Engineer III

Virginia Department of Conservation & Recreation

Date Prepared: July 22, 2015
Prepared By: M. Winters

DESIGN REPORT FOR THE CONSTRUCTION OR ALTERATION OF VIRGINIA REGULATED IMPOUNDING STRUCTURES

Note: Any executed Design Report for construction of an impounding structure must be mailed to the appropriate Regional Engineer. In addition, a completed Certificate and Permit Application Fee Form (DCR199-192) and the required fee must be mailed under separate cover to: Virginia Department of Conservation and Recreation, Division of Finance, Accounts Payable, 600 E. Main St., 24th Floor, Richmond, Virginia 23219.

Reference: Impounding Structures Regulations, 4VAC 50-20-10 et seq., including 4VAC 50-20-240, Virginia Soil and Water Conservation Board

1. Project Information:

a. Proposed Construction: _____
Proposed Alteration: Embankment Slope Restoration
b. Name of Impounding Structure: Possum Point Power Station Ash Pond E Dam
c. Inventory Number: 15321 (Leave blank if new Construction)
d. Name of Reservoir: Possum Point Power Station Ash Pond E
e. Purpose of Reservoir: Coal Ash Storage

2. Impounding Structure Hazard Classification:

a. Hazard Potential Classification Table I Impounding Structure Regulations:
(Check one) ☐ High ☐ Significant ☒ Low

3. Location of Impounding Structure:

a. City or County: Prince William County
b. Located 1,000 feet/miles upstream/downstream of Highway Number SR 633 Possum Point Road
c. Name of river or stream: Unnamed Tributary to Quantico Creek
d. Latitude: 38.552°N Longitude: -77.292°W

4. Ownership:

a. Owner's Name: Dominion Generation
If a corporation, name of representative: Michael Winters, P.E.
b. Mailing Address: 5000 Dominion Boulevard, Glen. Allen, VA 23060
c. Telephone: (Residential) 804-347-9451 (Business) 804-273-2376, cell: 804-347-9451
d. Other means of communication: Michael.j.winters@dom.com

5. Design Engineer:

a. Design Engineer and Design Firm: John Klamut
b. Design Engineer Virginia License Number: 048859
c. Mailing Address: 4200 Triangle Lane, Export PA 15632
d. Telephone: (Business) 724-387-2170

6. Impounding Structure Data:

a. Type of material: earth X concrete _____ masonry _____
Other: _____

Note: Identify datum used for elevations.
For new construction, complete the design configuration column.
For alteration, complete both the existing and design configuration columns.

	Existing Configuration				Design Configuration				
b. Top of Dam Elevation	43				43				Feet
c. Streambed Elevation at Toe (Lowest)	0				0				Feet
d. Height of Impounding Structure	40				40				Feet
e. Crest Length (Exclusive of Spillway)	3,000				3,000				Feet
f. Crest Width	12				12				Feet
g. Upstream Slope (Horizontal to Vertical)	1.5	H:	1	V	1.5	H:	1	V	
h. Downstream Slope (Horizontal to Vertical)	2	H:	1	V	2	H:	1	V	

7. Reservoir Data

	Existing Configuration	Design Configuration	
a. Maximum Capacity	313	313	Acre-feet
b. Maximum Pool Elevation	39.7	39.7	Feet
c. Maximum Pool Surface Area	34.24	34.24	Acres
d. Normal Capacity	196	196	Acre-feet
e. Normal Pool Elevation	38.3	38.3	Feet
f. Normal Pool Surface Area	18	18	Acres
g. Freeboard (to lowest crest elevation)	0.7	0.7	Feet

8. Spillway Data

	Type	Construction Material	Design Configuration	Invert Elevation	
a. Low Level Drain	N/A				Feet
b. Principal Spillway	Corrugated Pipe	Metal Pipe	72-inch diameter	38.3	Feet
c. Emergency Spillway	N/A				Feet

9. Watershed Data:

a. Drainage Area: Same as previous square miles
b. Type and Extent of Watershed Development: Same as previous

c. Time of Concentration: _____ (hours)
d. Routing Procedure: _____ Routing Model used: _____
e. Spillway Design Flood used (check and state source):
_____ PMF, source _____
_____ ½ PMF, source _____
_____ 100 Year, source _____
_____ Other, source _____
f. Design inflow hydrograph: Volume: _____ acre-feet
Peak inflow: _____ cfs
Rainfall duration of design inflow hydrograph: _____ hours
g. Freeboard during passage of spillway design flood: _____ feet
h. Provide printouts for 6, 12, and 24 hour models

10. Additional Information:

Provide as attachments to the Design Report the following information. Note: For alteration permits the details of this information is to be in accordance with the scope of the proposed alteration:

a. A description of properties located in the dam break inundation zone downstream from the site of the proposed/existing impounding structure, including the location and number of structures, buildings, roads, utilities and other property that would be endangered should the impounding structure fail. N/A

b. Evidence that the local government or governments have been notified of the proposal by the owner to build or alter an impounding structure. N/A

c. Maps showing the location of the impounding structure that include the county or city in which the proposed/existing impounding structure is located, the location of roads and access to the site, and the outline of the impoundment. Existing aerial photographs or existing topographic maps may be used for this purpose. See Attachment A

d. A report of the geotechnical investigations(s) of the foundation soils, bedrock, or both and of the materials to be used to construct or alter the impounding structure. N/A

e. Design assumptions and analyses sufficient to indicate that the impounding structure will be stable during construction or alteration and during the life of the impounding structure under all conditions of impoundment operations, including rapid filling, flood surcharge, seismic loadings, and rapid drawdown of the impoundment. N/A

f. Evaluation of the stability of the impoundment rim area to safeguard against impoundment rim slides of such magnitude as to create waves capable of overtopping the impounding structure and evaluation of rim stability during seismic activity. N/A

g. Design assumptions and analyses sufficient to indicate the seepage in, around, through, or under the impounding structure, foundation, and abutments will be reasonably and practically controlled so that internal or external forces or results thereof will not endanger the stability and integrity of the impounding structure. The design report shall also include information on graded filter design. N/A

h. Calculations and assumptions relative to hydraulic and structural design of the spillway or spillways and energy dissipater or dissipaters. Spillway capacity shall conform to the criteria of Table 1 and 4VAC50-20-52. N/A

i. Provisions to ensure that the impounding structure and appurtenances will be protected against unacceptable deterioration or erosion due to freezing and thawing, wind, wave action, and rain, or any combination thereof. N/A

j. Other pertinent design data, assumptions, and analyses commensurate with the nature of the particular impounding structure and specific site conditions, including when required, a plan and water surface profile of the dam break inundation zone. N/A

k. A description of the techniques to be used to divert stream flow during construction so as to prevent hazard to life, health and property, including a detailed plan and procedures to maintain a stable impounding structure during storm events, a drawing showing temporary diversion devices, and a description of the potential impoundment during construction. N/A

l. A plan for project construction monitoring and quality control testing to confirm that construction materials and performance standards meet the design requirements. N/A

m. Plans and specifications as required by 4VAC50-20-310 signed and sealed by the engineer. N/A

List of attached drawings and specifications:

Cover Letter, Site Location Map, Typical Section of Repair

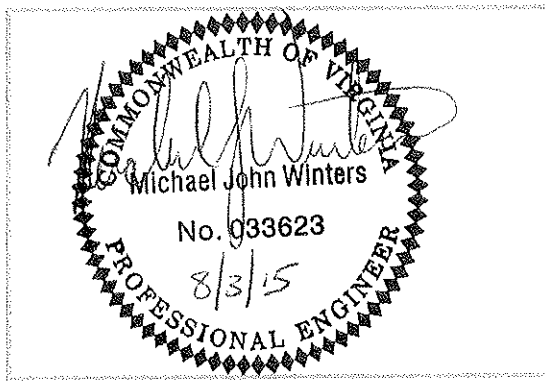
CERTIFICATION BY OWNER'S ENGINEER

I hereby certify that the information provided in this Design Report has been examined by me and found in my professional judgment to be true and correct.

Signed: _____ Michael Winters Virginia Number: 33623
Professional Engineer's Signature Print Name

This 3rd day of Aug., 20 15.

Engineer's Virginia Seal:



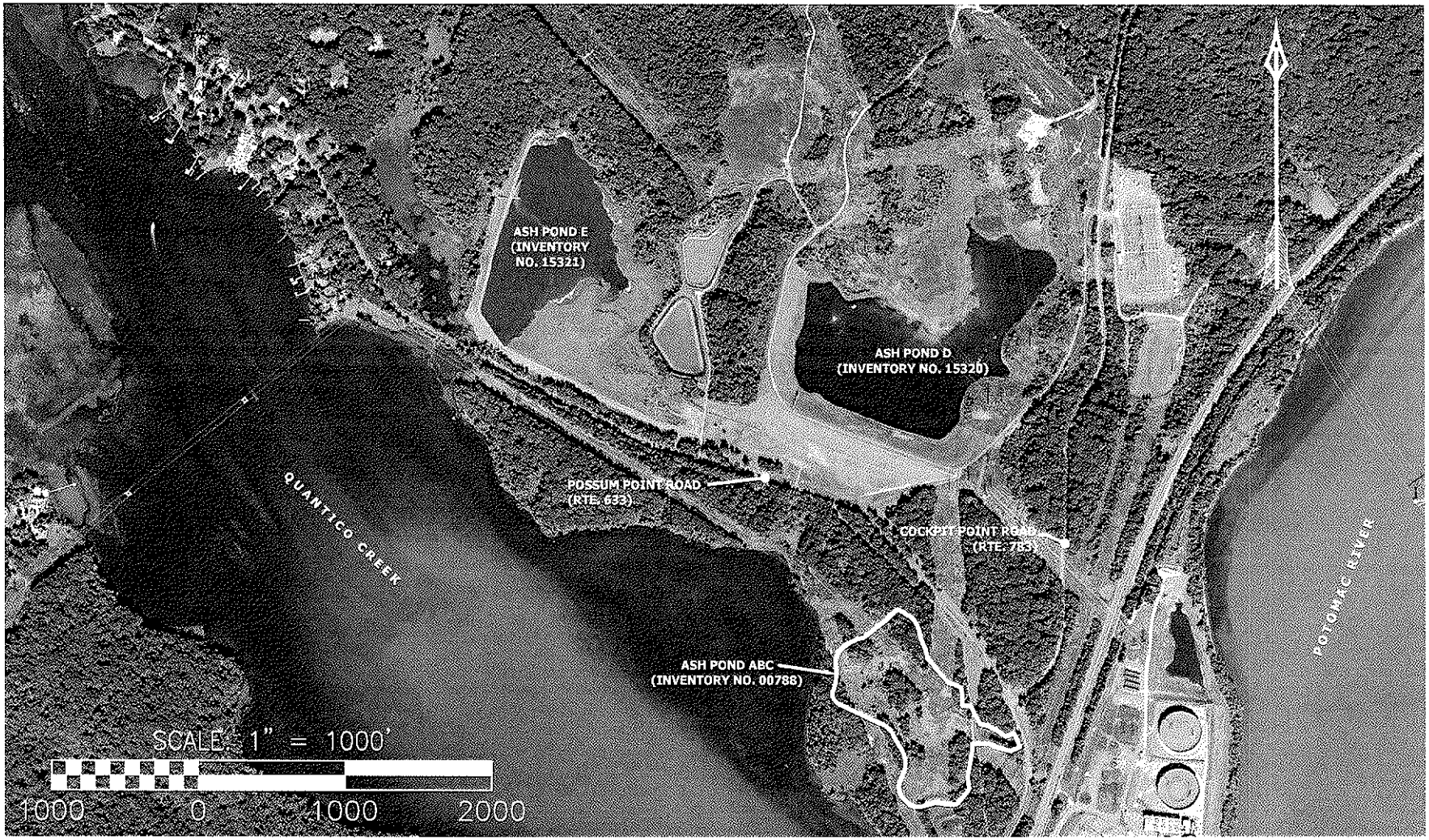
CERTIFICATION BY OWNER

I hereby certify that I have received this Design Report.

Signed: _____ Michael Winters
Owner's Signature Print Name

This 3rd Day of Aug., 20 15.

Mail the executed form to the appropriate
Department of Conservation and Recreation
Division of Dam Safety and Floodplain Management
Regional Engineer



DRAWING TITLE			GAI DRAWING NUMBER:		
SITE LOCATION MAP			**ATTACHMENT A**		
PROJECT		CLIENT	GAI FILE NUMBER:		
POSSUM POINT POWER STATION **POND CLOSURES** **PRINCE WILLIAM COUNTY, VA**	gai consultants	**DOMINION** **GLEN ALLEN, VA**	**C150132-00-C-A2-ATTACH A**		
			DRAWN BY:	CHECKED BY:	APPROVED BY:
			DOYLEMP	**KINDEKW**	**KINDEKW**
			SHEET NO.:	SCALE:	ISSUE DATE:
			1 OF 1	**N.T.S.**	**07/22/2015**

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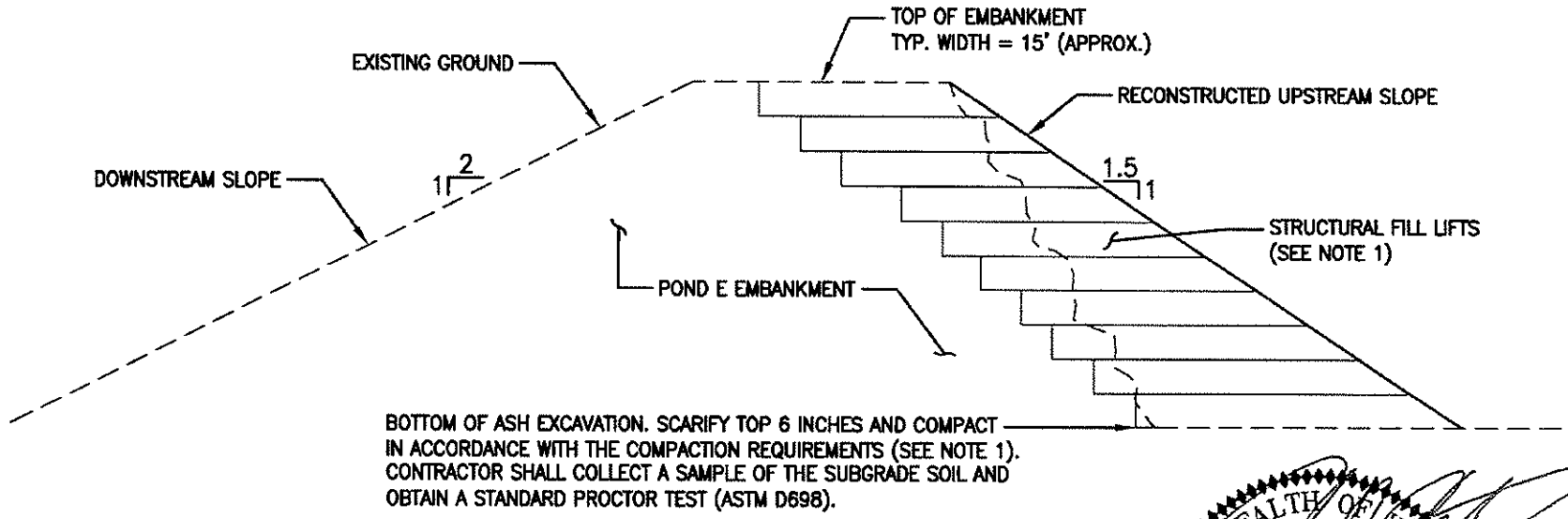

NOTES:

1. STRUCTURAL FILL MATERIAL SHALL BE CLASSIFIED ACCORDING TO THE USCS AS 'CL' OR 'CH' (ASTM D2487). STRUCTURAL FILL MATERIAL SHALL BE PLACED TO RECONSTRUCT THE UPSTREAM SLOPE OF THE EMBANKMENT. SOIL SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES AND SHALL BE ADEQUATELY KEYED INTO THE EXISTING EMBANKMENT. SOIL LIFTS SHALL BE COMPACTED TO A MINIMUM DENSITY EQUAL TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698, WITH A MOISTURE CONTENT OF +/- 2% OF OPTIMUM MOISTURE. THE RECONSTRUCTED SLOPE SHALL NOT EXCEED 1.5H:1V.

2. THIS REPAIR PROCEDURE SHALL BE IMPLEMENTED AT ALL AREAS ALONG THE LENGTH OF THE POND E EMBANKMENT WHERE THE UPSTREAM SLOPE EXCEEDS 1.5H:1V, FOLLOWING ASH EXCAVATION.

3. COMPACTION TESTING SHALL BE PERFORMED USING A NUCLEAR DENSITY GAUGE AT A RATE OF THREE IN-PLACE DENSITY TESTS PER ACRE PER LIFT OF COMPACTED MATERIAL. ONE STANDARD PROCTOR TEST SHALL BE OBTAINED FOR EACH 40,000 CY OF SOIL PLACED, AND ONE TEST FOR EACH TYPE OF SOIL MATERIAL USED.

COMMONWEALTH OF VIRGINIA
JOHN R. KLAMUT
Lic. No. 048859
8-24-2015
PROFESSIONAL ENGINEER

PROFESSIONAL SEAL & SIGNATURE

DRAWING TITLE			GAI DRAWING NUMBER:		
POND E EMBANKMENT SLOPE REPAIR TYPICAL SECTION			ATTACHMENT B		
PROJECT		CLIENT	GAI FILE NUMBER:		
POSSUM POINT POWER STATION POND CLOSURES PRINCE WILLIAM COUNTY, VA	gai consultants	DOMINION GLEN ALLEN, VA	C150132-00-C-A2-ATTACH B		
			DRAWN BY:	CHECKED BY:	APPROVED BY:
			DOYLEMP	KINDEKW	KINDEKW
			SHEET NO.:	SCALE:	ISSUE DATE:
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Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

March 21, 2016

Mr. Michael Winters, P.E.
Dominion Power Generation Engineering
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Possum Point Ash Dam #D (Inventory #15320) - Rapid Drawdown Stability Analysis

Dear Mr. Winters:

I received the Rapid Drawdown Stability Analysis for Possum Point Ash Dam #D, signed by your engineer Mr. John R. Klamut, VA PE #048859, dated December 18, 2015, and the additional information supporting the proposed drawdown rate which is 1 to 2 feet per day, signed by Mr. John R. Klamut, VA PE #048859, dated March 9, 2016. After I reviewed them, I agree with the conclusion made by Mr. John R. Klamut in the submitted analysis. The proposed drawdown rate for Possum Point Ash Dam #D (Inventory #15320), which is one to two feet per day, has been approved by this office. The maximum drawdown rate approved for Possum Point Ash Dam #D is two feet per day.

Should you have any questions or comments, please do not hesitate to contact me by telephone at (540) 351-1587 or by email at zhengang.wang@dcr.virginia.gov.

Sincerely,

Zhengang Wang, *Ph.D., P.E., CFM*
Regional Dam Safety Engineer (Region 1)
Division of Dam Safety and Floodplain Management
98 Alexandria Pike, Suite 33
Warrenton, VA 20186
Phone: (540) 351-1587

cc David C. Dowling, Deputy Director of Dam Safety and Floodplain Management and Soil and Water Conservation, Virginia Department of Conservation and Recreation
Melanie D. Davenport, Director Division of Water Quality Programs, Virginia Department of Environmental Quality
John R. Klamut, PE, Engineering Manager, GAI Consultants, Inc.

GEOTECHNICAL ENGINEERING STUDY

Possum Point Power Station Ash Pond ABC
Dominion Resources Services, Inc.
Prince William County, Virginia

Schnabel Reference 14221002.01
December 9, 2014

Schnabel
ENGINEERING

GEOTECHNICAL ENGINEERING STUDY

Possum Point Power Station Ash Pond ABC
Dominion Resources Services, Inc.
Prince William County, Virginia

Schnabel Reference 14221002.01
December 9, 2014

COMMONWEALTH OF VIRGINIA
JONATHAN M. PITTMAN
Lic. No. 041420
12/9/14
PROFESSIONAL ENGINEER

Jonathan M. Pittman, PE
Commonwealth of Virginia Professional Engineer No. 041420

Schnabel
ENGINEERING

ENGINEERING SERVICES, DOMINION POSSUM POINT POWER STATION
GEOTECHNICAL ENGINEERING STUDY FOR ASH POND ABC
DOMINION RESOURCES SERVICES, INC.
POSSUM POINT POWER STATION
PRINCE WILLIAM COUNTY, VIRGINIA

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Figure 1: Site Vicinity Map
Figure 2: Field Exploration Plan
Figure 3: Regional Geologic Map

APPENDICES

Appendix A: Subsurface Exploration Data
Appendix B: Soil Laboratory Test Data
Appendix C: Slope Stability Analyses

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1 INTRODUCTION

1.1 Background

Schnabel has been retained by Dominion Resource Services, Inc. (Dominion) to evaluate the stability of the embankment for Ash Pond ABC at Possum Point Power Station in Prince William County, Virginia. Ash Pond ABC is located south and west of Possum Point Road about ½ mile west of the station. A site vicinity map is included as Figure 1.

The dam that impounds Ash Pond ABC is considered a single structure. However, there are three distinct areas within the pond that are referred to herein as Ash Pond A, Ash Pond B, and Ash Pond C in order to more accurately describe the location of existing features, etc.

Based on information provided by Dominion, Ash Pond ABC was constructed in the 1950s. Ash was sluiced to the pond until the late 1960s when the pond was generally filled with ash to within a few feet of the top of the embankment. Over 80% of the original impoundment capacity is filled with consolidated ash. Since that time, storm water runoff has resulted in embankment overtopping at three low areas. The overtopping flows have resulted in some erosion and head cutting of the embankment, most noticeably at an approximately 110-foot long section of the downstream slope of the embankment in the area of Ash Pond A.

The dam that impounds the pond is a vegetated earth embankment that has a maximum height of about 20 feet and an original total impoundment capacity of approximately 177,000 cubic yards (about 110 acre-feet). Despite the fact that the majority of the pond has been filled with consolidated ash, the dam meets the minimum height and storage requirements for a regulated impounding structure set forth in the *Commonwealth of Virginia Impounding Structure Regulations* (VA DCR, 2012) based on its height and original storage capacity. We understand that VA DCR Dam Safety now considers ash ponds to be significant hazard potential structures, at a minimum. The spillway design flood (SDF) for a significant hazard potential structure is ½ of the Probable Maximum Flood (PMF). VA DCR regulations allow for the possibility of reducing the SDF to the 100-year flood through an incremental damage analysis (IDA).

Schnabel has been retained by Dominion to provide the services required to obtain a regular Operation and Maintenance (O&M) Certificate from VA DCR Dam Safety and to design improvements to reduce the risk of overtopping of the embankment during future storm events. The evaluation of embankment slope stability is a part of this scope of services.

Our scope of services for obtaining a regular O&M Certificate from VA DCR Dam Safety also includes evaluating the hydraulic capacity of the existing spillway, determining the hazard potential classification of the dam, and preparing the associated breach inundation maps. The results of these analyses and the breach inundation maps are provided in Schnabel's "Dam Breach Analysis Report and Inundation Mapping" dated December 9, 2014 (Schnabel, 2014). Design documents and an erosion and sediment control plan are also being developed to support the implementation of the recommendations discussed in this report and the recommendations resulting from the additional analyses discussed above.

As indicated in the "Dam Breach Analysis Report and Inundation Mapping" (Schnabel, 2014), Schnabel is recommending that the SDF for Ash Pond ABC be reduced to the 100-year flood based on the results of the IDA. Despite this reduction in the SDF, the existing spillway does not have the capacity to pass the

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100-year flood without overtopping the embankment at its existing, minimum crest elevation. Therefore, Dominion intends to address the inadequate spillway capacity of Ash Pond ABC by diverting a portion of the watershed around the pond and raising the crest of the embankment to El 23.5, or by increasing the capacity of the existing spillway system through the removal of one or more stop logs. The analyses, conclusions, and recommendations included in this report are based on the option of diverting water around the pond and raising the crest of the embankment.

1.2 Site Description

As described above, Ash Pond ABC is impounded by a vegetated earth embankment constructed along a tributary to Quantico Creek. The embankment varies in height from a few feet to over 20 feet. The embankment is approximately 1,800 feet long and has an average crest elevation between El 21 and El 23 and an average crest width of about 15 feet. The embankment has upstream and downstream slope angles of approximately 2H:1V, although several sections of the downstream slope are slightly steeper than 2H:1V.

The spillway system for the ponds is located at the northwest corner of Ash Pond C. The spillway consists of a 4-foot by 4-foot reinforced concrete riser and 30-inch reinforced concrete outlet pipe that discharges into Quantico Creek at the downstream toe of the dam. Reinforced concrete and wood stop logs, placed in slots along the upstream face of the spillway riser, control the normal pool elevation of the ponds. The top of the stop logs is currently set at El 22.3. The top of the riser, which is at El 22.8, is open with a slotted metal grate across the opening.

Large trees and woody vegetation are present along the edges of the embankment crest and the downstream embankment slope. Tidal marshland, trees, and other woody vegetation are present throughout the majority of the ponds' watershed and along the majority of the downstream toe of the embankment.

In addition to addressing inadequate spillway capacity as mentioned previously, Dominion plans to repair the eroded areas of the embankment where the overtopping has occurred. Dominion also plans to remove the trees and woody vegetation from the embankment crest and slopes and 25 feet beyond the embankment limits in accordance with the *Commonwealth of Virginia Impounding Structure Regulations* (VA DCR, 2012).

We obtained the site information from the April 5, 2014 photogrammetric survey performed by Axis Geospatial, LLC of Easton, MD, through archival information provided by Dominion, and through our observations during recent site visits.

1.3 Scope of Services

Schnabel performed the following services for this project:

- Review of record drawings provided by Dominion,
- Coordination of project activities with Dominion personnel and subcontractors,
- Subcontracting with Fishburne Drilling, Inc. to perform test borings,
- Field engineering including boring stakeout, drilling observation, logging of the subsurface conditions (test borings and hand auger borings), and delivering split spoon and Shelby tube

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samples to our corporate laboratory for soil index testing, as well as triaxial and consolidation testing,

- Soil laboratory testing,
- Embankment slope stability analyses, and
- Preparation of a report to summarize the results of our field exploration, soil laboratory testing, and slope stability analyses.

1.4 Elevation Datum

Elevations in this report are in feet and referenced to the North American Vertical Datum of 1988 (NAVD88). The abbreviation "El" represents Elevation.

1.5 Terminology

Descriptive nomenclature for dams is based upon one looking downstream. The terms "right" and "left" are referenced in this manner. The reservoir side is known as "upstream" with the opposite side of the dam referred to as "downstream".

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2 GEOTECHNICAL EXPLORATION AND TESTING

2.1 Field Exploration

The field exploration included:

- six (6) test borings with split-spoon sampling
- two (2) hand auger borings,
- multiple thin-wall Shelby tube samples collected in two of the test borings, and
- groundwater level measurements in the test borings and hand auger borings.

Drilling was performed by our subcontractor, Fishburne Drilling, Inc. of Ashland, Virginia, on July 30 and 31, 2014. The test borings were drilled with a CME-550X all-terrain rig. The coordinates of the test borings were located in the field by Schnabel personnel using a portable Trimble GPS unit.

The test borings were drilled in soil through the crest of the embankment to termination depths ranging from 20 feet to 45 feet below the existing ground surface (bgs). The test borings were advanced using open-hole mud-rotary drilling techniques. Bentonite drilling fluid was recirculated during drilling to maintain an open borehole and a 3½-inch OD (outside diameter) tri-cone roller bit was used to advance the borings. A 10-foot long, 4-inch ID (inner diameter) surface casing was also installed to facilitate this drilling technique. Additional information on the drilling and sampling techniques used is provided in Appendix A.

The Standard Penetration Test (SPT) was performed in the mud-rotary test borings continuously to a depth of 10 feet bgs, and then at 5-foot intervals thereafter. SPTs were performed using a 24-inch long, split-spoon sampler to collect soil samples and to measure the relative penetration resistance of the soils. The number of blows (blow count) of a 140 pound hammer falling 30 inches required to drive the split spoon sampler four consecutive 6-inch increments were recorded. The SPT N-value is defined as the sum of the second and third 6-inch blow count intervals. The SPTs were performed in general accordance with ASTM D1586.

Relatively undisturbed samples of the embankment fill soils and alluvial soils were collected in test borings B-02 and B-06 using 3-inch-ID thin-wall Shelby tubes. The Shelby tube sampling was performed in general accordance with ASTM D1587.

A Schnabel representative observed the field exploration, logged the test borings, and described the soils using the Unified Soil Classification System (ASTM D2488). The borings were backfilled with bentonite chips upon completion. The ground water level readings taken in the test borings are discussed in Section 3.3 of this report.

Schnabel personnel drilled two hand auger borings (HA-01 and HA-02) near the downstream toe of the embankment to collect data on the soils in these areas. Hand auger borings HA-01 and HA-02 were drilled to depths of 10 feet and 6 feet bgs, respectively, and were backfilled with soil cuttings upon completion.

The test boring logs and hand auger boring logs are included in Appendix A. The locations of the test borings and the hand auger borings are shown on the Field Exploration Plan in Figure 2.

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2.2 Soil Laboratory Testing

Geotechnical laboratory testing was performed by our Blacksburg, Virginia laboratory on selected soil samples obtained during the field exploration. Soil laboratory tests were performed to aid in the classification of soils, to provide data for use in the preparation of our stability analyses, and to aid in the development of our geotechnical recommendations. The followings numbers and types of tests were performed:

- sixteen (16) moisture content tests (ASTM D2216),
- seven (7) Atterberg limits tests (ASTM D4318),
- five (5) particle-size distribution tests (ASTM D422 and D1140),
- three (3) particle-size distribution tests with hydrometer (ASTM D422 and D1140),
- three (3) #200-sieve particle-size distribution tests (ASTM D422 and D1140),
- three (3) specific gravity tests (ASTM D854)
- three (3) unit weight determination tests (ASTM D7263),
- one (1) one-dimensional consolidation test with incremental loading (ASTM D2435), and
- two (2) series of consolidated-undrained triaxial compression tests with pore pressure measurements (ASTM D4767).

The results of the consolidation and shear strength testing are presented in Tables 1 and 2, respectively. The remaining laboratory test results are presented in Appendix B.

Table 1: Consolidation Testing Summary

Material	Recompression Ratio, $C_{\varepsilon r}$	Virgin Compression Ratio, $C_{\varepsilon c}$	Preconsolidation Pressure, σ_p' (tsf)	Coefficient of Vertical Consolidation, C_v, (ft^2/day)
Fine-Grained Embankment Fill Stratum A1	0.021	0.12	1.1	0.03 @ 2 tsf

Table 2: Shear Strength Testing Summary

Material	Total Stress Cohesion, c (psf)	Total Stress Friction Angle, φ (degrees)	Effective Stress Cohesion, c' (psf)	Effective Stress Friction Angle, φ' (degrees)
Fine-Grained Embankment Fill Stratum A1	290	14	230	23
Fine-Grained Alluvium Stratum B1	530	17	500	24

The total stress and effective stress shear strength parameters presented above were obtained from the Mohr's circles plotted at the maximum principal stress ratios.

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3 REGIONAL GEOLOGY AND SUBSURFACE CONDITIONS

3.1 Regional Geology

We reviewed existing geologic data and information in our files. Based on this review, the general geologic stratigraphy at the site consists of embankment fill over river terrace deposits of late Pleistocene age which are underlain by Cretaceous age sediments of the Potomac Group. The terrace deposits are alluvial soils that typically consist of a mixture of clay, silt, sand and gravel. These soils typically exhibit moderate strength and compressibility. Portions of the Pleistocene age alluvial deposits have been eroded and replaced with more recent alluvial soils deposited by Quantico Creek and its tributaries. The portion of the Geologic Map of the Quantico Quadrangle in Prince William County, Virginia where the site is located is included as Figure 3.

3.2 Generalized Subsurface Stratigraphy

The embankment fill soils range in thickness from a few feet near the abutments to about 22 feet at test borings B-02 and B-06. The fill soils are underlain by fine to coarse-grained alluvial soils varying in thickness from less than three feet in B-05 to 15 feet in B-02. Coarse-grained terrace deposits were encountered below the alluvial soils. Where encountered, the terrace deposits ranged in thickness from 5 feet in B-02 to 26 feet in B-05. Borings B-02, B-05, and B-06 extended through the terrace deposits and were terminated within the fine-grained Cretaceous age soils. Test boring and hand auger logs are presented in Appendix A. Our interpretation of the generalized subsurface stratigraphy is presented in the following paragraphs:

Ground Cover:

Approximately one to two inches of grass, rootmat, and topsoil were encountered at the ground surface in each of the test borings performed through the crest of the embankment (B-01 through B-06). Approximately four inches of rootmat and topsoil were encountered at the ground surface in the hand auger borings (HA-01 and HA-02) performed near the downstream toe of the embankment.

Stratum A1: Fine-Grained Embankment Fill

These materials likely exist on the site as a result of embankment construction and associated earth-moving and construction activities. The fine-grained fill materials encountered on the site generally consist of lean clays (CL) and fat clays (CH) with varying amounts of sand, and to a lesser extent, low-plasticity silts (ML) and elastic silts (MH). The fine-grained fill materials were generally moist and yellowish-brown to gray in color. These soils had low to high plasticity with liquid limits ranging from 28 to 60 and plasticity limits ranging from 19 to 55 (plasticity indices (PI) of 9 to 37). The natural moisture contents of these soils ranged from 14 to 30 percent, which is about 1 to 8 percent above their plastic limits. The fine-grained fill materials were observed in all of the test borings, at depths ranging from 0 to 22 feet bgs. Fine-grained fill materials were also encountered in hand auger HA-01 at depths ranging from just below the ground surface to the termination depth of the boring at 10 feet bgs. The SPT N-values recorded when sampling in the fine-grained fill materials ranged from 1 to 22 blows per foot (bpf) with an average of 8 bpf. Blow counts from samples that crossed strata interfaces were not included when calculating the average N-value for the fine-grained fill materials.

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Stratum A2: Coarse-Grained Embankment Fill

These materials likely exist on the site as a result of embankment construction and associated earth-moving and construction activities. The coarse-grained fill materials encountered on the site generally consist of fine to coarse-grained silty sands (SM) and clayey sands (SC) with varying amounts of gravel. The coarse-grained fill materials were generally moist to wet and brown to gray in color. The coarse-grained fill materials were observed in test borings B-04, B-05, and B-06. The coarse-grained fill materials were inter-layered with the fine-grained fill materials of Stratum A1 from depths of 0 to 22 feet bgs. The SPT N-values recorded when sampling in the coarse-grained fill materials ranged from 3 to 13 bpf with an average of 7 bpf. Blow counts from samples that crossed strata interfaces were not included when calculating the average N-value for the coarse-grained fill materials.

Stratum B1: Fine-Grained Alluvium

Fine-grained alluvial soils consisting of lean clay (CL), fat clay (CH), low-plasticity silt (ML), and organic silt (OL) were encountered below the fill in all the test borings except B-06, In B-01, the fine-grained alluvium was overlying coarse-grained alluvium (stratum B2) while in B-03 and B-04 the fine-grained alluvial soils were encountered below layers of coarse-grained alluvium. The inorganic alluvial soils were generally moist and gray to light brown in color. The organic silt (OL) was moist and dark blackish gray in color and was only encountered as a 4-foot-thick layer beneath the fill in B-02. The fine-grained alluvial soils were observed at depths ranging from 9 to 35 feet bgs. The SPT N-values recorded when sampling in the fine-grained alluvial soils ranged from 2 to 9 bpf with an average of 5 bpf. Atterberg limits were performed on one sample of fine grained alluvium (CL) indicating a liquid limit of 49, plastic limit of 19, and a plasticity index of 30. The natural moisture content of the sample was 30 percent, approximately 11 percent above its plastic limit.

Stratum B2: Coarse-Grained Alluvium

Coarse-grained alluvial soils consisting of fine to medium-grained silty sands (SM) and clayey sand (SC) were generally encountered below the fill in test borings B-01, B-03, B-04 and B-06, These soils were interlayered with fine-grained alluvium (stratum B1) in B-01, B-03, and B-04. The coarse-grained soils were observed at depths ranging from 8 to 28 feet bgs. These soils occasionally contained fine quartz gravel and were generally moist and grayish-brown in color. The SPT N-values recorded when sampling in the coarse-grained alluvial soils ranged from 4 to 11 bpf with an average of 7 bpf.

Stratum C1 Coarse-Grained Pleistocene Terrace

The coarse-grained terrace deposits encountered at the site primarily consist of poorly-graded sands with silt (SP-SM), and to a lesser extent, silty sands (SM). The coarse-grained terrace deposits were generally moist and light gray to light brown in color. The coarse-grained terrace deposits were observed in test borings B-02, B-04, B-05 and B-06 at depths ranging from 17 to 42 feet bgs. These soils were found underlying the fine- and/or coarse-grained alluvial soils. Coarse-grained terrace deposits were also encountered in hand auger HA-02 from a depth of 2 feet bgs to the termination depth of the boring at 6 feet bgs. The SPT N-values recorded when

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sampling in the coarse-grained terrace deposits ranged from 10 bpf to greater than 50 bpf with an average of 30 bpf.

Stratum D Cretaceous Age Sediments

The Cretaceous age sediments of the Potomac Group were encountered in test borings B-02, B-05, and B-06 directly below the coarse-grained terrace deposits at depths ranging from 39 to 42 feet bgs. These sediments generally consist of low- to medium-plasticity lean clay (CL) with sand, medium- to high-plasticity fat clay (CH), and high-plasticity elastic silt (MH). The cretaceous age sediments were generally moist and light greenish gray to dark grayish green in color. SPT N-values recorded while sampling these sediments ranged from 17 to 26 bpf with an average of 22 bpf. Atterberg limits were performed on one sample of the cretaceous age sediments indicating a liquid limit of 55 and plasticity index of 22. The natural moisture content of the sample was 35, approximately 2 percent above the plastic limit.

3.3 Groundwater Levels

Groundwater level readings taken during and after drilling are recorded on the boring logs. These levels may or may not represent stabilized water level readings. The test borings were performed using bentonite mud rotary techniques, and as a result, water level data recorded on the logs may not be indicative of actual ground water levels due to the presence of bentonite drilling fluid in the boreholes.

Groundwater levels in open boreholes were observed at depths of 4 to 6.6 feet bgs, El 19 to El 15.5. Multiple readings were taken in borings B-01 through B-04 at time of drilling and up to 16 hours after drilling. Water level readings in test borings B-05 and B-06 were recorded only at time of drilling. The groundwater level in hand auger HA-02 was observed at 2.7 feet bgs (El 11.3) after drilling. Groundwater was not encountered in HA-01.

Some of the higher groundwater levels recorded on the logs may represent a perched groundwater condition or the effects of drilling with fluid. Perched groundwater is relatively common in stratified soils similar to those observed in our field exploration and generally occurs when a lower permeability layer retards surface water infiltration. Perched groundwater could occur at other locations on site and at higher elevations than those recorded on the logs.

The ground water levels on the logs show our estimate of the water table at the time the borings and hand augers were drilled. Fluctuations in the water table should be anticipated depending on variations in precipitation, surface runoff, pumping, evaporation, leaking utilities, pond levels, and similar factors.

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4 GEOTECHNICAL ENGINEERING ANALYSES

4.1 General

The geotechnical engineering analyses were performed to support the evaluation of the embankment slope stability and the design of measures to address the pond's inadequate spillway capacity. As described in Schnabel's "Dam Breach Analysis Report and Inundation Mapping" (Schnabel, 2014), the design of improvements to Ash Pond ABC includes diverting a portion of the watershed around the pond and raising the dam crest to El 23.5 along its entirety such that the existing spillway can safely pass the 100-year flood with up to 0.4 feet of freeboard.

Slope stability analyses were performed for two sections of the embankment under various loading conditions. Our slope stability analyses were based on the information collected during our subsurface exploration and soil laboratory testing programs.

The embankment was modeled with the proposed increase in crest elevation to El 23.5 feet. Raising the crest of the embankment to El 23.5 will require the placement of up to three feet of soil fill with an average of less than 12 inches of soil fill across the approximately 1,800-foot long embankment crest. The analyses presented in this report are based the proposed stormwater diversion system being in-place and an embankment crest elevation of El 23.5 feet.

4.2 Soil Parameters

The design strength parameters used for the embankment and foundation soils in our slope stability analyses were selected based on the results of our laboratory testing, soil type and SPT N-value correlations (McGregor and Duncan, 1998; Duncan et al., 1980) and our past experience with similar materials. The following table presents the soil properties used in our analyses.

Table 3: Summary of Design Shear Strength Parameters

Material	Total Stress		Effective Stress		Moist Unit Weight (pcf)	Saturated Unit Weight (pcf)
	c (psf)	φ (degrees)	c' (psf)	φ' (degrees)		
Fine-Grained Fill, Stratum A1	290	14	230	23	120	123
Coarse-Grained Fill, Stratum A2	300	18	200	30	125	128
Fine-Grained Alluvium, Stratum B1	530	17	500	24	120	125
Coarse-Grained Alluvium, Stratum B2	300	18	200	32	120	125
Terrace Deposits, Stratum C1	-	-	0	36	--	135
Cretaceous Sediments, Stratum D	3,000	0	300	34	--	130

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4.3 Embankment Slope Stability Analyses

Schnabel performed limit-equilibrium slope stability analyses of the downstream slope of the embankment using the computer software SLOPE/W (GeoStudio 2012). Two static load cases and one pseudostatic load case were analyzed for two sections of the embankment with moderate variations in subsurface stratigraphy and embankment geometry. The embankment cross-sections selected for analysis were chosen based on multiple criteria including embankment height, steepness of the downstream slope, and proximity to areas of past overtopping and erosion. During our field exploration, access to portions of the Ash Pond A embankment crest was limited due to the presence of sandbags along the crest in this area. Therefore, this potentially critical section of the embankment was not analyzed for stability. The locations of the sections analyzed, near test borings B-02 and B-06, are shown on Figure 2. The following load cases were considered:

Load Case 1:	Normal pool level (approx. El 22.3) with pore pressures calculated from an assumed phreatic line through the embankment under steady-state seepage conditions.
Load Case 2:	Design surcharge pool (El 23.1) with pore pressures calculated from an assumed phreatic line through the embankment that is slightly elevated above normal pool steady-state seepage conditions.
Load Case 3:	Normal pool level and seismic loading conditions using the Peak Horizontal Ground Acceleration (PHGA) for the 2,500-year recurrence interval earthquake at the site.

A rapid drawdown analysis was not performed since a sudden drawdown of the pond level is highly unlikely to occur since the ponds have essentially been filled with ash.

The phreatic surfaces modeled in our stability analyses were based on the water levels encountered in the borings. The normal pool level (El 22.3) was conservatively selected as the spillway inlet elevation (i.e., the top of the stop logs). Actual water levels in the ponds are commonly below the spillway inlet elevation as a result of leakage through the stop logs. The design surcharge pool level of El 23.1 is based on anticipated water levels corresponding to the 100-year flood event.

For Load Cases 1 and 2, the strength envelopes used for the embankment fill soils and foundation soils were modeled using drained shear strengths and effective stress parameters. For Load Case 3, total stress strength parameters were assigned to fill and foundation soils located below the phreatic line while effective stress (drained strength) parameters were assigned to soils located above the phreatic line. The coarse-grained terrace deposits are expected to behave in a drained manner during seismic loading and therefore were assigned effective stress parameters for Load Case 3. The terrace deposits and Cretaceous age sediments are relatively deep and significantly stiffer than the overlying alluvial soils and embankment fill, and are, therefore, unlikely to influence the stability of the slope for any of the load cases considered.

For Load Case 3, we performed a pseudo-static stability analysis using a seismic coefficient equivalent to the peak horizontal ground acceleration (PHGA) corresponding to the 2,500-year recurrence interval

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earthquake at the site. Based on our experience, the 2,500-year recurrence interval earthquake represents the typical seismic design event for dams of this size and hazard potential that are located in this region of the eastern United States. The 2014 update to the USGS United States National Seismic Hazard Maps (Petersen et al, 2014) was used to estimate this PHGA at 'firm rock' (shear wave velocity of 760 meters per second). Amplification of the ground motions in the embankment fill and foundation soils at the site was ignored for this analysis. To account for ignoring amplification, we conservatively estimated a PHGA of 0.10g for the site. A PHGA of 0.10g represents the higher bound of the range of PHGA for the 2,500-year recurrence interval earthquake as indicated on the 2014 USGS seismic hazard map for the site.

Table 4 presents the results of our stability analyses for each cross section and load case analyzed. The stability analysis results, including embankment section geometries, soil strata, and critical failure planes, are presented in Appendix C. The calculated factors of safety for Load Cases 1 through 3 at the sections analyzed meet US Army Corps of Engineers criteria for embankment slope stability (USACE, 2003).

Table 4: Stability Analysis Results

Section	Load Case Analyzed	Minimum Calculated Factor of Safety	USACE Factor of Safety Criteria for Embankment Slope Stability
Section at B-02	1	2.0	1.5
Section at B-02	2	1.8	1.4
Section at B-02	3	1.5	N/A*
Section at B-06	1	1.7	1.5
Section at B-06	2	1.6	1.4
Section at B-06	3	1.4	N/A*

*USACE slope stability criteria for seismic loading are based on anticipated embankment deformations. Our analysis resulted in factors of safety of 1.4 and 1.5 under pseudostatic seismic loading for the 2,500-year recurrence interval earthquake. Therefore, we do not anticipate appreciable embankment deformation to occur during the design earthquake.

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5 ENGINEERING CONSIDERATIONS AND RECOMMENDATIONS

5.1 Embankment Slope Repairs and Height Increase

Based on our site observations and the results of our field exploration, laboratory testing, and slope stability analyses, the embankment with the crest elevation raised to El 23.5 is considered stable for the loading conditions analyzed.

The results of the hydrologic and hydraulic analyses presented in the "Dam Breach Analysis Report and Inundation Mapping" (Schnabel, 2014) demonstrate that the embankment crest will need to be raised to a minimum elevation of El 23.5 to safely pass the spillway design flood while maintaining a small amount of freeboard (0.4 feet). Existing grades shown on the recent topographic survey provided by Dominion indicate that increasing the embankment crest elevation to El 23.5 feet will require the placement of up to 3 feet of fill, with the majority of the embankment requiring between 6 and 12 inches of fill placement to achieve the proposed crest elevation. Increased embankment loading due to raising the crest to El 23.5 may induce up to one inch of settlement in the underlying embankment and foundation soils. As the majority of the embankment requires 12 inches or less of fill placement, average settlements are anticipated to be less than ½ inch, which is considered acceptable given the 0.4 feet (4.8 inches) of freeboard provided for the 100-year flood event. If embankment settlements exceed anticipated amounts, placement of additional fill may be required in the future to maintain adequate freeboard.

In addition to raising the embankment crest, the embankment slope areas that have been damaged by overtopping during storm events should be repaired. Continued overtopping in these areas will result in increased erosion possibly leading to seepage and stability issues and/or failure of the embankment. Compacted structural fill should be placed in these areas to restore the original slope angle of 2H:1V.

Compacted structural fill for re-grading the embankment slopes and crest should consist of material classifying SC, SM, SP-SM, or SP-SC per ASTM D2487. The on-site, sloughed soils from the downstream slope are not expected to meet these criteria. In general, finer-grained fill materials should be used on the crest, while coarser-grained fill should be used to re-grade the embankment slopes. Structural fill materials must be compatible with the underlying embankment fill soils to prevent finer particles from migrating out of the embankment. The structural fill should also have a higher permeability than the underlying embankment fill soils to reduce the risk of localized slope saturation and shallow slope instability during wet periods. Structural fill materials should not contain particles larger than 3 inches.

Compacted structural fill should be placed in maximum eight-inch thick horizontal, loose lifts and should be compacted to at least 95 percent of maximum dry density per ASTM D698, Standard Proctor. Soil moisture contents at the time of compaction should be 2 percent below to 2 percent above the soils' optimum moisture content per ASTM D2216. Additional material and placement requirements will be provided in the technical specifications.

Subgrades to receive compacted structural fill should be stripped of vegetation, topsoil, and organic matter. The removal of several feet of soft and wet soils will also be required prior to the placement of compacted structural fill in the embankment slope repair areas. When excavation of unsuitable materials is required, it should be performed in a manner to limit disturbance of the underlying suitable material.

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The excavation should be performed under the observation of the Engineer to evaluate required excavation depths.

The fill soils at this site primarily consist of moderately- to highly-plastic clays. These soils are moisture sensitive, and will readily become disturbed by construction traffic on exposed surfaces of wet subgrades. We recommend avoiding site preparation and grading activities during wet weather. If wet weather work is performed, the quantities of disturbed soils to be excavated should be expected to increase.

Grading activities for the slope repairs may encounter perched groundwater. The Contractor will likely need to provide temporary dewatering such as trenching and/or pumping from sumps to control surface and groundwater levels to maintain dry work areas.

Following completion of grading, the site should be permanently stabilized through the installation of topsoil and permanent seeding in accordance with the requirements of the Virginia Erosion and Sediment Control Handbook. Erosion control matting should also be placed on disturbed and/or re-graded sections of the embankment slopes.

5.2 Embankment Crest and Downstream Slope Maintenance

Large portions of the embankment crest and downstream slope are covered with large trees and woody growth. Dominion has informed Schnabel that they intend to remove the trees and woody growth from the embankment and 25 feet beyond the limits of the embankment in accordance with the *Commonwealth of Virginia Impounding Structure Regulations* (VA DCR, 2012). We concur with the proposed clearing plan and recommend continued maintenance of the embankment and downstream area to allow for easier identification of conditions such as seepage, embankment cracking and sloughing, animal burrows, and other conditions that could be indicative of potential embankment dam safety issues.

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6 LIMITATIONS

We based the analyses and recommendations submitted in this report on the conditions encountered during our field exploration. We attempted to provide for normal contingencies, but the possibility remains that unexpected conditions may be encountered during construction.

We have endeavored to complete the services identified herein in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions as this project. No other representation, express or implied, is included or intended, and no warranty or guarantee is included or intended in this report, or any other instrument of service.

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FIGURES

Figure 1, Site Vicinity Map

Figure 2, Field Exploration Plan

Figure 3, Regional Geologic Map

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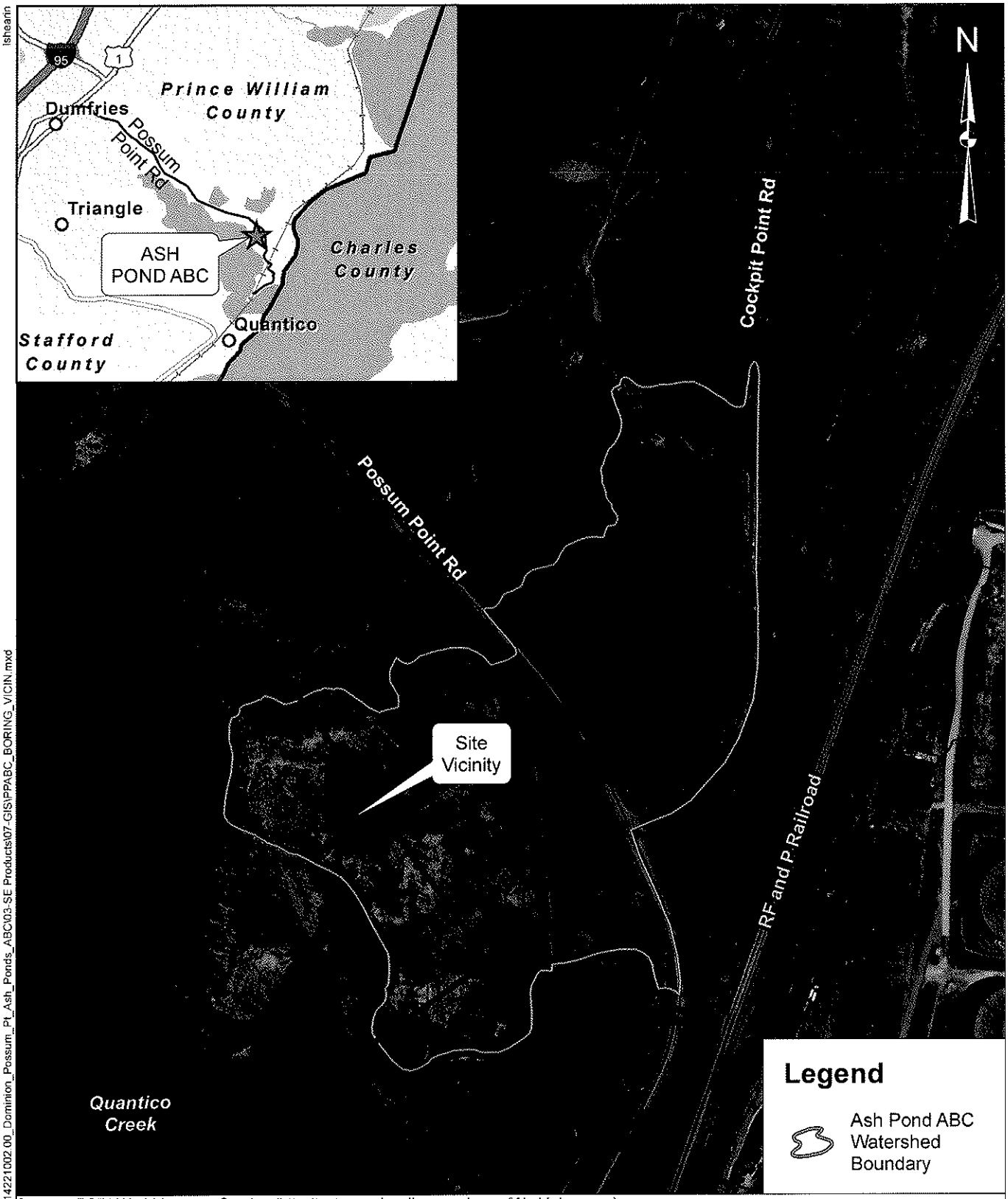

Source: ESRI World Imagery Service (http://goto.arcgisonline.com/maps/World_Imagery)
ESRI MediaKit 2010

Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

400 200 0 400 Feet

Scale: 1:4,800

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POSSUM POINT POWER STATION ASH POND ABC
DOMINION RESOURCES SERVICES, INC
PRINCE WILLIAM COUNTY, VA
PROJECT NO. 14221002.01

SITE VICINITY MAP

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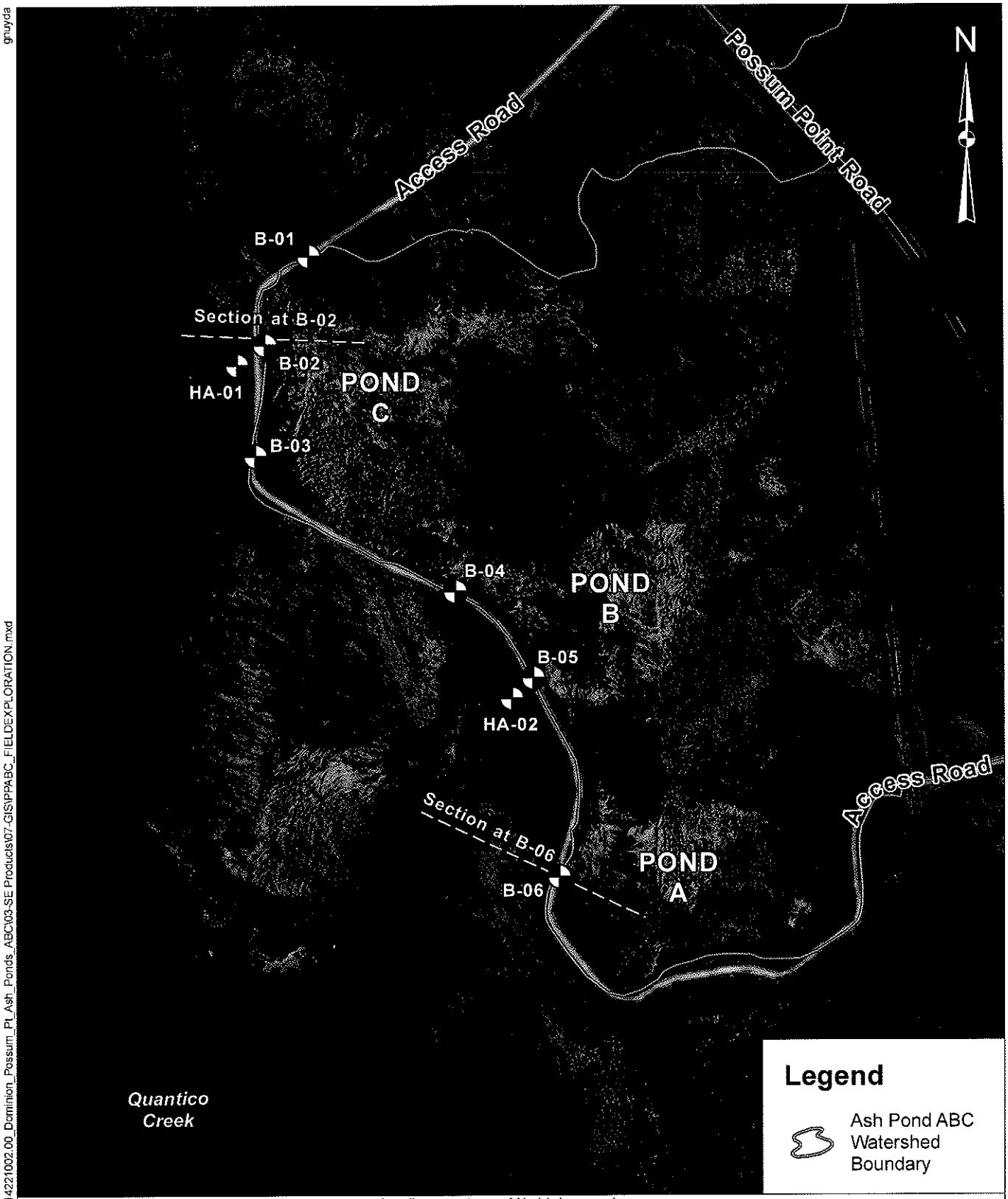

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ESRI MediaKit 2010

200 100 0 200 Feet

Scale: 1:2,400

Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

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POSSUM POINT POWER STATION ASH POND ABC
DOMINION RESOURCES SERVICES, INC
PRINCE WILLIAM COUNTY, VA
PROJECT NO. 14221002.01

FIELD
EXPLORATION
PLAN

gnuyda

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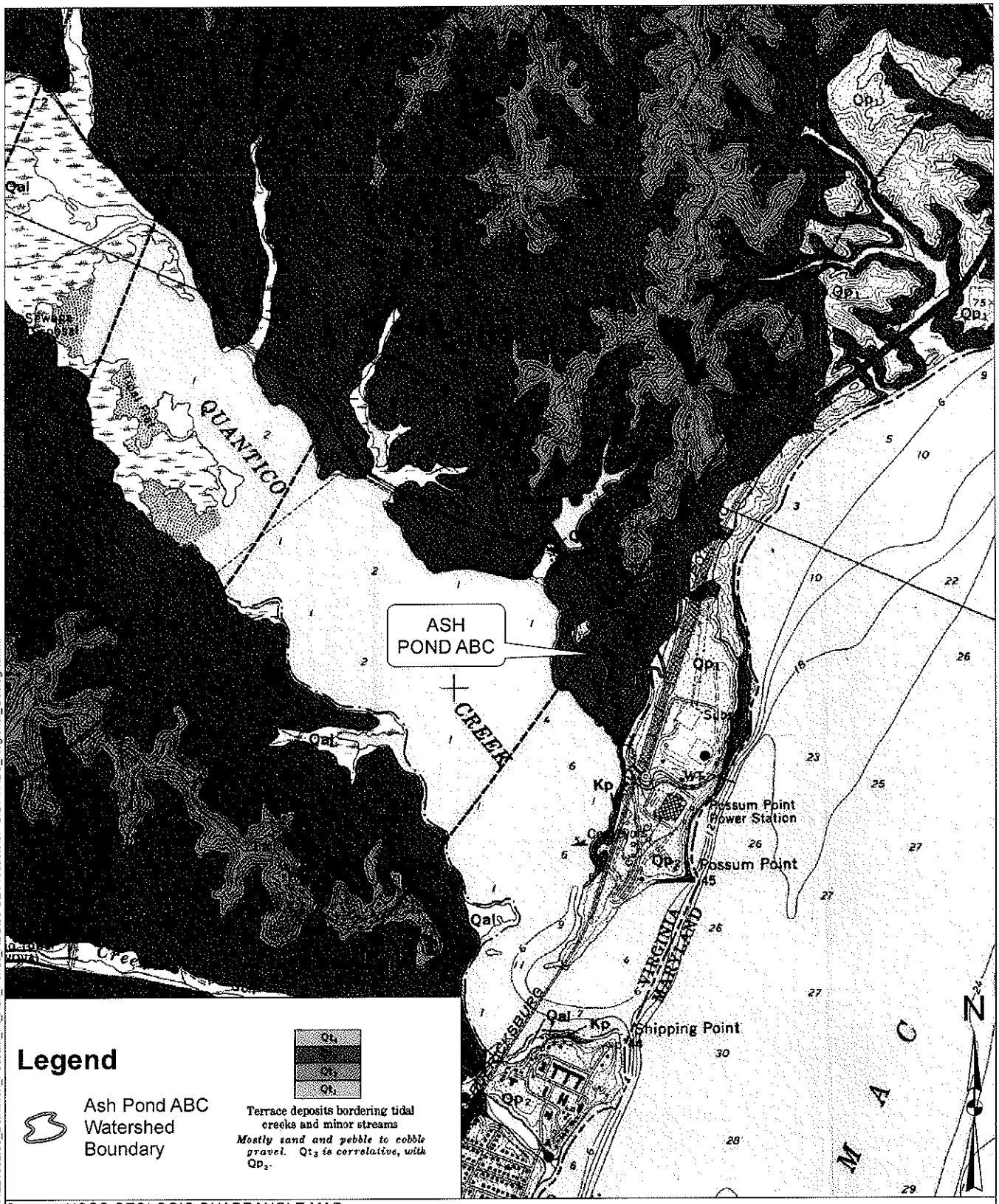

Legend

Ash Pond ABC Watershed Boundary

Qt4
Qt3
Qt2
Qt1

Terrace deposits bordering tidal creeks and minor streams

Mostly sand and pebble to cobble gravel. Qt_2 *is correlative, with* Qp_2.

Source: USGS GEOLOGIC QUADRANGLE MAP
- QUANTICO QUADRANGLE, VA-MD (GQ-1044)

Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

2,000 1,000 0 2,000 Feet

Scale: 1:24,000

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POSSUM POINT POWER STATION ASH POND ABC
DOMINION RESOURCES SERVICES, INC
PRINCE WILLIAM COUNTY, VA
PROJECT NO. 14221002.01

REGIONAL GEOLOGIC MAP

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APPENDIX A

SUBSURFACE EXPLORATION DATA

Subsurface Exploration Procedures (1 sheet)
General Notes for Subsurface Exploration Logs (1 sheet)
Identification of Soil (1 sheet)

Test Boring Logs, B-01 through B-06 (19 sheets)
Hand Auger Logs, HA-01 and HA-02 (2 sheets)

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SUBSURFACE EXPLORATION PROCEDURES

Test Borings

The test borings were drilled using mud-rotary drilling techniques. Bentonite drilling mud was recirculated to maintain an open bore hole. The hole was advanced by using a nominal 3-1/2 inch O.D. tri-cone roller bit. A 10-foot-long, 4-inch ID surface casing 10-feet long was used. At the designated depths, drillers removed the roller bit and performed the Standard Penetration Test (SPT). Water level data indicated on the logs may not be indicative of actual ground water levels because of the presence of drilling fluid in the borehole.

Relatively undisturbed, 3-inch diameter Shelby Tube samples were obtained by using the hydraulic drive system on the drill rig to apply downward pressure on the drill rods and thin-wall tube sampler. The tube sampler was advanced at a constant pressure, and slow rotated prior to withdrawal to shear the end of the sample. A GUS sampler was used with the thin-wall tube sampler. After sampler withdrawal, the top and bottom of the sample was sealed in the tube with wax, and sand packing material was placed between the wax seals and the caps at the ends of the tube.

Standard Penetration Test Results

The numbers in the Sampling Data column of the boring logs represent SPT results. Each number represents the blows needed to drive a two-inch O.D., 1⅜ inch I.D. split-spoon sampler six inches, using a 140-pound hammer falling 30 inches. The sampler is typically driven a total of 18 or 24 inches. The first six inch interval usually represents a seating interval. The total of the number of blows for the second and third six-inch intervals is the SPT "N value." When the blow count reaches 100 before the full driving distance, we determine the SPT N value based on extrapolation of the blows recorded. The SPT is conducted according to ASTM D1586.

The SPT samples were obtained using an automatic trip hammer (ATH). The energy applied to the split-spoon sampler using the ATH was estimated at about 80%. The drilling subcontractor did not provide hammer calibration results. The hammer blows recorded on the boring logs are uncorrected blow counts. However, we have considered the higher energy associated with the ATH hammer in our evaluation of the geotechnical engineering parameters used in our analyses, and have normalized the blow count values to standardized N_{60} and $N_{1,60}$ values as applicable.

Hand Augers

Our personnel drilled the hand augers using a three-inch O.D. auger. Disturbed soil samples were collected from the open barrel of the auger.

Soil Classification Criteria

The group symbols on the logs represent the Unified Soil Classification System Group Symbols (ASTM D2487) based on visual observation and limited laboratory testing of the samples. Criteria for visual identification of soil samples are included in this appendix. Some variation may be expected between samples visually classified and samples classified in the laboratory.

Boring and Hand Auger Locations and Elevations

Our personnel located the borings and hand augers using a portable Trimble GPS unit. Figure 2 shows the approximate boring and hand auger locations. Approximate surface elevations at the boring and hand auger locations were estimated based on topographic data shown on the site plan provided by Dominion. Project planning should consider these locations and elevations no more accurate than the methods and plans used to obtain them.

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GENERAL NOTES FOR SUBSURFACE EXPLORATION LOGS

1. Numbers in sampling data column next to Standard Penetration Test (SPT) symbols indicate blows required to drive a 2-inch O.D., 1⅜-inch I.D. sampling spoon 6 inches using a 140 pound hammer falling 30 inches. The Standard Penetration Test (SPT) N value is the number of blows required to drive the sampler 12 inches, after a 6 inch seating interval. The Standard Penetration Test is performed in general accordance with ASTM D1586.

2. Visual classification of soil is in accordance with terminology set forth in "Identification of Soil." The ASTM D2487 group symbols (e.g., CL) shown in the classification column are based on visual observations.

3. Estimated ground water levels indicated on the logs are only estimates from available data and may vary with precipitation, porosity of the soil, site topography, and other factors.

4. Refusal at the surface of rock, boulder, or other obstruction is defined as an SPT resistance of 100 blows for 2 inches or less of penetration.

5. The logs and related information depict subsurface conditions only at the specific locations and at the particular time when drilled or excavated. Soil conditions at other locations may differ from conditions occurring at these locations.

6. The stratification lines represent the approximate boundary between soil and rock types as obtained from the subsurface exploration. Some variation may also be expected vertically between samples taken. The soil profile, water level observations and penetration resistances presented on these logs have been made with reasonable care and accuracy and must be considered only an approximate representation of subsurface conditions to be encountered at the particular location.

7. Key to symbols and abbreviations:

	S-1, SPT	- Sample No., Standard Penetration Test
	5+10+1	- Number of blows in each 6-in increment
	UD-1, UNDIST	- Sample No., 2" or 3" Undisturbed Tube Sample
	REC=24", 100%	- Recovery in inches, Percent Recovery
	C-1, CORE	- Core No., Rock Core
	Run = 5.0 ft	- Run Length in feet
	REC = 60" 100%	- Recovery in inches, Percent Recovery
	RQD = 60" 100%	- RQD in inches, Percent RQD
	MC	- Moisture Content
	PP	- Pocket Penetrometer Reading (tsf)
	FID	- Flame Ionization Detector Reading (ppm)
	PID	- Photoionization Detector Reading (ppm)
	GP	- Geostick Penetration Reading (inches)
	LL	- Liquid Limit
	PL	- Plastic Limit
	TPH	- Total Petroleum Hydrocarbons

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IDENTIFICATION OF SOIL

I. DEFINITION OF SOIL GROUP NAMES (adapted from ASTM D2487)

			SYMBOL	GROUP NAME
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels – More than 50% of coarse fraction retained on No. 4 sieve Coarse, ¾" to 3" Fine, No. 4 to ¾"	Clean Gravels Less than 5% fines	GW	WELL GRADED GRAVEL
			GP	POORLY GRADED GRAVEL
		Gravels with fines More than 12% fines	GM	SILTY GRAVEL
			GC	CLAYEY GRAVEL
	Sands – 50% or more of coarse Fraction passes No. 4 sieve Coarse, No. 10 to No. 4 Medium, No. 40 to No. 10 Fine, No. 200 to No. 40	Clean Sands Less than 5% fines	SW	WELL GRADED SAND
			SP	POORLY GRADED SAND
		Sands with fines More than 12% fines	SM	SILTY SAND
			SC	CLAYEY SAND
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays – Liquid Limit less than 50 Low to medium plasticity	Inorganic	CL	LEAN CLAY
			ML	SILT
		Organic	OL	ORGANIC CLAY
				ORGANIC SILT
	Silts and Clays – Liquid Limit 50 or more Medium to high plasticity	Inorganic	CH	FAT CLAY
			MH	ELASTIC SILT
		Organic	OH	ORGANIC CLAY
				ORGANIC SILT
Highly Organic Soils	Primarily organic matter, dark in color and organic odor		PT	PEAT

II. DEFINITION OF SOIL COMPONENT PROPORTIONS (ASTM D2487)

			Examples
Adjective Form	GRAVELLY SANDY	>30% to <50% coarse grained component in a fine-grained soil	GRAVELLY LEAN CLAY
	CLAYEY SILTY	>12% to <50% fine grained component in a coarse-grained soil	SILTY SAND
"With"	WITH GRAVEL WITH SAND	>15% to <30% coarse grained component in a fine-grained soil	FAT CLAY WITH GRAVEL
	WITH GRAVEL WITH SAND	>15% to <50% coarse grained component in a coarse-grained soil	POORLY GRADED GRAVEL WITH SAND
	WITH SILT WITH CLAY	>5% to <12% fine grained component in a coarse-grained soil	POORLY GRADED SAND WITH SILT

III. GLOSSARY OF MISCELLANEOUS TERMS

SYMBOLS ..... Unified Soil Classification Symbols are shown above as group symbols. A dual symbol "-" indicates the soil belongs to two groups. A borderline symbol "/" indicates the soil belongs to two possible groups.

FILL..... Man-made deposit containing soil, rock and often foreign matter.

PROBABLE FILL..... Soils which contain no visually detected foreign matter but which are suspect with regard to origin.

DISINTEGRATED ROCK (DR)..... Residual materials with a standard penetration resistance (SPT) between 60 blows per foot and refusal. Refusal is defined as a SPT of 100 blows for 2" or less penetration.

PARTIALLY WEATHERED ROCK (PWR)..... Residual materials with a standard penetration resistance (SPT) between 100 blows per foot and refusal. Refusal is defined as a SPT of 100 blows for 2" or less penetration.

BOULDERS & COBBLES..... Boulders are considered rounded pieces of rock larger than 12 inches, while cobbles range from 3 to 12 inch size.

LENSES..... 0 to ½ inch seam within a material in a test pit.

LAYERS..... ½ to 12 inch seam within a material in a test pit.

POCKET ..... Discontinuous body within a material in a test pit.

MOISTURE CONDITIONS..... Wet, moist or dry to indicate visual appearance of specimen.

COLOR ..... Overall color, with modifiers such as light to dark or variation in coloration.

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Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-01** Contract Number: 14221002.01 Sheet: 1 of 2

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/30/14 **Finished:** 7/30/14

North: 321867 ft **East:** 2347275 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 23± (ft) **Total Depth:** 20.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
After Drilling	7/30/14	3:56 PM	3.3'	---	---
After Drilling	7/30/14	5:49 PM	4.6'	---	---
After Drilling	7/31/14	8:12 AM	6.6'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 4.0 ft: FILL, sampled as sandy lean clay; moist, orangish brown and gray, estimated 30 - 45% fine grained sand, low to medium plasticity	FILL				S-1, SPT 5+5+6+8 REC=16", 67% S-2, SPT 6+5+7+7 REC=15", 63%		
4.0	4.0 - 6.0 ft: FILL, sampled as lean clay with sand; moist, orangish brown, estimated 15 - 25% fine grained sand, low to medium plasticity	FILL	18.5		5	S-3, SPT 4+6+7+9 REC=14", 58%		
6.0	6.0 - 9.0 ft: FILL, sampled as fat clay; moist, orangish brown and gray, medium to high plasticity	FILL	16.5			S-4, SPT 3+5+6+10 REC=16", 67% S-5, SPT 3+3+4+5 REC=18", 75%	MC = 28.3%	
9.0	9.0 - 18.5 ft: SILT WITH SAND; moist, gray and light brown, estimated 15 - 25% fine grained sand, probable ALLUVIAL material	ML	13.5					

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-01** Contract Number: 14221002.01 Sheet: 2 of 2

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	9.0 - 18.5 ft: SILT WITH SAND; moist, gray and light brown, estimated 15 - 25% fine grained sand, probable ALLUVIAL material *(continued)*	ML				S-6, SPT 1+1+2+3 REC=20", 83%	MC = 29.3%	
					15			
						S-7, SPT 2+2+2+2 REC=11", 46%		
18.5	18.5 - 20.0 ft: SILTY SAND, fine to coarse grained sand; moist, gray, estimated 15 - 25% fines, probable ALLUVIAL material	SM	4.0					
20.0			2.5		20			

Bottom of Boring at 20.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-02** Contract Number: 14221002.01 Sheet: 1 of 4

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/30/14 **Finished:** 7/30/14

North: 321748 ft **East:** 2347229 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 22± (ft) **Total Depth:** 45.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
Encountered	7/30/14	4:21 PM	4.0'	---	---
After Drilling	7/30/14	5:50 PM	3.1'	---	---
After Drilling	7/31/14	8:15 AM	6.5'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 3.5 ft: FILL, sampled as sandy elastic silt; moist, reddish brown to gray, estimated 30 - 45% fine to medium sand, contains organics, low plasticity	FILL				S-1, SPT 2+4+5+7 REC=14", 58% S-2, SPT 3+2+3+3 REC=14", 58%		
3.5	3.5 - 9.0 ft: FILL, sampled as sandy lean clay; moist, dark reddish gray and orange, estimated 30 - 45% fine grained sand, low to medium plasticity 4.0 ft: Change: gray and brown		18.8			S-3, SPT 2+2+3+2 REC=14", 58%		
	6.0 ft: Change: gray and light brown, estimated 15 - 25% sand, contains roots	FILL			5	S-4, SPT 2+2+3+2 REC=15", 63% S-5, SPT 1/12"+1/12" REC=16", 67%	LL = 43 PL = 22 MC = 30.3% % Passing #200 = 87.6	
9.0	9.0 - 10.0 ft: FILL, sampled as silt with sand; moist, dark blackish gray, contains roots, contains fine gravel, organic odor	FILL	13.3					

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TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-02** Contract Number: 14221002.01 Sheet: 2 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
10.0	10.0 - 22.0 ft: FILL, sampled as fat clay; moist, light gray and light brown, contains sand, medium plasticity		12.3			UD-1, UNDIST REC=18", 75%	LL = 60 PL = 23 MC = 24.0% % Passing #200 = 97.9	
						UD-2, UNDIST REC=19", 79%	MC = 27.2%	
						S-6, SPT 2+1+2+2 REC=15", 63%		
					15			
		FILL						
	17.0 ft: Change: estimated 15 - 25% fine grained sand							
						S-7, SPT 1+1+2+2 REC=12", 50%	LL = 52 PL = 23 MC = 29.0%	
					20			
22.0	22.0 - 26.0 ft: ORGANIC SILT WITH SAND; moist, dark blackish gray, estimated 15 - 25% fine to medium sand, contains roots, organic odor, probable ALLUVIAL material	OL	0.3			S-8, SPT 1+2+2+3 REC=21", 88%		

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TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-02** Contract Number: 14221002.01 Sheet: 3 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	22.0 - 26.0 ft: ORGANIC SILT WITH SAND; moist, dark blackish gray, estimated 15 - 25% fine to medium sand, contains roots, organic odor, probable ALLUVIAL material *(continued)*	OL			25	UD-3, UNDIST REC=21", 88%		
26.0	26.0 - 37.0 ft: SANDY LEAN CLAY; moist, light gray and light brown, estimated 30 - 45% fine to medium sand, contains fine gravel, probable ALLUVIAL material, fine gravel consists of rounded quartz rock fragments		-3.7			UD-4, UNDIST REC=24", 100%	LL = 49 PL = 19 MC = 30.3% % Passing #200 = 52.4	
					30	S-9, SPT 2+2+3+2 REC=18", 75%		
	32.0 ft: Change: with streaks of light brown	CL						
					35	S-10, SPT 2+3+3+5	MC = 27.1% % Passing #200 = 51.4	

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TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-02** Contract Number: 14221002.01 Sheet: 4 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
37.0	37.0 - 42.0 ft: SILTY SAND WITH GRAVEL, fine to coarse grained sand; wet, light gray, estimated 30 - 45% fines, estimated 15 - 25% fine gravel, probable TERRACE material, fine gravel consists of rounded quartz rock fragments	SM	-14.7		40	S-11, SPT 3+5+7+5 REC=9", 38%		
42.0	42.0 - 45.0 ft: LEAN CLAY WITH SAND; moist, light greenish gray, estimated 15 - 25% fine grained sand, low to medium plasticity, probable COASTAL material	CL	-19.7		45	S-12, SPT 6+12+14+11 REC=20", 83%		
45.0			-22.7					

Bottom of Boring at 45.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-03** Contract Number: 14221002.01 Sheet: 1 of 3

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/31/14 **Finished:** 7/31/14

North: 321595 ft **East:** 2347203 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 23± (ft) **Total Depth:** 35.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
After Drilling	7/31/14	9:30 AM	4.8'	---	---
After Drilling	7/31/14	12:15 PM	5.5'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 2.0 ft: FILL, sampled as lean clay; moist, orangish brown and yellowish brown, low plasticity	FILL				S-1, SPT 3+6+7+8 REC=17", 71%		
2.0	2.0 - 22.0 ft: FILL, sampled as sandy lean clay; moist, orangish brown and grayish brown, estimated 30 - 45% fine grained sand, low to medium plasticity		21.0			S-2, SPT 5+6+6+8 REC=12", 50%		
	3.5 ft: Change: estimated 15 - 25% fine grained sand					S-3, SPT 7+6+6+7 REC=17", 71%		
					5			
		FILL				S-4, SPT 5+6+8+8 REC=17", 71%		
	8.0 ft: Change: estimated 15 - 25% fine grained sand, contains organics					S-5, SPT 3+5+5+10 REC=15", 63%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-03** Contract Number: 14221002.01 Sheet: 2 of 3

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	2.0 - 22.0 ft: FILL, sampled as sandy lean clay; moist, orangish brown and grayish brown, estimated 30 - 45% fine grained sand, low to medium plasticity *(continued)*							
						S-6, SPT 2+3+3+5 REC=24", 100%		
					15			
		FILL						
	17.0 ft: Change: grayish brown and blackish gray, contains roots							
						S-7, SPT 1+1+1+1 REC=17", 71%		
					20			
22.0	22.0 - 33.8 ft: CLAYEY SAND, fine to coarse grained sand; moist, grayish brown, estimated 30 - 45% fines, probable ALLUVIAL material	SC	1.0					
						S-8, SPT 3+3+4+5 REC=18", 75%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-03** Contract Number: 14221002.01 Sheet: 3 of 3

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	22.0 - 33.8 ft: CLAYEY SAND, fine to coarse grained sand; moist, grayish brown, estimated 30 - 45% fines, probable ALLUVIAL material *(continued)*							
					25			
	28.0 ft: Change: grayish brown and orangish brown, contains fine gravel	SC				S-9, SPT 3+4+4+4 REC=20", 83%	MC = 19.7% % Passing #200 = 40.1	
					30			
						S-10, SPT 3+4+5+5 REC=18", 75%		
33.8	33.8 - 35.0 ft: FAT CLAY; moist, grayish brown with streaks of orangish brown, medium to high plasticity, probable ALLUVIAL material	CH	-10.8					
35.0			-12.0		35			

Bottom of Boring at 35.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-04** Contract Number: 14221002.01 Sheet: 1 of 2

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/31/14 **Finished:** 7/31/14

North: 321386 ft **East:** 2347492 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 24± (ft) **Total Depth:** 20.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
After Drilling	7/31/14	10:56 AM	3.4'	---	---
After Drilling	7/31/14	12:54 PM	5.5'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 1.5 ft: FILL, sampled as lean clay with sand; moist, grayish brown, estimated 15 - 25% fine grained sand, low plasticity	FILL				S-1, SPT 3+5+5+5 REC=18", 75%		
1.5	1.5 - 2.0 ft: FILL, sampled as silty sand, fine grained sand; moist, grayish brown, estimated 30 - 45% fines	FILL	22.5					
2.0	2.0 - 4.0 ft: FILL, sampled as lean clay with sand; moist, grayish brown with streaks of orangish brown, estimated 15 - 25% fine grained sand, contains organics, contains fine gravel, low to medium plasticity	FILL	22.0			S-2, SPT 3+4+5+5 REC=15", 63%		
4.0	4.0 - 8.0 ft: FILL, sampled as fat clay; moist, grayish brown, medium to high plasticity	FILL	20.0		5	S-3, SPT 9+12+10+10 REC=16", 67% S-4, SPT 3+6+10+7 REC=18", 75%		
8.0	8.0 - 12.0 ft: SILTY SAND, fine to coarse grained sand; moist, grayish brown and orangish brown, estimated 15 - 25% fines, probable ALLUVIAL material	SM	16.0			S-5, SPT 3+5+6+3 REC=19", 79%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-04** Contract Number: 14221002.01 Sheet: 2 of 2

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	8.0 - 12.0 ft: SILTY SAND, fine to coarse grained sand; moist, grayish brown and orangish brown, estimated 15 - 25% fines, probable ALLUVIAL material *(continued)*	SM						
12.0	12.0 - 17.0 ft: SILT WITH SAND; moist, grayish brown, estimated 15 - 25% fine grained sand, contains fine gravel, probable ALLUVIAL material	ML	12.0		15	S-6, SPT 1+1+1+2 REC=15", 63%	MC = 28.2% % Passing #200 = 88.0	
17.0	17.0 - 20.0 ft: SILTY SAND, fine grained sand; moist, grayish brown and orangish brown, estimated 30 - 45% fines, contains fine gravel, probable TERRACE material, fine gravel consists of rounded quartz rock fragments	SM	7.0		20	S-7, SPT 7+10+7+6 REC=14", 58%		
20.0			4.0					

Bottom of Boring at 20.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-05** Contract Number: 14221002.01 Sheet: 1 of 4

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/31/14 **Finished:** 7/31/14

North: 321262 ft **East:** 2347608 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 23± (ft) **Total Depth:** 45.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
After Drilling ▽	7/31/14	12:49 PM	4.4'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 2.0 ft: FILL, sampled as lean clay; moist, grayish brown and orangish brown, contains organics, low plasticity, contains lenses of fine grained Clayey Sand (SC) with fine gravel	FILL				S-1, SPT 3+5+3+4 REC=16", 67%		
2.0	2.0 - 6.0 ft: FILL, sampled as silty sand, fine to medium grained sand; moist, grayish brown and orangish brown, estimated 30 - 45% fines, contains fine gravel, fine gravel consists of rounded quartz rock fragments	FILL ▽	21.0			S-2, SPT 3+6+7+6 REC=16", 67% S-3, SPT 4+5+5+5 REC=14", 58%	MC = 14.2% % Passing #200 = 23.7	
					5			
6.0	6.0 - 13.5 ft: FILL, sampled as clayey sand, fine grained sand; moist, grayish brown with speckles of orangish brown, estimated 30 - 45% fines		17.0			S-4, SPT 2+3+3+3 REC=19", 79%		
	8.0 ft: Change: estimated 15 - 25% fine gravel, contains organics, fine gravel consists of rounded quartz rock fragments	FILL				S-5, SPT 2+2+2+1 REC=14", 58%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-05** Contract Number: 14221002.01 Sheet: 2 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	6.0 - 13.5 ft: FILL, sampled as clayey sand, fine grained sand; moist, grayish brown with speckles of orangish brown, estimated 30 - 45% fines *(continued)*	FILL						
						S-6, SPT 1+2+3+6 REC=18", 75%		
13.5	13.5 - 16.0 ft: LEAN CLAY WITH SAND; moist, grayish brown, estimated 15 - 25% fine grained sand, contains organics, low to medium plasticity, probable ALLUVIAL material	CL	9.5		15			
16.0	16.0 - 42.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; moist, light gray, estimated 5 - 10% fines, contains fine gravel, probable TERRACE material, fine gravel consists of rounded quartz rock fragments	SP-SM	7.0			S-7, SPT 8+9+11+13 REC=18", 75%		
					20			
	23.0 ft: Change: fine to coarse grained sand; estimated 15 - 25% fines					S-8, SPT 6+9+14+14 REC=19", 79%	MC = 24.0% % Passing	

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-05** Contract Number: 14221002.01 Sheet: 3 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	16.0 - 42.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; moist, light gray, estimated 5 - 10% fines, contains fine gravel, probable TERRACE material, fine gravel consists of rounded quartz rock fragments *(continued)*						#200 = 15.4	
					25			
	28.0 ft: Change: no fine gravel					S-9, SPT 11+20+36+34 REC=22", 92%		
		SP-SM			30			
	33.0 ft: Change: light gray and orangish brown					S-10, SPT 12+19+24+27 REC=20", 83%		
					35			

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-05** Contract Number: 14221002.01 Sheet: 4 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	16.0 - 42.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; moist, light gray, estimated 5 - 10% fines, contains fine gravel, probable TERRACE material, fine gravel consists of rounded quartz rock fragments *(continued)*	SP-SM			40	S-11, SPT 16+30+32+37 REC=24", 100%		
42.0	42.0 - 45.0 ft: FAT CLAY; moist, light greenish gray with mottles of orangish brown, medium to high plasticity, probable COASTAL material	CH	-19.0		45	S-12, SPT 6+9+16+16 REC=21", 88%		
45.0			-22.0					

Bottom of Boring at 45.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-06** Contract Number: 14221002.01 Sheet: 1 of 4

Contractor: Fishburne Drilling, Inc.
Chesapeake, Virginia

Contractor Foreman: Tim Donohue

Schnabel Representative: Sue Buchanan

Equipment: CME-550X

Method: 4" Mud Rotary, Tricone Roller Bit

Hammer Type: Auto Hammer (140 lb)

Dates Started: 7/30/14 **Finished:** 7/30/14

North: 320965 ft **East:** 2347643 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 23± (ft) **Total Depth:** 45.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
Encountered ▽	7/30/14	2:15 PM	4.0'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	0.0 - 2.0 ft: FILL, sampled as clayey sand, fine grained sand; moist, light grayish brown, estimated 30 - 45% fines, contains organics	FILL				S-1, SPT 4+3+4+494 REC=11", 46%		
2.0	2.0 - 7.7 ft: FILL, sampled as sandy lean clay; moist, light grayish brown with mottles of orangish brown, estimated 30 - 45% fine grained sand, contains fine gravel, low to medium plasticity, contains lenses of fine grained clayey sand	FILL	21.0			S-2, SPT 3+2+2+3 REC=15", 63%	LL = 28 PL = 19 MC = 22.4% % Passing #200 = 60.5	
						S-3, SPT 2+2+3+3 REC=10", 42%		
					5			
						S-4, SPT 2+3+4+4 REC=11", 46%		
7.7	7.7 - 11.0 ft: FILL, sampled as clayey sand, fine to medium grained sand; moist, light grayish brown with mottles of orange, estimated 30 - 45% fines, contains fine gravel	FILL	15.3			S-5, SPT 2+2+1+2 REC=4", 17%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-06** Contract Number: 14221002.01 Sheet: 2 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	7.7 - 11.0 ft: FILL, sampled as clayey sand, fine to medium grained sand; moist, light grayish brown with mottles of orange, estimated 30 - 45% fines, contains fine gravel *(continued)*	FILL				UD-1, UNDIST REC=14", 58%		
11.0	11.0 - 22.0 ft: FILL, sampled as fat clay; moist, light grayish brown with mottles of orange, estimated 15 - 25% fine grained sand, contains fine gravel, medium to high plasticity		12.0			UD-2, UNDIST REC=19", 79%	LL = 55 PL = 25 MC = 25.4% % Passing #200 = 85.9	
		FILL			15	S-6, SPT 1+2+2+3 REC=12", 50%		
					20	S-7, SPT 1+1+1+2 REC=20", 83%		
22.0	22.0 - 28.5 ft: CLAYEY SAND, fine to medium grained sand; moist, light grayish brown with mottles of orange, estimated 30 - 45% fines, contains fine gravel, probable ALLUVIAL material	SC	1.0			S-8, SPT 2+3+3+3 REC=24", 100%		

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-06** Contract Number: 14221002.01 Sheet: 3 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	22.0 - 28.5 ft: CLAYEY SAND, fine to medium grained sand; moist, light grayish brown with mottles of orange, estimated 30 - 45% fines, contains fine gravel, probable ALLUVIAL material *(continued)*							
	25.0 ft: Change: light gray	SC			25	UD-3, UNDIST REC=21", 88%		
						S-9, SPT 1+1+1+1 REC=5", 21%		
28.5	28.5 - 39.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; moist, light gray with speckles of white, estimated 5 - 10% fines, contains fine to coarse gravel, probable TERRACE material, fine to coarse gravel consists of rounded quartz rock fragments		-5.5			S-10, SPT 3+6+8+9 REC=14", 58%		
					30			
		SP-SM				S-11, SPT 13+17+21+22 REC=21", 88%	MC = 22.6% % Passing #200 = 14.5	
					35			

(continued)

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	TEST BORING LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Boring Number: **B-06** Contract Number: 14221002.01 Sheet: 4 of 4

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
	28.5 - 39.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; moist, light gray with speckles of white, estimated 5 - 10% fines, contains fine to coarse gravel, probable TERRACE material, fine to coarse gravel consists of rounded quartz rock fragments *(continued)*	SP-SM				S-12, SPT 7+4+6+10 REC=22", 92%		
39.0	39.0 - 45.0 ft: ELASTIC SILT; moist, dark grayish green and bluish gray, high plasticity, probable COASTAL material		-16.0		40			
		MH				S-13, SPT 4+6+11+12 REC=24", 100%	LL = 55 PL = 33 MC = 34.7%	
45.0			-22.0		45			

Bottom of Boring at 45.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	HAND AUGER LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Hand Auger Number: **HA-01** Contract Number: 14221002.01 Sheet: 1 of 1

Contractor: Not Applicable

Contractor Foreman: Not Applicable

Schnabel Representative: K. Megginson

Equipment:

Method: Hand Auger

Dates Started: 7/31/14 **Finished:** 7/31/14

North: 321738 ft **East:** 2347175 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 9± (ft) **Total Depth:** 10.1 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
Completion	7/31/14	11:30 AM	Dry	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
0.3	0.0 - 0.3 ft: Forest litter, rootmat and topsoil		8.6			GRAB		
1.3	0.3 - 1.3 ft: FILL, sampled as lean clay with sand; moist, dark yellowish brown, estimated 15 - 25% sand, contains roots	FILL	7.6			GRAB		
	1.3 - 3.0 ft: FILL, sampled as fat clay; moist, dark yellowish brown and light gray, estimated 5 - 10% sand, medium plasticity	FILL						
3.0	3.0 - 6.4 ft: FILL, sampled as sandy fat clay; moist, dark yellowish brown and light gray, estimated 30 - 45% sand, contains mica, medium plasticity		5.9			GRAB		
	4.8 ft: Change: contains Clayey Sand (SC) layers to 5.3 feet	FILL			5	GRAB		
6.4	6.4 - 10.1 ft: FILL, sampled as fat clay; moist, dark yellowish brown and light gray, estimated 5 - 10% sand, contains mica, medium plasticity		2.5			GRAB		
	7.7 ft: Change: contains Sandy Fat Clay (CH) layers to 8.2 feet	FILL				GRAB		
10.1			-1.2		10			

Bottom of Hand Auger at 10.1 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

Schnabel ENGINEERING	HAND AUGER LOG	Project: Dominion Possum Point Ash Ponds ABC Prince William County Virginia	Hand Auger Number: **HA-02** Contract Number: 14221002.01 Sheet: 1 of 1

Contractor: Not Applicable

Contractor Foreman: Not Applicable

Schnabel Representative: K. Megginson

Equipment:

Method: Hand Auger

Dates Started: 7/31/14 **Finished:** 7/31/14

North: 321244 ft **East:** 2347582 ft

Coordinate System: VA State Plane (N)

Plunge: -90 **Bearing:**

Ground Surface Elevation: 14± (ft) **Total Depth:** 6.0 ft

Water Level Observations

	Date	Time	Depth	Casing	Caved
Encountered ▽	7/31/14	12:40 PM	1.0'	---	---
Completion ▼	7/31/14	1:00 PM	2.7'	---	---

DEPTH (ft)	MATERIAL DESCRIPTION	SYMBOL	ELEV (ft)	STRATUM	SAMPLING DEPTH	SAMPLING DATA	TESTS	REMARKS
0.3	0.0 - 0.3 ft: Forest litter, rootmat and topsoil		13.9			GRAB		
	0.3 - 2.2 ft: SILTY SAND, fine to coarse grained sand; moist, dark yellowish gray and dark orangish brown, estimated 30 - 45% fines, contains roots, probable ALLUVIAL material, contains Clayey Sand (SC) pockets	SM						
2.2	1.0 ft: Change: wet 1.5 ft: Change: estimated 5 - 10% fine gravel		12.0			GRAB		
	2.2 - 5.0 ft: POORLY GRADED SAND WITH SILT, fine to medium grained sand; wet, dark yellowish brown and grayish brown, estimated 5 - 10% fines, probable TERRACE material	SP-SM						
5.0	5.0 - 6.0 ft: POORLY GRADED SAND, fine to medium grained sand; wet, gray, estimated <5% fines, probable TERRACE material	SP	9.2		5			
6.0			8.2					

Bottom of Hand Auger at 6.0 ft.
Boring terminated at selected depth.
Boring backfilled with bentonite upon completion.
Continuous cave in below 5 feet.

TEST BORING LOG 14221002.01 POSSUM POINT 2014-08-01.GPJ SCHNABEL DATA TEMPLATE 2008_07_06.GDT 10/7/14

APPENDIX B

SOIL LABORATORY TEST DATA

Summary of Laboratory Tests (2 sheets)

Gradation Curves (8 sheets)

One-Dimensional Consolidation Test with Incremental Loading (4 sheets)

Consolidated-Undrained (CU) Triaxial Compression Tests (10 sheets)

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Summary Of Laboratory Tests

Project Number: 14221002.01

Boring No.	Sample Depth ft / Elevation ft	Sample Type	Description of Soil Specimen	Wet Natural Density (pcf)	Natural Moisture (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Clay	% Passing No. 200 Sieve	% Passing No. 40 Sieve	% Passing No. 10 Sieve	% Retained No. 4 Sieve	Specific Gravity
B-02	6.0 - 8.0	Jar	LEAN CLAY (CL), contains sand and mica, brown	--	30.3	43	22	21	--	87.6	--	--	--	--
B-02	10.0 - 12.0	Tube	FAT CLAY (CH), contains sand, mottled light gray and light brown	123.2	24.0	60	23	37	42.6	97.9	98.9	100.0	0.0	2.73
B-02	12.0 - 14.0	Tube	FAT CLAY (CH), contains sand, mottled light gray and light brown (Visual Classification)	122.3	27.2	--	--	--	--	--	--	--	--	--
B-02	18.0 - 20.0	Jar	FAT CLAY (CH), contains sand, mottled light gray and light brown (Visual Classification)	--	29.0	52	23	29	--	--	--	--	--	--
B-02	27.0 - 29.0	Tube	SANDY LEAN CLAY (CL), contains gravel, blue gray	123.1	30.3	49	19	30	--	52.4	76.5	97.9	1.2	--
B-02	33.0 - 35.0	Jar	SANDY LEAN CLAY (CL), contains gravel and mica, brown (Visual Classification)	--	27.1	--	--	--	17.4	51.4	92.4	98.6	0.8	2.68
B-03	28.0 - 30.0	Jar	CLAYEY SAND (SC), fine to medium, contains gravel, brown (Visual Classification)	--	19.7	--	--	--	--	40.1	73.8	97.9	0.9	--

Notes:
1. Soil tests in general accordance with ASTM standards.
2. Soil classifications are in general accordance with ASTM D2487(as applicable), based on testing indicated and visual classification.
3. Key to abbreviations: NP=Non-Plastic; -- indicates no test performed

Schnabel ENGINEERING

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Summary Of Laboratory Tests

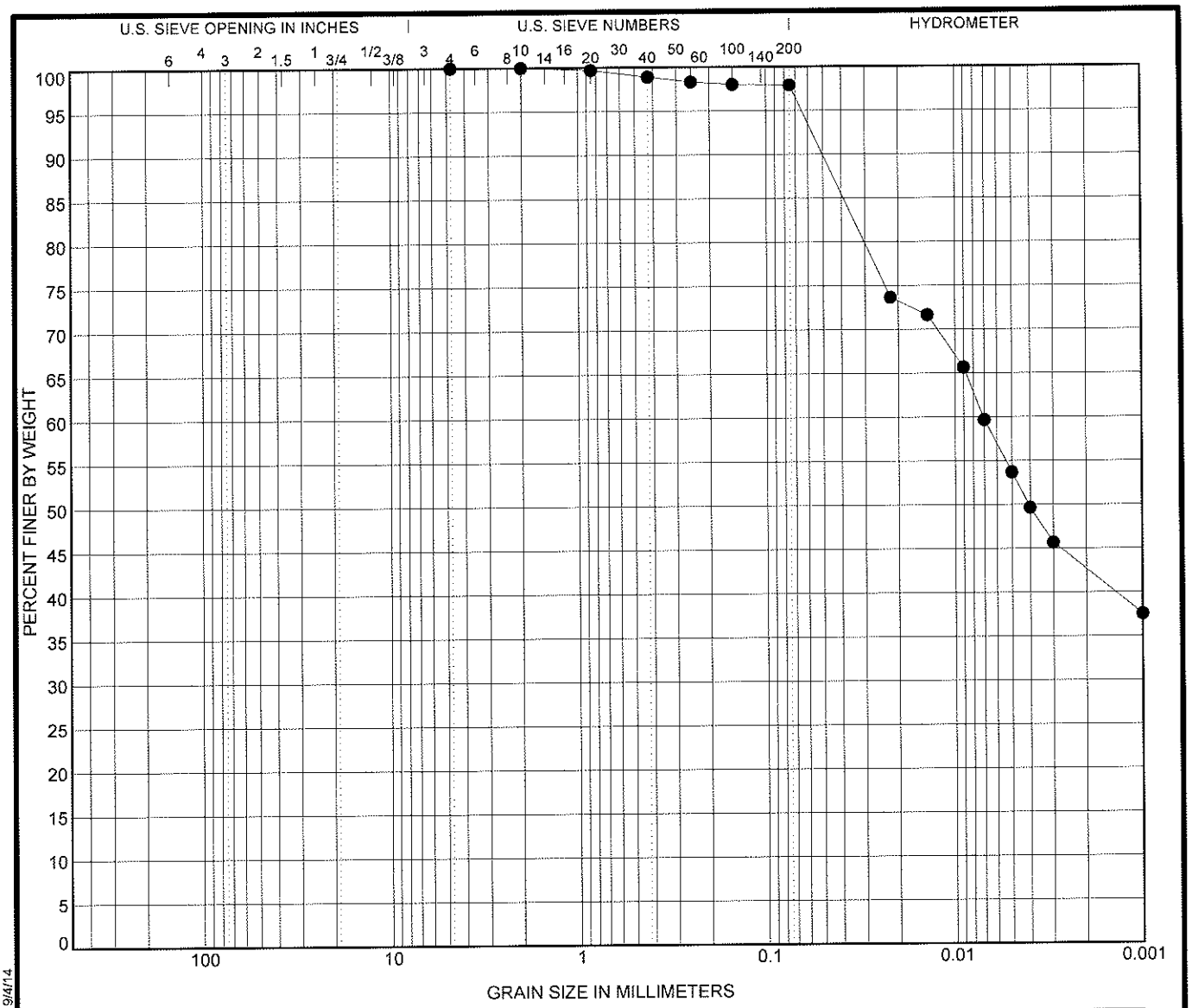
Project Number: 14221002.01

Boring No.	Sample Depth ft / Elevation ft	Sample Type	Description of Soil Specimen	Wet Natural Density (pcf)	Natural Moisture (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Clay	% Passing No. 200 Sieve	% Passing No. 40 Sieve	% Passing No. 10 Sieve	% Retained No. 4 Sieve	Specific Gravity
B-04	13.0 - 15.0	Jar	LEAN CLAY (CL), contains sand, gravel and mica, light gray (Visual Classification)	--	28.2	--	--	--	--	88.0	96.7	99.8	0.1	--
B-05	2.0 - 4.0	Jar	SILTY SAND (SM), fine to medium, contains gravel and mica, light brown (Visual Classification)	--	14.2	--	--	--	--	23.7	--	--	--	--
B-05	23.0 - 25.0	Jar	SILTY SAND (SM), fine to medium, contains gravel, light brown (Visual Classification)	--	24.0	--	--	--	--	15.4	41.0	99.3	0.3	--
B-06	2.0 - 4.0	Jar	SANDY LEAN CLAY (CL), contains gravel and mica, tan	--	22.4	28	19	9	--	60.5	--	--	--	--
B-06	12.5 - 14.5	Tube	FAT CLAY (CH), contains sand and gravel, gray brown	124.5	25.4	55	25	30	37.5	85.9	93.8	99.7	0.2	2.69
B-06	33.0 - 35.0	Jar	SILTY SAND (SM), fine to medium, contains gravel, light gray and light brown (Visual Classification)	--	22.6	--	--	--	--	14.5	35.7	100.0	0.0	--
B-06	43.0 - 45.0	Jar	ELASTIC SILT (MH), contains sand, blue gray (Visual Classification)	--	34.7	55	33	22	--	--	--	--	--	--

Notes:
1. Soil tests in general accordance with ASTM standards.
2. Soil classifications are in general accordance with ASTM D2487(as applicable), based on testing indicated and visual classification.
3. Key to abbreviations: NP=Non-Plastic; -- indicates no test performed

Schnabel ENGINEERING

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-02	10.0 ft	**FAT CLAY (CH), contains sand, mottled light gray and light brown**	**60**	**23**	**37**		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**2**	**0.007**			**0.0**	**2.1**	**55.3**	**42.6**

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4
% Finer	97.9	98.0	98.3	98.9	99.7	100.0	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/15/14	TTM	MJF

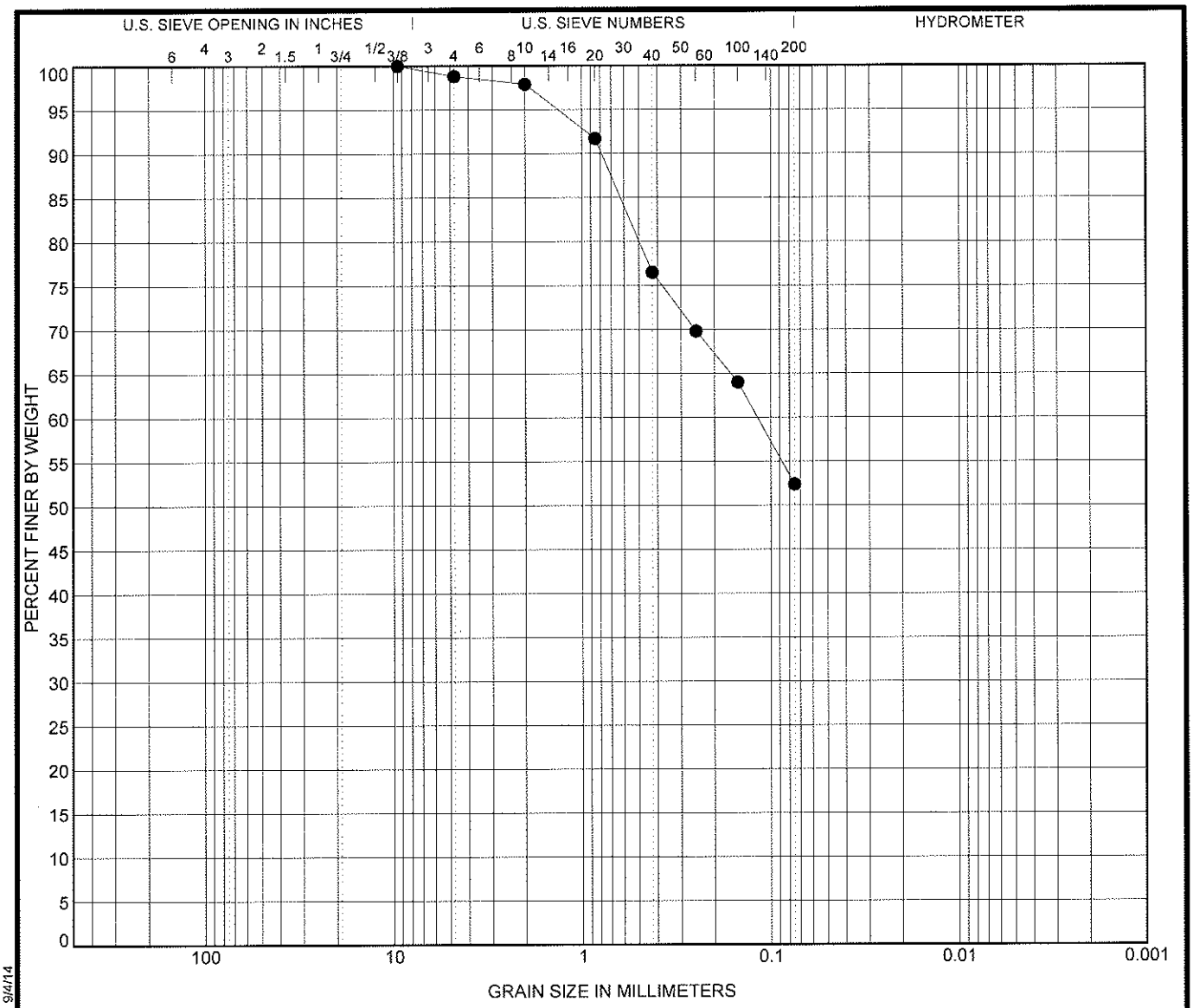
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008_04_22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-02	27.0 ft	**SANDY LEAN CLAY (CL), contains gravel, blue gray**	**49**	**19**	**30**		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**9.5**	**0.118**			**1.2**	**46.4**	**52.4**	

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.
% Finer	52.4	64.0	69.8	76.5	91.7	97.9	98.8	100.0

Tested By	Tested Date	Reviewed By	Calc By
DWC/MJF	8/15/14	TTM	MJF

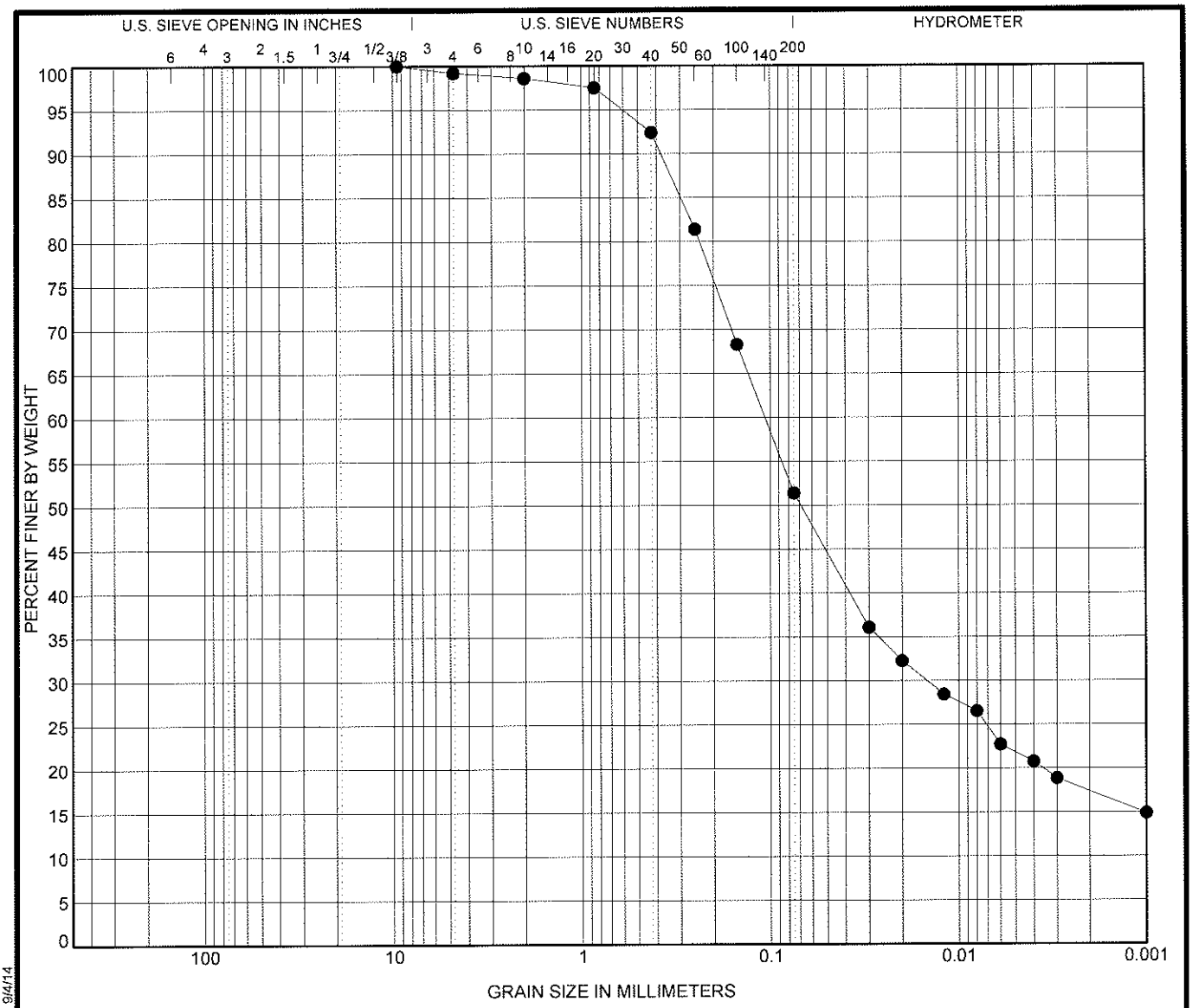
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-02	33.0 ft	**SANDY LEAN CLAY (CL), contains gravel and mica, brown (Visual Classification)**	--	--	--		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**9.5**	**0.107**	**0.015**		**0.8**	**47.8**	**34.0**	**17.4**

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.
% Finer	51.4	68.3	81.4	92.4	97.5	98.6	99.2	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/15/14	TTM	MJF

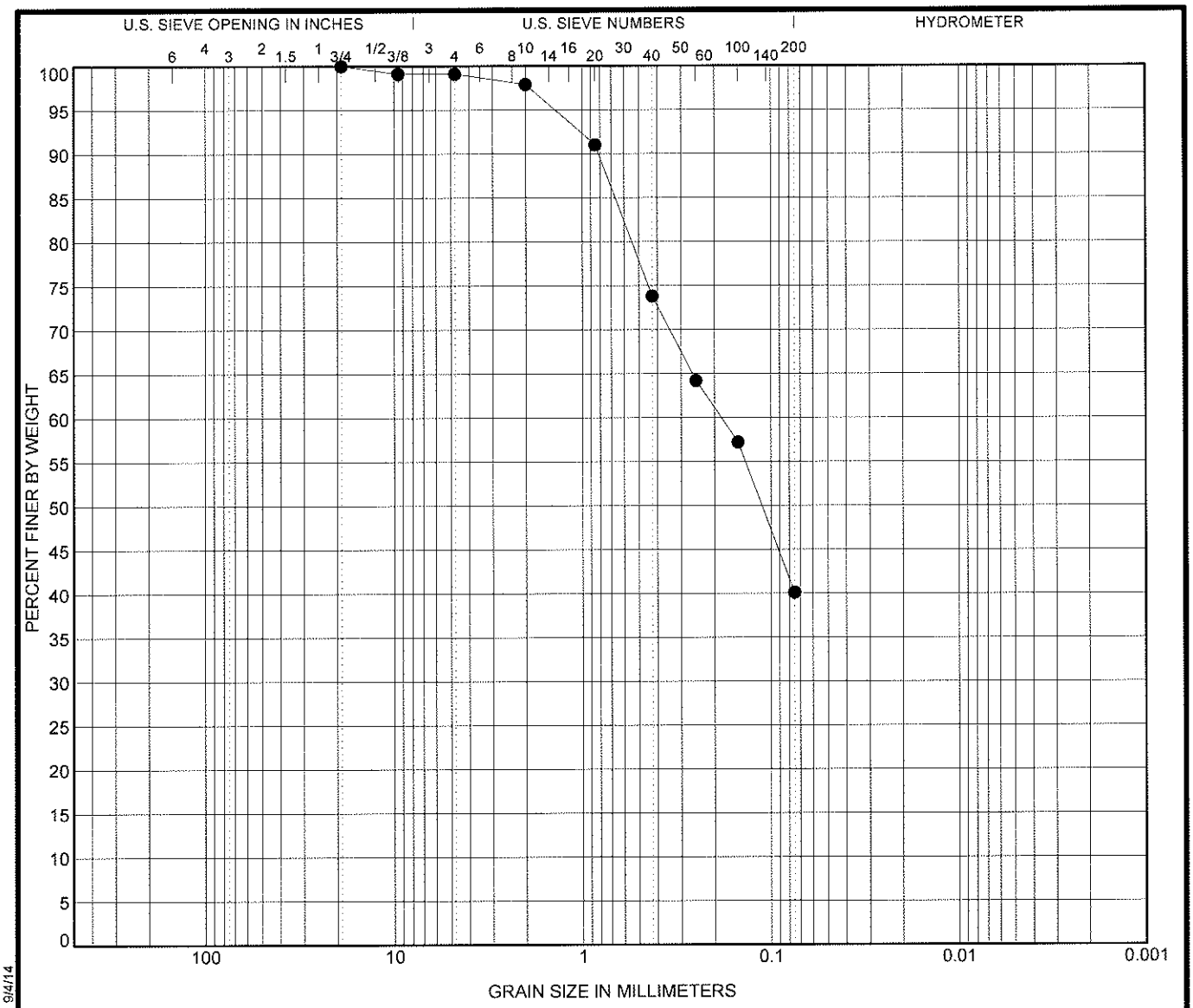
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008_04_22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-03	28.0 ft	**CLAYEY SAND (SC), fine to medium, contains gravel, brown (Visual Classification)**	--	--	--		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**19**	**0.184**			**0.9**	**59.0**	**40.1**	

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.	3/4 in.
% Finer	40.1	57.2	64.2	73.8	91.0	97.9	99.1	99.1	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/12/14	TTM	MJF

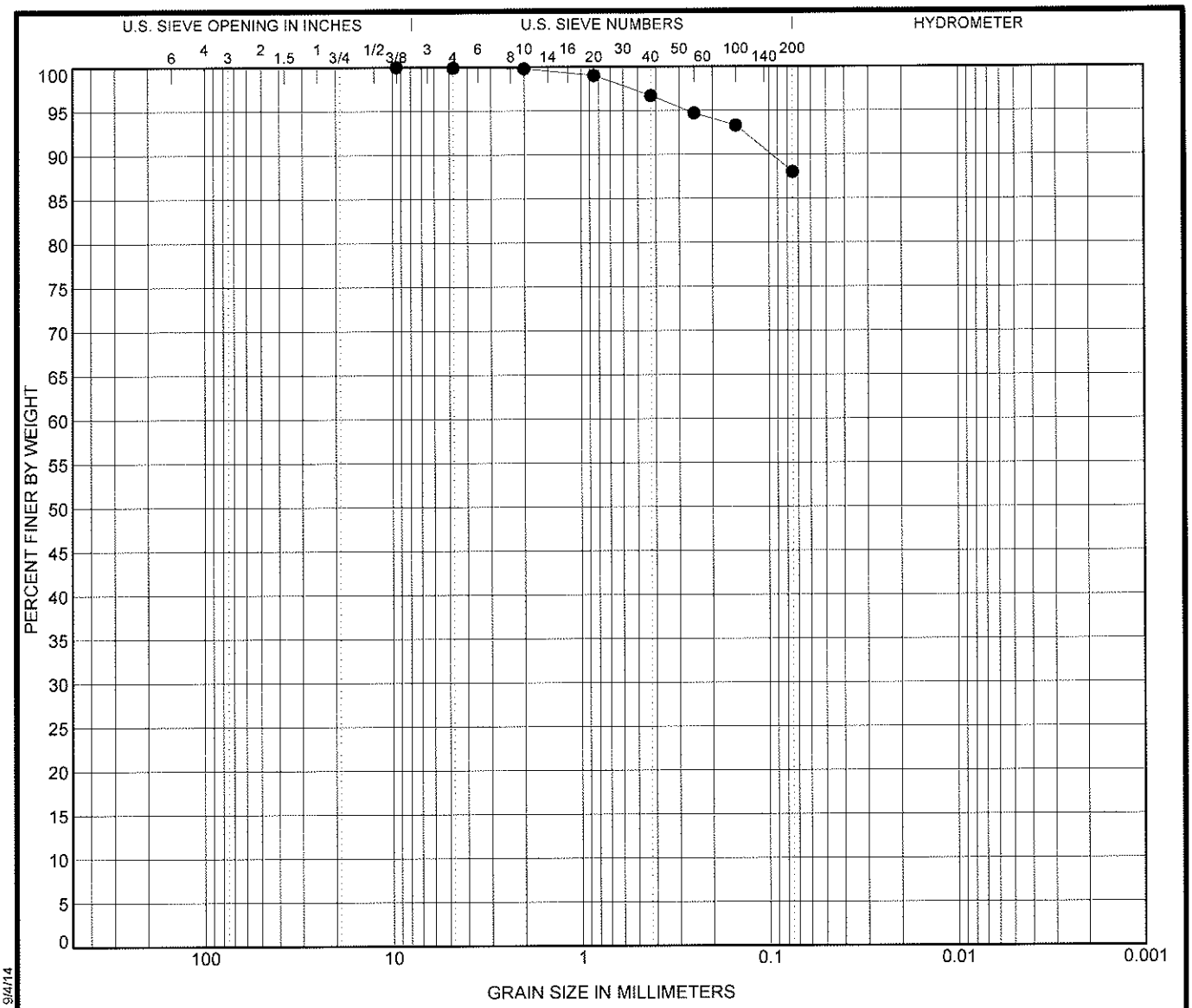
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-04	13.0 ft	**LEAN CLAY (CL), contains sand, gravel and mica, light gray (Visual Classification)**	--	--	--		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**9.5**				**0.1**	**11.9**	**88.0**	

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.
% Finer	88.0	93.3	94.7	96.7	99.0	99.8	99.9	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/12/14	TTM	MJF

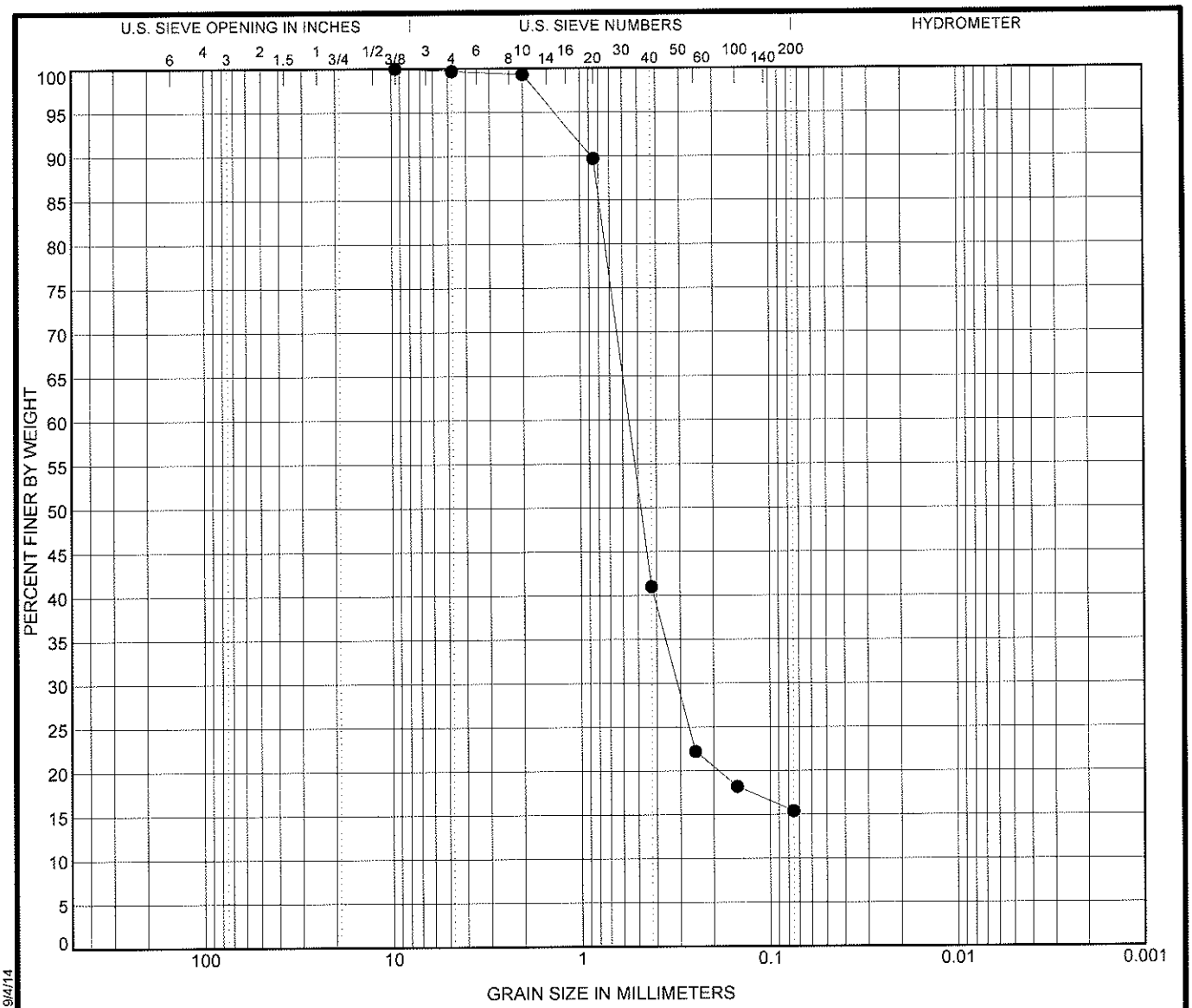
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-05	23.0 ft	**SILTY SAND (SM), fine to medium, contains gravel, light brown (Visual Classification)**	--	--	--		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**9.5**	**0.557**	**0.312**		**0.3**	**84.3**	**15.4**	

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.
% Finer	15.4	18.2	22.2	41.0	89.7	99.3	99.7	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/12/14	TTM	MJF

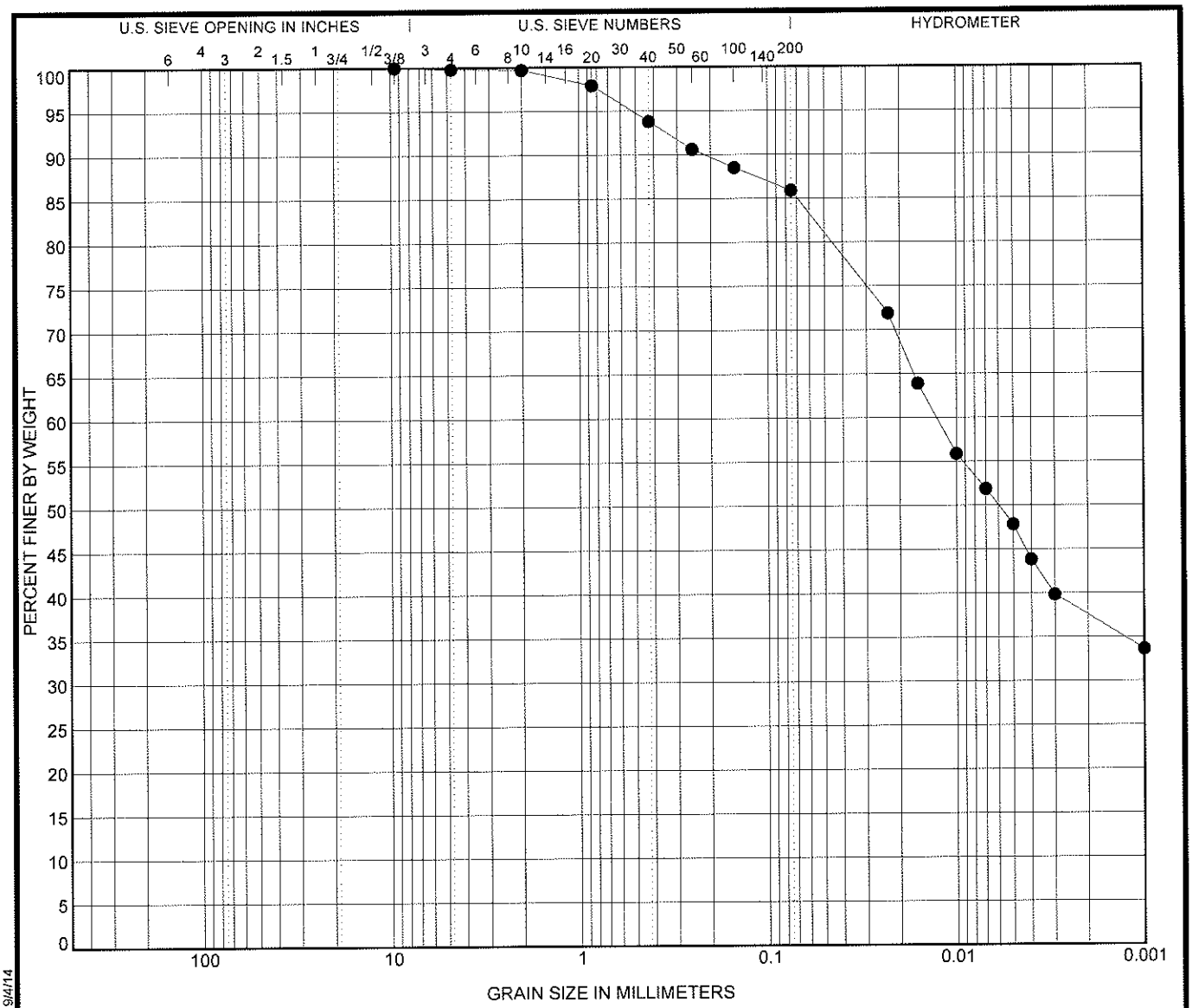
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI		
● B-06	12.5 ft	**FAT CLAY (CH), contains sand and gravel, gray brown**	**55**	**25**	**30**		

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**9.5**	**0.013**			**0.2**	**13.9**	**48.4**	**37.5**

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4	3/8 in.
% Finer	85.9	88.5	90.6	93.8	97.9	99.7	99.8	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/15/14	TTM	MJF

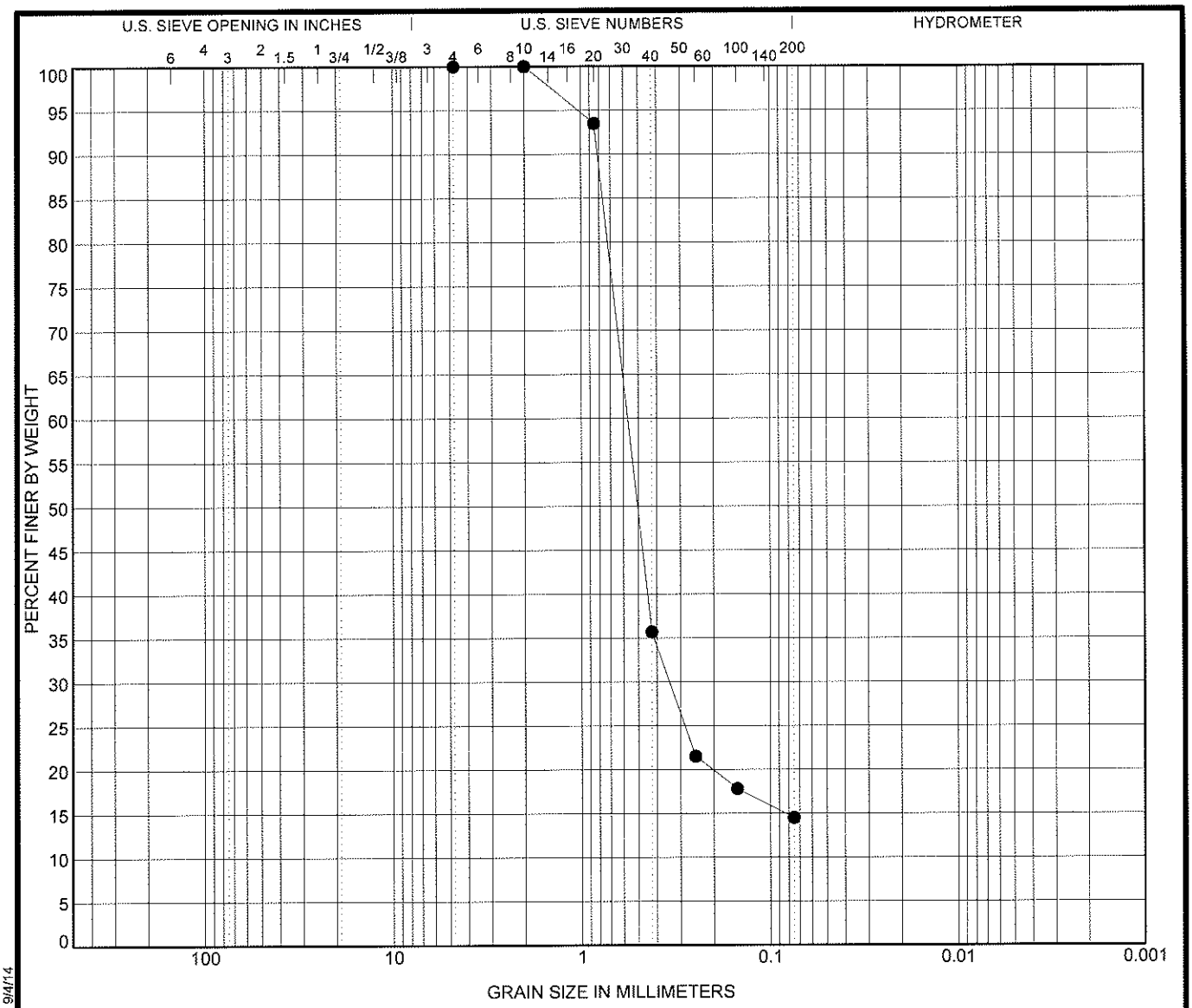
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen		Sample Description	LL	PL	PI
● B-06	33.0 ft	**SILTY SAND (SM), fine to medium, contains gravel, light gray and light brown (Visual Classification)**	--	--	--

Test Method	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
ASTM D422	**2**	**0.569**	**0.343**		**0.0**	**85.5**	**14.5**	

Percent Finer

Sieve Size	No. 200	No. 100	No. 60	No. 40	No. 20	No. 10	No. 4
% Finer	14.5	17.8	21.5	35.7	93.5	100.0	100.0

Tested By	Tested Date	Reviewed By	Calc By
MJF	8/12/14	TTM	MJF

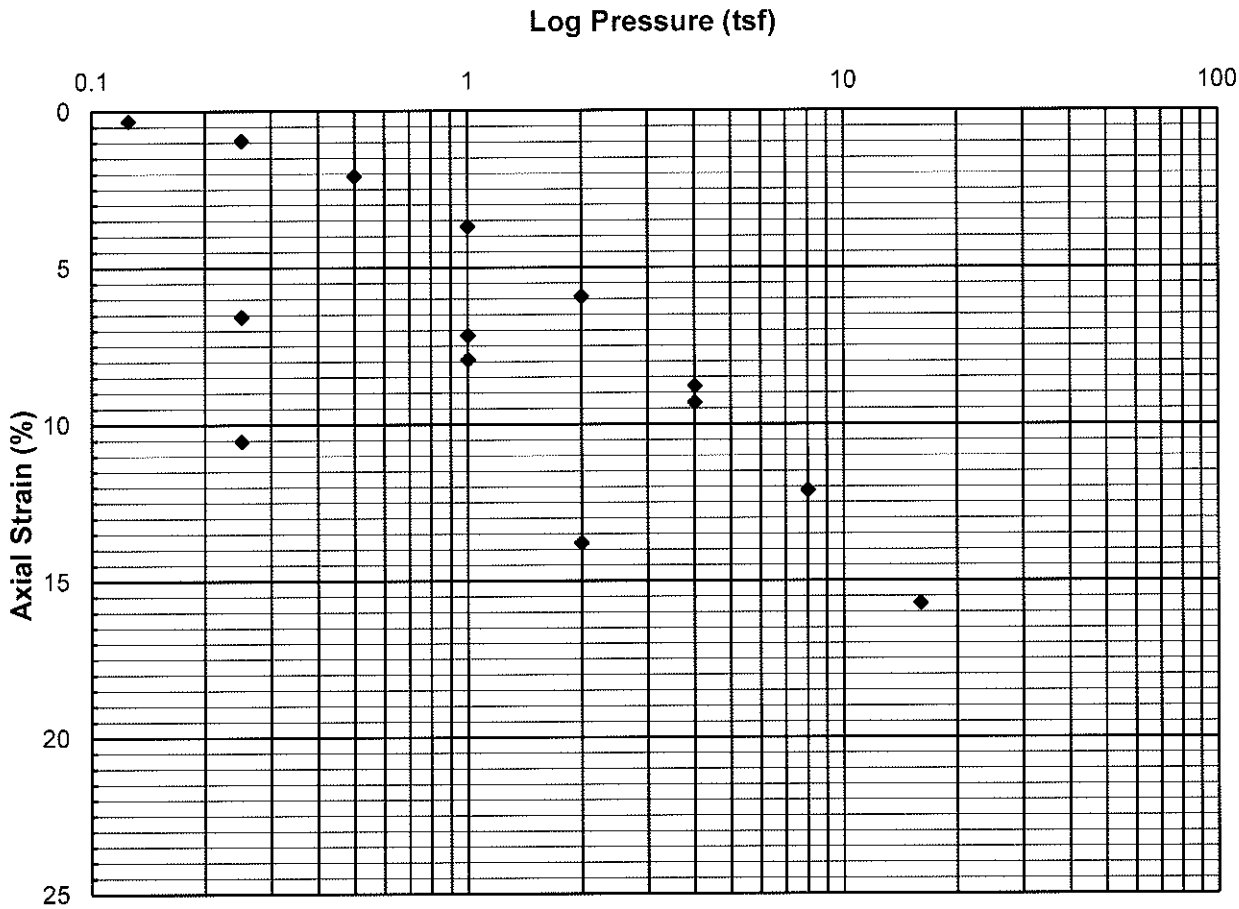
Schnabel ENGINEERING

GRADATION CURVE

Project: Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Contract: 14221002.01

SIEVE 1/SHEET 14221002.01 POSSUM POINT.GPJ SCHNABEL DATA TEMPLATE 2008 04 22.GDT 9/4/14



Probable Preconsolidation Pressure (Pp), tsf: *1.1*		**Recompression Ratio ($C_{\varepsilon r}$):**	*0.021*
Type of Specimen: *Tube Sample*		**Compression Ratio ($C_{\varepsilon c}$):**	*0.120*
Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown*		**Initial**	**Final**
		Water Content, % *31.4*	*24.4*
LL: *60* **PI:** *37* **Gs:** *2.73* **P_o' (tsf):** *0.47*		**Void Ratio** *0.85*	*0.66*
% < No. 200: *97.9* **Test Method:** *ASTM D2435 Method A*		**Saturation, %** *100*	*100*
Test Condition: *Inundated @ 0.05 tsf*		**Dry Unit Weight, pcf** *91.9*	*102.7*
Remarks:		**Project:** Dominion - Possum Point Ash Ponds ABC - Phase 2	
Average Water Content of Trimmings, %: *29.1*		**Location** *Prince William County, Virginia*	
Schnabel ENGINEERING		**Boring:** *B-02*	**Schnabel No.:** *14221002.01*
		Depth: *10-12 ft.*	**Elevation:** *12 to 10 ft.*
		Date: *9/30/2014*	**Reviewed by:** *CJS*
		Consolidation Test Report	

Consol 5/2007 Rev. 6

Consolidation Test Data Sheet

Consolidometer ID: 2 9/30/14

Schnabel Contract: 14221002.01

Test Method: *ASTM D2435 Method A*

Test Condition: *Inundated @ 0.05 tsf*

Project: *Dominion - Possum Point Ash Ponds ABC - Phase 2*

Initial Height of Specimen (H_o), in.: 0.7499

Height of Solids (H_s), in.: 0.4045

Boring No.: *B-02*

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Depth: *10-12 ft.*

Final Height Differential (Hd), in.: -0.0025

Reviewed by: CJS

Pressure, P (tsf)	TimeReadings Required	Date Load Applied	Time Load Applied	Load Applied By	A: Final[1] Dial Reading, D_{fi} x 10^{-4} in.	B: Apparatus Correction[2], D_{ci} x 10^{-4} in.	C: Cumulative Change in Height[3], ΔH_i in.	D: Height of Voids[4], H_{vi} in.	Vertical Strain[5], ε_i (%)	Void Ratio[6], e_i
0.125		8/14/2014	9:00	DWC	21	-2	0.0023	0.3431	0.31	0.848
0.25		8/15/2014	9:00	DWC	70	-1	0.0071	0.3383	0.95	0.836
0.5		8/16/2014	9:00	DWC	158	2	0.0156	0.3298	2.08	0.815
1		8/18/2014	9:00	DWC	282	6	0.0276	0.3178	3.68	0.786
2		8/19/2014	9:00	DWC	454	10	0.0444	0.3010	5.92	0.744
4		8/20/2014	9:00	DWC	673	15	0.0658	0.2796	8.78	0.691
1		8/21/2014	9:00	DWC	601	6	0.0595	0.2859	7.93	0.707
0.25		8/22/2014	9:00	DWC	491	-1	0.0492	0.2962	6.56	0.732
1		8/23/2014	9:00	DWC	543	6	0.0537	0.2917	7.16	0.721
4		8/25/2014	9:00	DWC	713	15	0.0698	0.2756	9.31	0.681
8		8/26/2014	9:00	DWC	932	23	0.0909	0.2545	12.12	0.629
16		8/27/2014	9:00	DWC	1211	32	0.1179	0.2275	15.72	0.562
2		8/28/2014	9:00	DWC	1044	10	0.1034	0.2420	13.79	0.598
0.25		8/29/2014	9:00	DWC	788	-1	0.0789	0.2665	10.52	0.659

Notes:
1. "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
2. Correction value, for the current pressure, from the consolidometer's calibration curve.
3. $\Delta H = D_{fi} - D_o - D_{ci}$ = Col. A - D_o - Col. B
4. $H_{vi} = (H_o - H_s) - \Delta H$
5. $\varepsilon_i = (\Delta H / H_o) \times 100$ = (Col. C / H_o) x 100
6. $e_i = H_{vi}$ / Hs = Col. D / Hs

Consol 5/2007 Rev. 6

Schnabel ENGINEERING

Load Time Readings

9/30/14

Project: Dominion - Possum Point
Schnabel Contract: 14221002.01
Boring No.: B-02 Depth: 10-12 ft.

Consol. ID: 2 Reviewed by: CJS

Test Drainage Conditions: Double

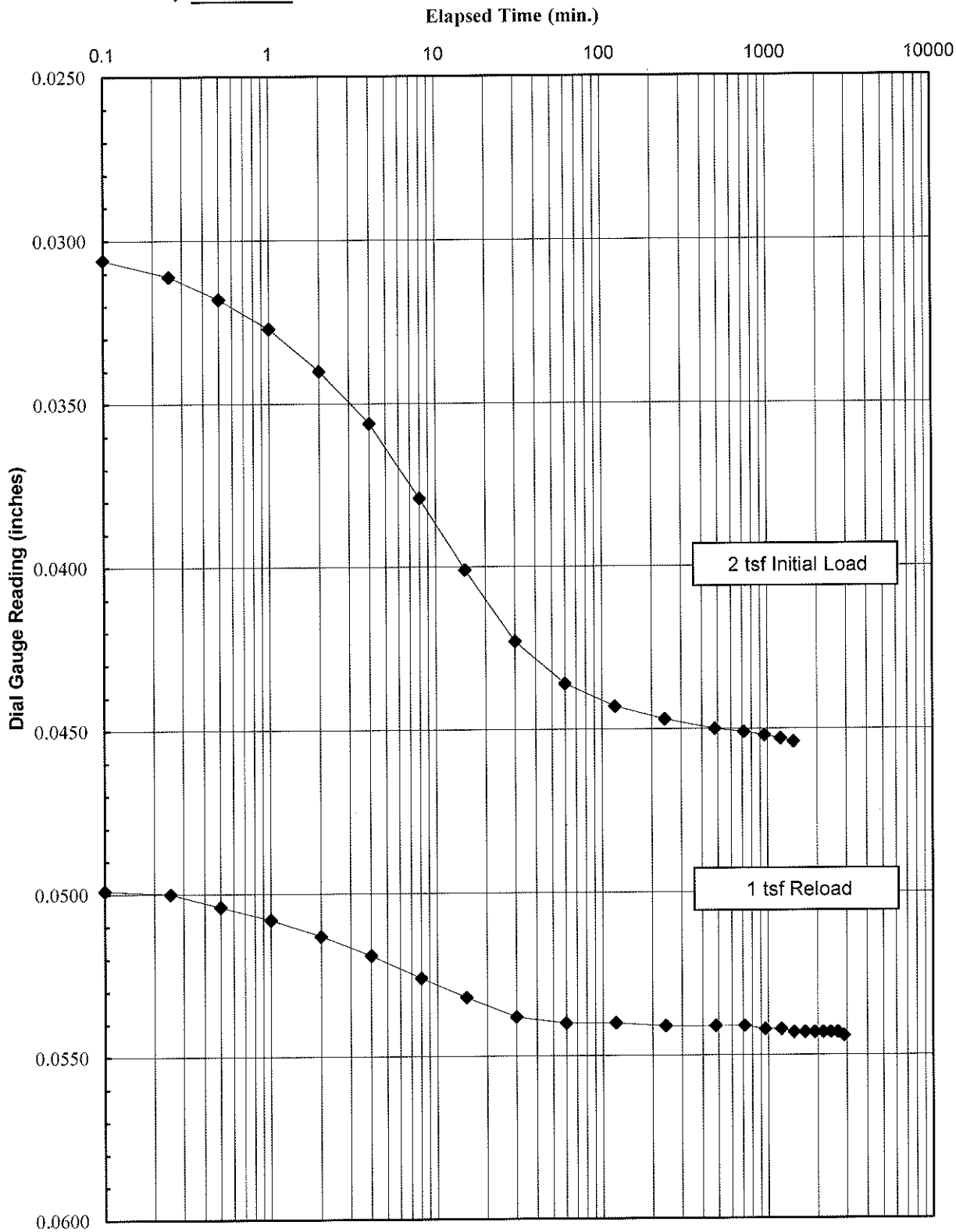
Elapsed Time (min.)	Dial Gauge Readings (inches)					
	2 tsf Initial Load 8/19/2014	1 tsf Reload 8/23/2014				
0.1	0.0306	0.0499				
0.25	0.0311	0.0500				
0.5	0.0318	0.0504				
1	0.0327	0.0508				
2	0.0340	0.0513				
4	0.0356	0.0519				
8	0.0379	0.0526				
15	0.0401	0.0532				
30	0.0423	0.0538				
60	0.0436	0.0540				
120	0.0443	0.0540				
240	0.0447	0.0541				
480	0.0450	0.0541				
720	0.0451	0.0541				
960	0.0452	0.0542				
1200	0.0453	0.0542				
1440	0.0454	0.0543				
1680		0.0543				
1920		0.0543				
2160		0.0543				
2400		0.0543				
2640		0.0543				
2880		0.0544				

Consol 5/2007 Rev. 6

Consolidation Time Curves

9/30/14

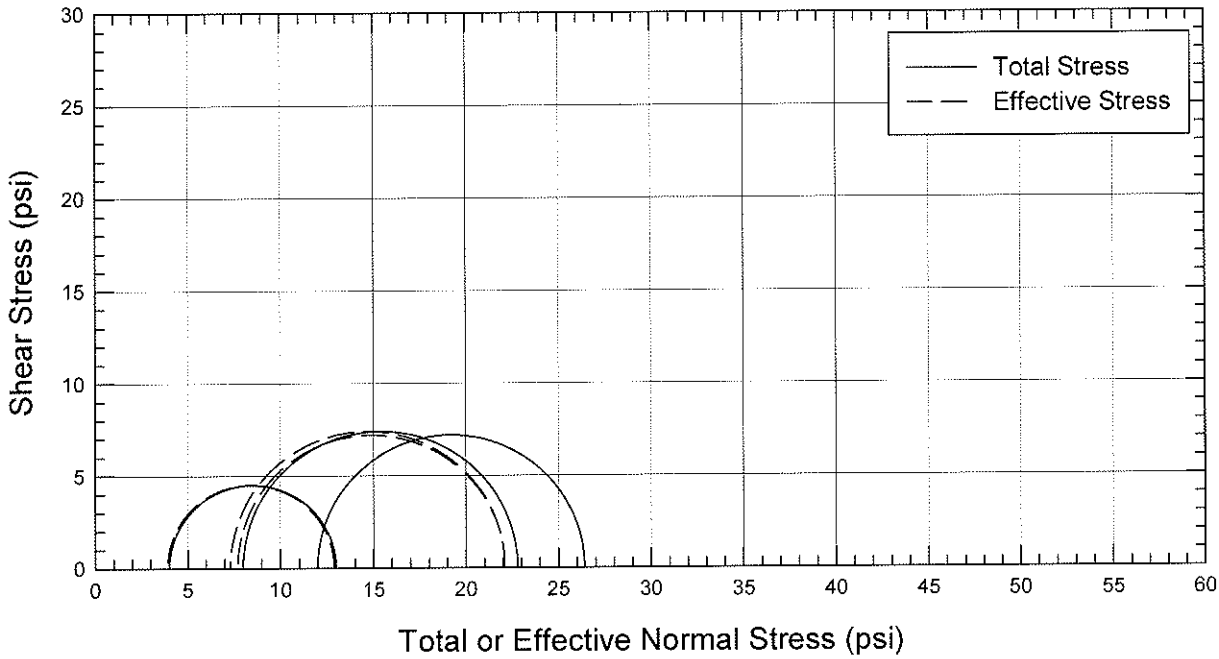
Project: Dominion - Possum Point
Schnabel Contract: 14221002.01
Boring No.: B-02 Depth: 10-12 ft.
Reviewed by: CJS Test Drainage Conditions: Double



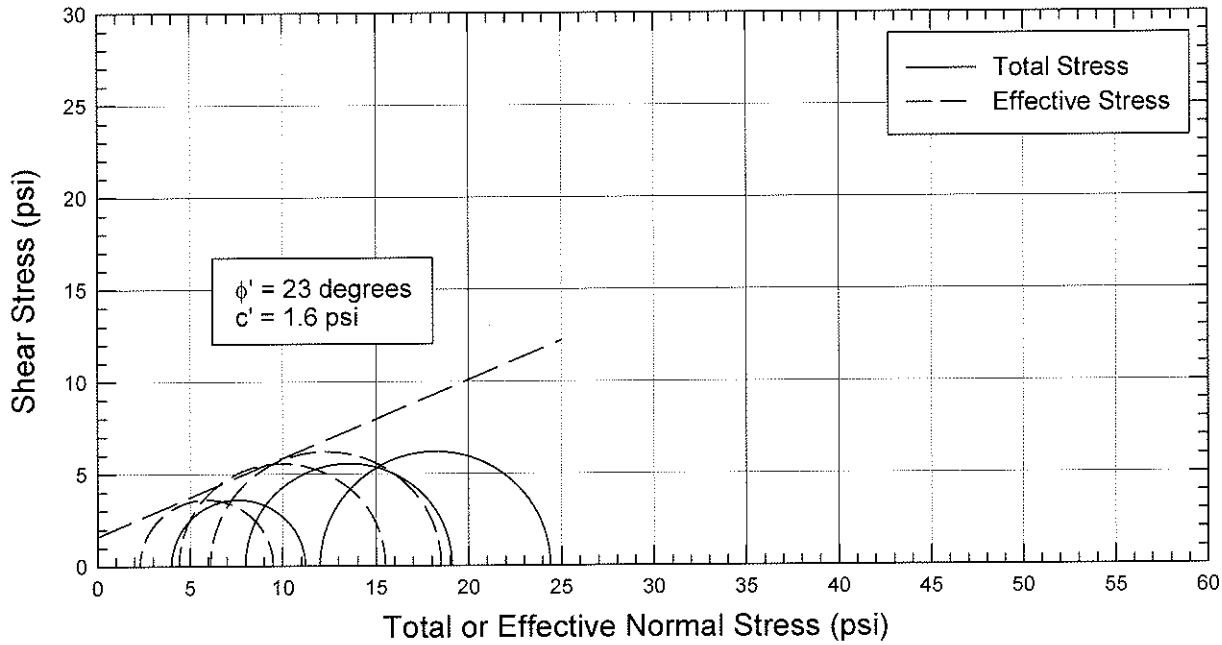
Consol 5/2007 Rev. 6

Consolidated Undrained (CU) Triaxial Shear (ASTM D4767)

Mohr Stress Circles at Maximum Deviator Stress Criterion



Mohr Stress Circles at Maximum Principal Stress Ratio Criterion



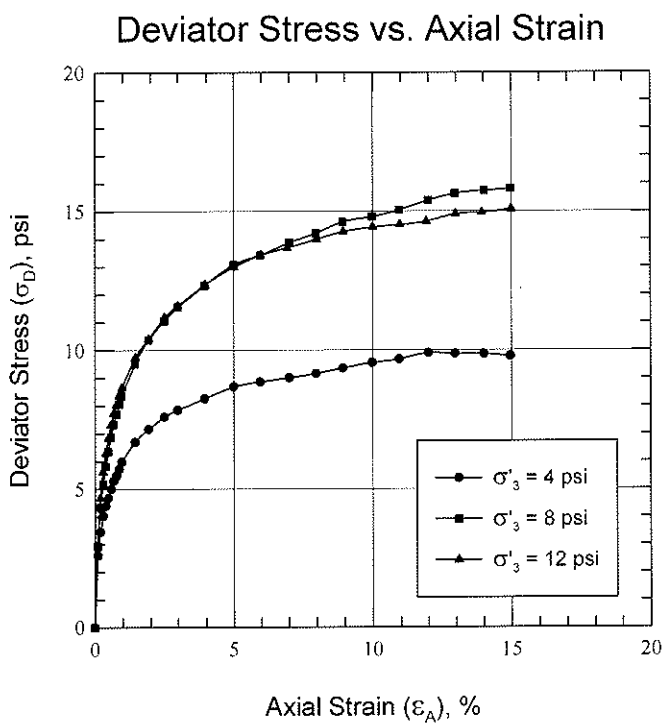
Boring No.: *B-02* Depth: *10-14 ft* Elevation: *12 to 8 ft* SE Contract: *14221002.01* Date: *9/30/14*

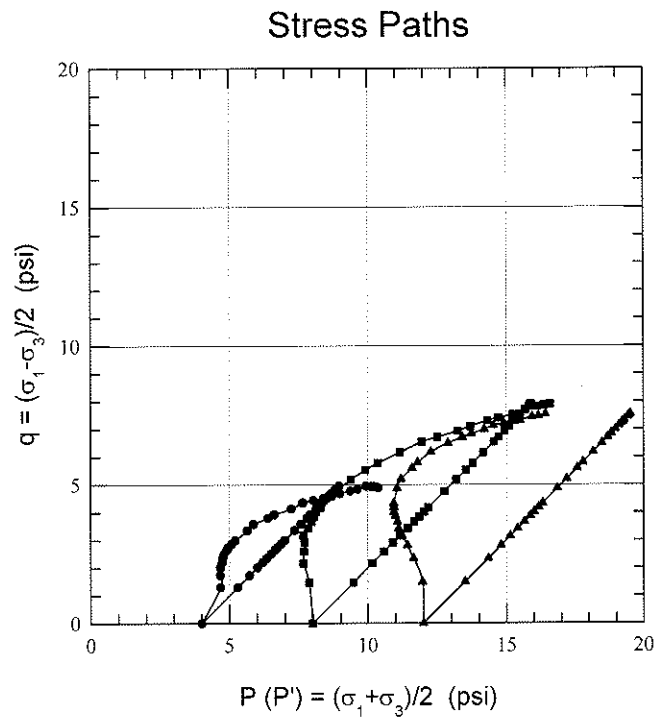
Sample Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown* Reviewed By: *CJS*

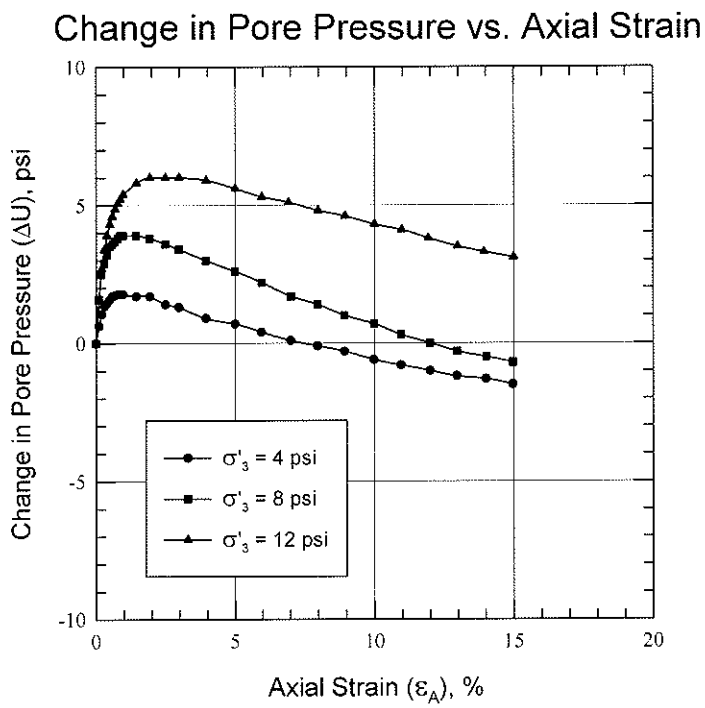
Specimen Type: *Tube Sample* Gs: *2.70 (assumed)* LL: *60* PI: *37* %<200: *97.9*

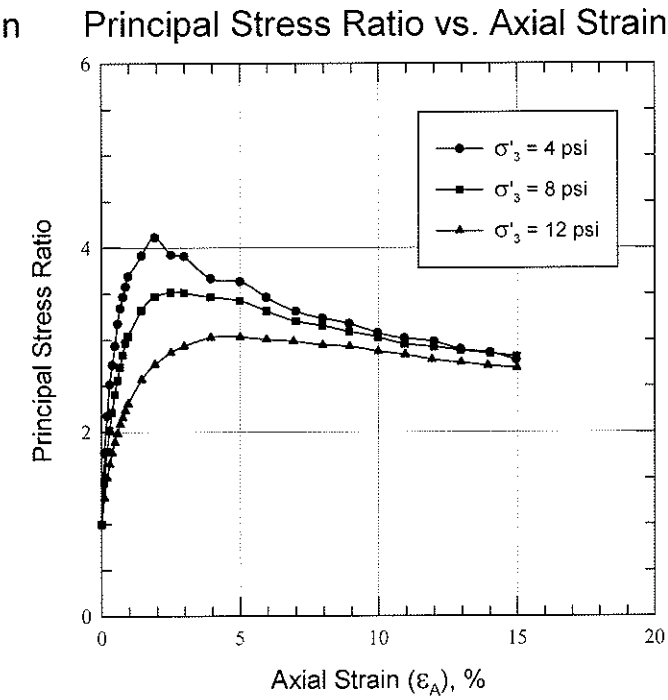
Schnabel ENGINEERING

Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia









Boring No.: *B-02* Depth: *10-14 ft* Elevation: *12 to 8 ft* SE Contract: *14221002.01* Date: *9/30/14*

Sample Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown* Reviewed By: *CJS*

Specimen Type: *Tube Sample* Gs: *2.70 (assumed)* LL: *60* PI: *37* %<200: *97.9*

Schnabel ENGINEERING

Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01* Date: *9/30/2014*
Boring No.: *B-02*
Depth: *12-14 ft.*
Elevation: *10 to 8 ft.* Reviewed by: *CJS*
Confining Stress (psi): *4.0*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.878	2.87
Height (in)	5.798	5.80
Area (in^2)	6.51	6.48
Moisture (%)	27.2	
W_{solids} (lbs)	2.09	
ρ_{wet} (pcf)	122.0	
ρ_{dry} (pcf)	95.9	96.3
Void Ratio	0.78	0.77
Saturation, %	96	100

Shear Testing Conditions	
Cell Pressure (psi):	13.0
Back Pressure (psi):	9.0
Eff. Confining Stress (psi):	4.0
Final B check	0.97
t_{50} (min.):	20.8
Rate of Strain (%/min):	0.0193

Filter strips used? *YES*

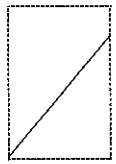
Specimen Type: *Tube Sample*

Soil Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown (Visual Classification)*

Liquid Limit: –
Plasticity Index: –
% finer that No. 200: –
Specific Gravity: *2.73*

Remarks: *Gs assumed.*

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	9.0	0.0	6.48	4.0	4.0	4.0	4.0	0.0	1.00	0.00	4.0	4.0	0.0
1	17.0	16.9	0.006	0.10	9.6	0.6	6.49	6.6	4.0	6.0	3.4	2.6	1.77	0.24	5.3	4.7	1.3
2	22.7	22.5	0.012	0.20	10.1	1.1	6.50	7.5	4.0	6.4	2.9	3.5	2.18	0.31	5.7	4.7	1.7
3	26.6	26.2	0.017	0.30	10.3	1.3	6.50	8.0	4.0	6.7	2.7	4.0	2.52	0.33	6.0	4.7	2.0
4	29.1	28.6	0.023	0.39	10.5	1.5	6.51	8.4	4.0	6.9	2.5	4.4	2.73	0.33	6.2	4.7	2.2
5	31.1	30.5	0.028	0.49	10.6	1.6	6.51	8.7	4.0	7.1	2.4	4.7	2.93	0.34	6.3	4.8	2.3
6	33.3	32.7	0.034	0.58	10.7	1.7	6.52	9.0	4.0	7.3	2.3	5.0	3.18	0.34	6.5	4.8	2.5
7	35.4	34.6	0.039	0.68	10.7	1.7	6.53	9.3	4.0	7.6	2.3	5.3	3.34	0.33	6.6	4.9	2.6
8	36.7	35.8	0.045	0.77	10.8	1.8	6.53	9.5	4.0	7.7	2.2	5.5	3.46	0.32	6.7	5.0	2.7
9	38.5	37.4	0.050	0.87	10.8	1.8	6.54	9.7	4.0	7.9	2.2	5.7	3.58	0.31	6.9	5.1	2.9
10	40.3	39.1	0.056	0.97	10.8	1.8	6.55	10.0	4.0	8.2	2.2	6.0	3.69	0.30	7.0	5.2	3.0
11	45.8	44.1	0.084	1.45	10.7	1.7	6.58	10.7	4.0	9.0	2.3	6.7	3.91	0.25	7.3	5.6	3.3
12	49.6	47.3	0.112	1.92	10.7	1.7	6.61	11.2	4.0	9.5	2.3	7.2	4.11	0.24	7.6	5.9	3.6
13	53.0	50.5	0.145	2.50	10.4	1.4	6.65	11.6	4.0	10.2	2.6	7.6	3.92	0.18	7.8	6.4	3.8
14	55.0	52.4	0.173	2.98	10.3	1.3	6.68	11.8	4.0	10.5	2.7	7.8	3.91	0.17	7.9	6.6	3.9
15	58.5	55.7	0.228	3.94	9.9	0.9	6.75	12.3	4.0	11.4	3.1	8.3	3.66	0.11	8.1	7.2	4.1
16	62.3	59.2	0.289	4.99	9.7	0.7	6.82	12.7	4.0	12.0	3.3	8.7	3.63	0.08	8.3	7.6	4.3
17	64.3	61.1	0.345	5.95	9.4	0.4	6.89	12.9	4.0	12.5	3.6	8.9	3.46	0.05	8.4	8.0	4.4
18	66.2	62.8	0.406	7.00	9.1	0.1	6.97	13.0	4.0	12.9	3.9	9.0	3.31	0.01	8.5	8.4	4.5
19	68.2	64.5	0.462	7.96	8.9	-0.1	7.04	13.2	4.0	13.3	4.1	9.2	3.23	-0.01	8.6	8.7	4.6
20	70.4	66.6	0.517	8.92	8.7	-0.3	7.12	13.3	4.0	13.6	4.3	9.3	3.17	-0.03	8.7	9.0	4.7
21	72.8	68.7	0.578	9.98	8.4	-0.6	7.20	13.5	4.0	14.1	4.6	9.5	3.07	-0.06	8.8	9.4	4.8
22	74.7	70.4	0.634	10.93	8.2	-0.8	7.28	13.7	4.0	14.5	4.8	9.7	3.01	-0.08	8.8	9.6	4.8
23	77.4	72.9	0.695	11.99	8.0	-1.0	7.37	13.9	4.0	14.9	5.0	9.9	2.98	-0.10	8.9	9.9	4.9
24	78.2	73.5	0.750	12.95	7.8	-1.2	7.45	13.9	4.0	15.1	5.2	9.9	2.90	-0.12	8.9	10.1	4.9
25	79.3	74.3	0.812	14.00	7.7	-1.3	7.54	13.9	4.0	15.2	5.3	9.9	2.86	-0.13	8.9	10.2	4.9
26	79.8	74.6	0.867	14.96	7.5	-1.5	7.62	13.8	4.0	15.3	5.5	9.8	2.78	-0.15	8.9	10.4	4.9

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CU 8/2006 Rev. 1

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01* Date: *9/30/2014*
Boring No.: *B-02*
Depth: *12-14 ft.*
Elevation: *10 to 8 ft.* Reviewed by: *CJS*
Confining Stress (psi): *8.0*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.878	2.87
Height (in)	5.806	5.79
Area (in^2)	6.51	6.46
Moisture (%)	25.5	
W_{solids} (lbs)	2.16	
ρ_{wet} (pcf)	124.3	
ρ_{dry} (pcf)	99.0	100.1
Void Ratio	0.72	0.70
Saturation, %	97	100

Shear Testing Conditions	
Cell Pressure (psi):	23.0
Back Pressure (psi):	15.0
Eff. Confining Stress (psi):	8.0
Final B check	0.97
t_{50} (min.):	17.8
Rate of Strain (%/min):	0.0224

Filter strips used? *YES*

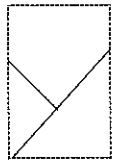
Specimen Type: *Tube Sample*

Soil Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown (Visual Classification)*

Liquid Limit: --
Plasticity Index: --
% finer that No. 200: --
Specific Gravity: *2.73*

Remarks: *Gs assumed.*

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	15.0	0.0	6.46	8.0	8.0	8.0	8.0	0.0	1.00	0.00	8.0	8.0	0.0
1	19.1	19.0	0.006	0.10	16.6	1.6	6.46	10.9	8.0	9.3	6.4	2.9	1.46	0.55	9.5	7.9	1.5
2	28.3	28.1	0.011	0.19	17.5	2.5	6.47	12.3	8.0	9.8	5.5	4.3	1.79	0.58	10.2	7.7	2.2
3	34.0	33.7	0.017	0.29	17.9	2.9	6.48	13.2	8.0	10.3	5.1	5.2	2.02	0.56	10.6	7.7	2.6
4	38.2	37.8	0.022	0.38	18.2	3.2	6.48	13.8	8.0	10.6	4.8	5.8	2.21	0.55	10.9	7.7	2.9
5	41.7	41.1	0.028	0.48	18.5	3.5	6.49	14.3	8.0	10.8	4.5	6.3	2.41	0.55	11.2	7.7	3.2
6	45.3	44.6	0.033	0.58	18.6	3.6	6.49	14.9	8.0	11.3	4.4	6.9	2.56	0.52	11.4	7.8	3.4
7	48.5	47.7	0.039	0.67	18.7	3.7	6.50	15.3	8.0	11.6	4.3	7.3	2.71	0.50	11.7	8.0	3.7
8	51.0	50.1	0.044	0.77	18.8	3.8	6.51	15.7	8.0	11.9	4.2	7.7	2.83	0.49	11.9	8.1	3.9
9	53.5	52.5	0.050	0.86	18.9	3.9	6.51	16.1	8.0	12.2	4.1	8.1	2.97	0.48	12.0	8.1	4.0
10	55.6	54.5	0.056	0.96	18.9	3.9	6.52	16.4	8.0	12.5	4.1	8.4	3.04	0.47	12.2	8.3	4.2
11	64.0	62.3	0.083	1.44	18.9	3.9	6.55	17.5	8.0	13.6	4.1	9.5	3.32	0.41	12.8	8.9	4.8
12	70.6	68.3	0.111	1.92	18.8	3.8	6.58	18.4	8.0	14.6	4.2	10.4	3.47	0.37	13.2	9.4	5.2
13	75.8	73.3	0.144	2.50	18.6	3.6	6.62	19.1	8.0	15.5	4.4	11.1	3.51	0.33	13.5	9.9	5.5
14	79.5	76.9	0.172	2.98	18.4	3.4	6.65	19.6	8.0	16.2	4.6	11.6	3.51	0.29	13.8	10.4	5.8
15	85.6	82.8	0.228	3.94	18.0	3.0	6.72	20.3	8.0	17.3	5.0	12.3	3.47	0.24	14.2	11.2	6.2
16	91.9	88.9	0.289	4.99	17.6	2.6	6.80	21.1	8.0	18.5	5.4	13.1	3.42	0.20	14.5	11.9	6.5
17	95.4	92.1	0.344	5.95	17.2	2.2	6.87	21.4	8.0	19.2	5.8	13.4	3.31	0.16	14.7	12.5	6.7
18	99.8	96.3	0.406	7.01	16.7	1.7	6.94	21.9	8.0	20.2	6.3	13.9	3.20	0.12	14.9	13.2	6.9
19	103.4	99.7	0.461	7.97	16.4	1.4	7.02	22.2	8.0	20.8	6.6	14.2	3.15	0.10	15.1	13.7	7.1
20	107.5	103.6	0.517	8.93	16.0	1.0	7.09	22.6	8.0	21.6	7.0	14.6	3.09	0.07	15.3	14.3	7.3
21	110.3	106.2	0.578	9.98	15.7	0.7	7.17	22.8	8.0	22.1	7.3	14.8	3.03	0.05	15.4	14.7	7.4
22	113.4	109.1	0.633	10.94	15.3	0.3	7.25	23.0	8.0	22.7	7.7	15.0	2.95	0.02	15.5	15.2	7.5
23	117.4	112.9	0.694	12.00	15.0	0.0	7.34	23.4	8.0	23.4	8.0	15.4	2.92	0.00	15.7	15.7	7.7
24	120.7	116.0	0.750	12.96	14.7	-0.3	7.42	23.6	8.0	23.9	8.3	15.6	2.88	-0.02	15.8	16.1	7.8
25	123.2	118.2	0.811	14.01	14.5	-0.5	7.51	23.7	8.0	24.2	8.5	15.7	2.85	-0.03	15.9	16.4	7.9
26	125.2	120.0	0.867	14.97	14.3	-0.7	7.59	23.8	8.0	24.5	8.7	15.8	2.82	-0.04	15.9	16.6	7.9

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CU 8/2006 Rev. 1

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01*
Boring No.: *B-02*
Depth: *10-12 ft.*
Elevation: *12 to 10 ft.*
Confining Stress (psi): *12.0*

Date: *9/30/2014*

Reviewed by: *CJS*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.876	2.85
Height (in)	5.823	5.78
Area (in^2)	6.50	6.37
Moisture (%)	24.0	
W_{solids} (lbs)	2.18	
ρ_{wet} (pcf)	123.3	
ρ_{dry} (pcf)	99.5	102.3
Void Ratio	0.71	0.67
Saturation, %	92	100

Shear Testing Conditions	
Cell Pressure (psi):	21.0
Back Pressure (psi):	9.0
Eff. Confining Stress (psi):	12.0
Final B check	0.97
t_{50} (min.):	13.4
Rate of Strain (%/min):	0.0298

Filter strips used? *YES*

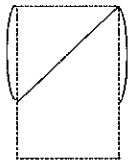
Specimen Type: *Tube Sample*

Soil Description: *FAT CLAY (CH), contains sand, mottled light gray and light brown*

Liquid Limit: *60*
Plasticity Index: *37*
% finer that No. 200: *97.9*
Specific Gravity: *2.73*

Remarks:

Failure Sketch



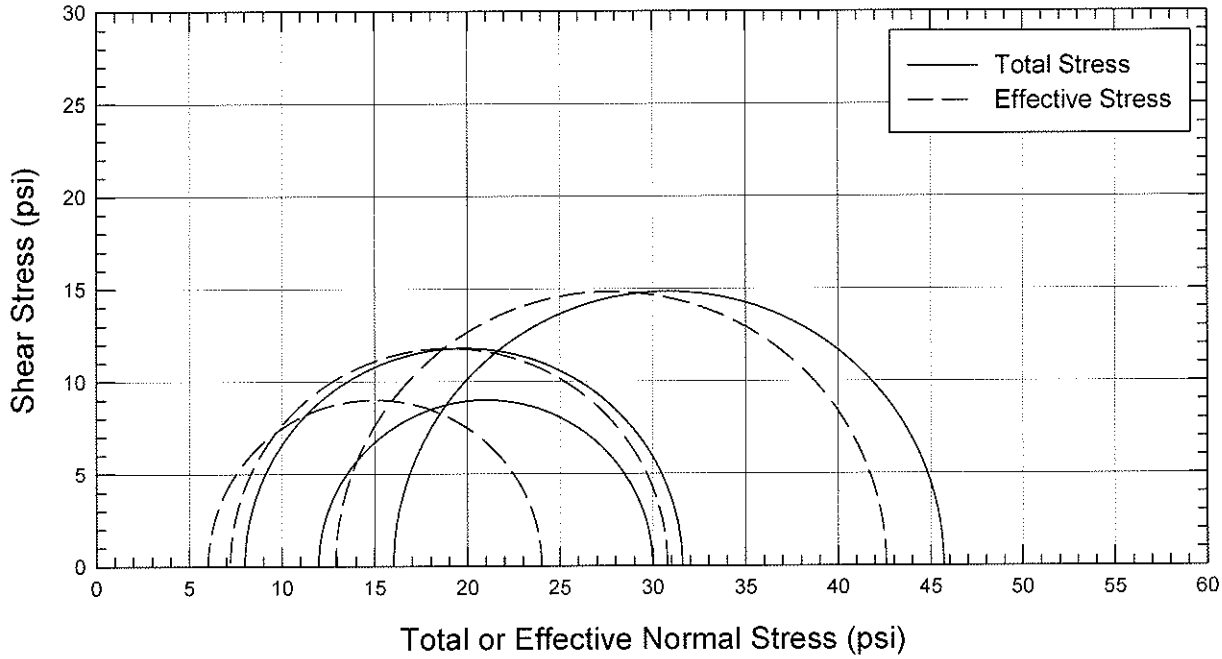
Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	9.0	0.0	6.37	12.0	12.0	12.0	12.0	0.0	1.00	0.00	12.0	12.0	0.0
1	19.2	19.1	0.006	0.10	10.5	1.5	6.37	15.0	12.0	13.5	10.5	3.0	1.29	0.51	13.5	12.0	1.5
2	30.1	29.9	0.012	0.20	11.7	2.7	6.38	16.7	12.0	14.0	9.3	4.7	1.50	0.58	14.3	11.6	2.3
3	36.3	35.9	0.017	0.30	12.4	3.4	6.39	17.6	12.0	14.2	8.6	5.6	1.65	0.60	14.8	11.4	2.8
4	40.7	40.2	0.023	0.39	12.9	3.9	6.39	18.3	12.0	14.4	8.1	6.3	1.78	0.62	15.1	11.2	3.1
5	44.3	43.8	0.028	0.49	13.3	4.3	6.40	18.8	12.0	14.5	7.7	6.8	1.89	0.63	15.4	11.1	3.4
6	47.5	46.8	0.034	0.58	13.6	4.6	6.40	19.3	12.0	14.7	7.4	7.3	1.99	0.63	15.7	11.1	3.7
7	50.4	49.6	0.039	0.68	13.9	4.9	6.41	19.7	12.0	14.9	7.1	7.7	2.08	0.63	15.9	11.0	3.9
8	52.4	51.5	0.045	0.78	14.1	5.1	6.42	20.0	12.0	15.0	6.9	8.0	2.16	0.63	16.0	10.9	4.0
9	54.8	53.7	0.050	0.87	14.2	5.2	6.42	20.4	12.0	15.1	6.8	8.4	2.23	0.62	16.2	11.0	4.2
10	56.8	55.6	0.056	0.97	14.4	5.4	6.43	20.7	12.0	15.3	6.6	8.7	2.31	0.62	16.3	10.9	4.3
11	64.6	62.8	0.084	1.45	14.8	5.8	6.46	21.7	12.0	15.9	6.2	9.7	2.57	0.60	16.9	11.1	4.9
12	69.8	67.5	0.112	1.93	15.0	6.0	6.49	22.4	12.0	16.4	6.0	10.4	2.73	0.58	17.2	11.2	5.2
13	75.5	73.0	0.145	2.51	15.0	6.0	6.53	23.2	12.0	17.2	6.0	11.2	2.86	0.54	17.6	11.6	5.6
14	78.7	76.1	0.173	2.99	15.0	6.0	6.56	23.6	12.0	17.6	6.0	11.6	2.93	0.52	17.8	11.8	5.8
15	84.7	81.9	0.228	3.95	14.9	5.9	6.63	24.4	12.0	18.5	6.1	12.4	3.03	0.48	18.2	12.3	6.2
16	90.1	87.1	0.289	5.00	14.6	5.6	6.70	25.0	12.0	19.4	6.4	13.0	3.03	0.43	18.5	12.9	6.5
17	94.1	90.9	0.345	5.96	14.3	5.3	6.77	25.4	12.0	20.1	6.7	13.4	3.00	0.39	18.7	13.4	6.7
18	97.1	93.6	0.400	6.93	14.1	5.1	6.84	25.7	12.0	20.6	6.9	13.7	2.98	0.37	18.8	13.7	6.8
19	100.5	96.8	0.462	7.98	13.8	4.8	6.92	26.0	12.0	21.2	7.2	14.0	2.94	0.34	19.0	14.2	7.0
20	103.6	99.7	0.517	8.94	13.6	4.6	6.99	26.3	12.0	21.7	7.4	14.3	2.93	0.32	19.1	14.5	7.1
21	106.2	102.1	0.578	10.00	13.3	4.3	7.07	26.4	12.0	22.1	7.7	14.4	2.87	0.30	19.2	14.9	7.2
22	108.1	103.8	0.634	10.96	13.1	4.1	7.15	26.5	12.0	22.4	7.9	14.5	2.84	0.28	19.3	15.2	7.3
23	110.3	105.8	0.689	11.92	12.8	3.8	7.23	26.6	12.0	22.8	8.2	14.6	2.78	0.26	19.3	15.5	7.3
24	113.7	109.0	0.750	12.98	12.5	3.5	7.32	26.9	12.0	23.4	8.5	14.9	2.75	0.24	19.4	15.9	7.4
25	115.6	110.6	0.806	13.94	12.3	3.3	7.40	27.0	12.0	23.7	8.7	15.0	2.72	0.22	19.5	16.2	7.5
26	118.1	112.9	0.867	15.00	12.1	3.1	7.49	27.1	12.0	24.0	8.9	15.1	2.69	0.21	19.5	16.4	7.5

Notes:
1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

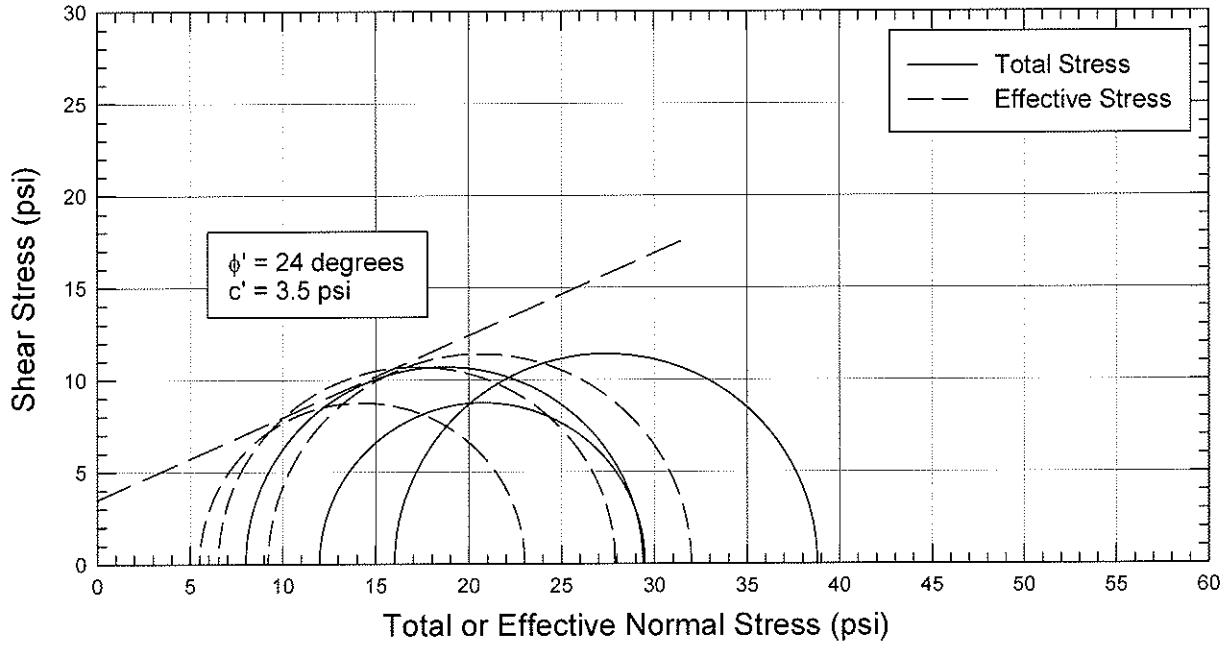
CU 8/2006 Rev. 1

Consolidated Undrained (CU) Triaxial Shear (ASTM D4767)

Mohr Stress Circles at Maximum Deviator Stress Criterion



Mohr Stress Circles at Maximum Principal Stress Ratio Criterion



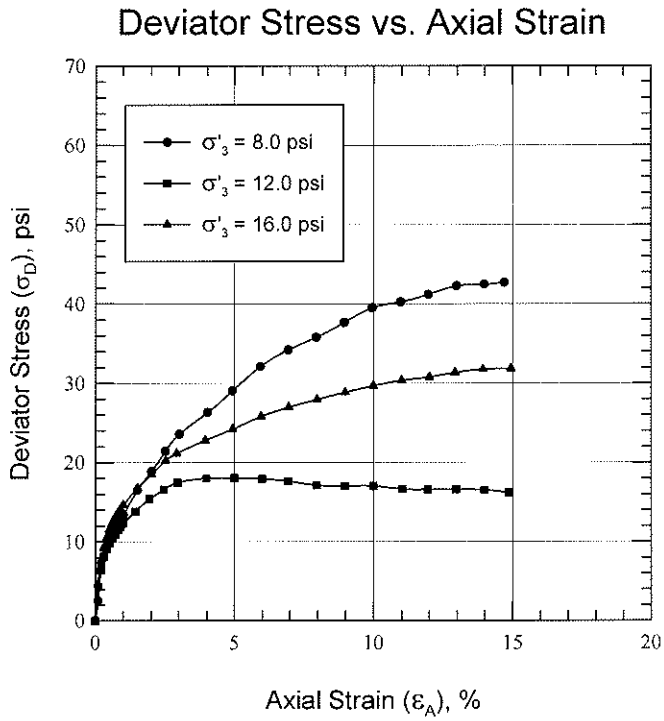
Boring No.: *B-02* Depth: *27-29 ft* Elevation: *-5 to -7 ft* SE Contract: *14221002.01* Date: *9/30/14*

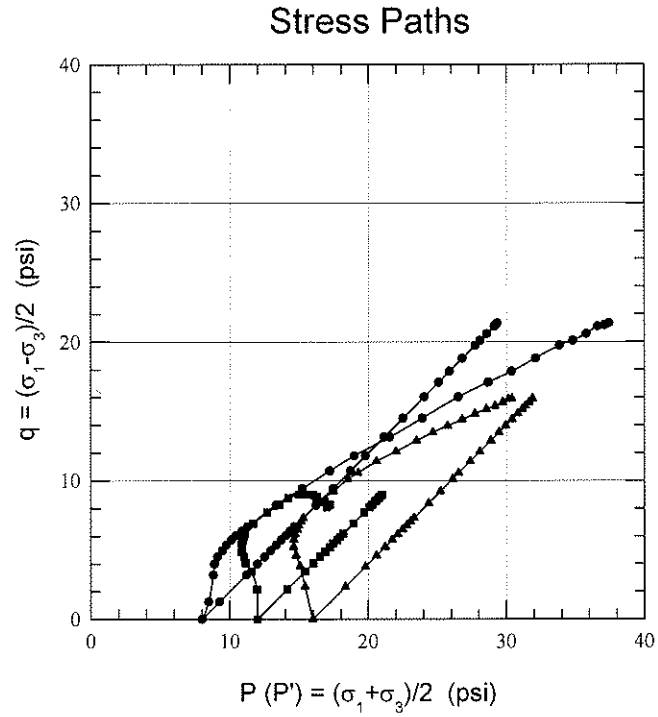
Sample Description: *SANDY LEAN CLAY (CL), contains gravel, blue gray* Reviewed By: *CJS*

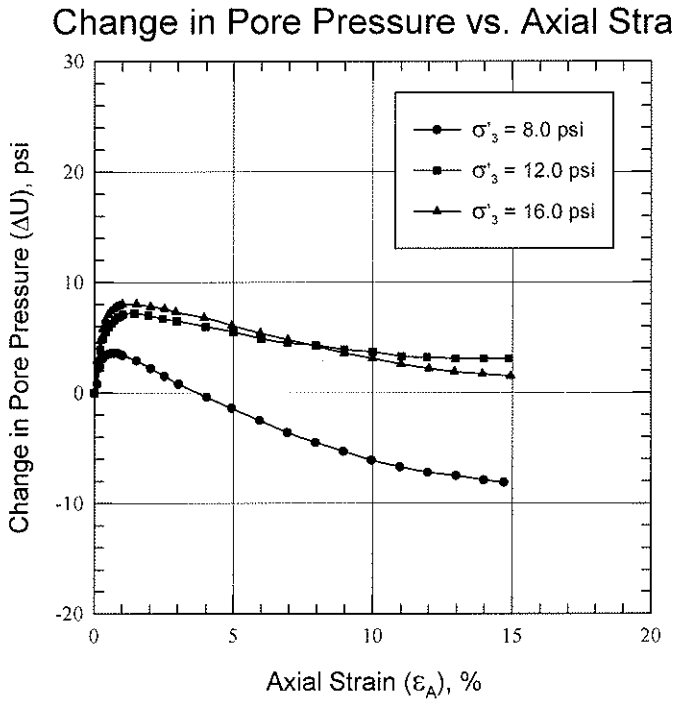
Specimen Type: *Tube Sample* Gs: *2.70 (assumed)* LL: *49* PI: *30* %<200: *52.4*

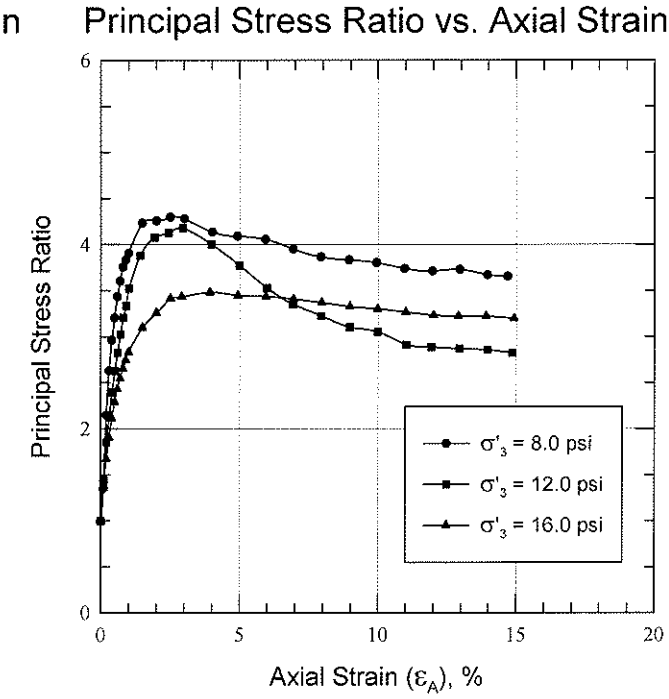
Schnabel ENGINEERING

Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia









Boring No.: *B-02* Depth: *27-29 ft* Elevation: *-5 to -7 ft* SE Contract: *14221002.01* Date: *9/30/14*

Sample Description: *SANDY LEAN CLAY (CL), contains gravel, blue gray* Reviewed By: *CJS*

Specimen Type: *Tube Sample* Gs: *2.70 (assumed)* LL: *49* PI: *30* %<200: *52.4*

Schnabel ENGINEERING

Dominion - Possum Point
Ash Ponds ABC - Phase 2
Prince William County, Virginia

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01*
Boring No.: *B-02*
Depth: *27-29 ft.*
Elevation: *-5 to -7 ft*
Confining Stress (psi): *8.0*

Date: *9/30/2014*

Reviewed by: *CJS*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.878	2.87
Height (in)	5.812	5.81
Area (in^2)	6.51	6.47
Moisture (%)	24.1	
W_{solids} (lbs)	2.18	
ρ_{wet} (pcf)	123.5	
ρ_{dry} (pcf)	99.5	100.2
Void Ratio	0.69	0.68
Saturation, %	94	95

Shear Testing Conditions	
Cell Pressure (psi):	33.0
Back Pressure (psi):	25.0
Eff. Confining Stress (psi):	8.0
Final B check	0.98
t_{50} (min.):	0.6
Rate of Strain (%/min):	0.0208

Filter strips used? *NO*

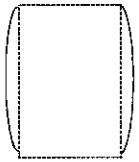
Specimen Type: *Tube Sample*

Soil Description: *SANDY LEAN CLAY (CL), contains gravel, blue gray*

Liquid Limit: *49*
Plasticity Index: *30*
% finer that No. 200: *52.4*
Specific Gravity: *2.70*

Remarks: *Gs assumed.*

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	25.0	0.0	6.47	8.0	8.0	8.0	8.0	0.0	1.00	0.00	8.0	8.0	0.0
1	16.5	16.5	0.006	0.10	25.8	0.8	6.48	10.5	8.0	9.7	7.2	2.5	1.35	0.31	9.3	8.5	1.3
2	41.7	41.7	0.012	0.20	27.4	2.4	6.48	14.4	8.0	12.0	5.6	6.4	2.15	0.37	11.2	8.8	3.2
3	51.9	51.8	0.017	0.30	28.1	3.1	6.49	16.0	8.0	12.9	4.9	8.0	2.63	0.39	12.0	8.9	4.0
4	58.7	58.6	0.023	0.40	28.4	3.4	6.50	17.0	8.0	13.6	4.6	9.0	2.96	0.38	12.5	9.1	4.5
5	64.6	64.5	0.029	0.50	28.5	3.5	6.50	17.9	8.0	14.4	4.5	9.9	3.20	0.35	13.0	9.5	5.0
6	69.8	69.7	0.035	0.60	28.6	3.6	6.51	18.7	8.0	15.1	4.4	10.7	3.43	0.34	13.4	9.8	5.4
7	74.8	74.6	0.041	0.70	28.6	3.6	6.52	19.4	8.0	15.8	4.4	11.4	3.60	0.31	13.7	10.1	5.7
8	79.2	79.1	0.047	0.80	28.6	3.6	6.52	20.1	8.0	16.5	4.4	12.1	3.75	0.30	14.1	10.5	6.1
9	83.4	83.2	0.052	0.90	28.5	3.5	6.53	20.7	8.0	17.2	4.5	12.7	3.83	0.27	14.4	10.9	6.4
10	87.6	87.4	0.058	1.00	28.4	3.4	6.54	21.4	8.0	18.0	4.6	13.4	3.91	0.25	14.7	11.3	6.7
11	108.6	108.3	0.087	1.51	27.9	2.9	6.57	24.5	8.0	21.6	5.1	16.5	4.23	0.18	16.2	13.3	8.2
12	125.1	124.7	0.117	2.01	27.2	2.2	6.60	26.9	8.0	24.7	5.8	18.9	4.26	0.12	17.4	15.2	9.4
13	142.8	142.2	0.146	2.51	26.5	1.5	6.64	29.4	8.0	27.9	6.5	21.4	4.30	0.07	18.7	17.2	10.7
14	158.1	157.4	0.175	3.01	25.8	0.8	6.67	31.6	8.0	30.8	7.2	23.6	4.28	0.03	19.8	19.0	11.8
15	178.3	177.4	0.233	4.02	24.6	-0.4	6.74	34.3	8.0	34.7	8.4	26.3	4.13	-0.02	21.2	21.6	13.2
16	198.7	197.6	0.286	4.92	23.6	-1.4	6.81	37.0	8.0	38.4	9.4	29.0	4.09	-0.05	22.5	23.9	14.5
17	222.0	220.7	0.344	5.93	22.5	-2.5	6.88	40.1	8.0	42.6	10.5	32.1	4.06	-0.08	24.0	26.5	16.0
18	239.3	237.8	0.403	6.93	21.4	-3.6	6.95	42.2	8.0	45.8	11.6	34.2	3.95	-0.11	25.1	28.7	17.1
19	253.2	251.5	0.461	7.94	20.5	-4.5	7.03	43.8	8.0	48.3	12.5	35.8	3.86	-0.13	25.9	30.4	17.9
20	269.5	267.5	0.519	8.95	19.7	-5.3	7.11	45.6	8.0	50.9	13.3	37.6	3.83	-0.14	26.8	32.1	18.8
21	286.0	283.9	0.578	9.95	18.9	-6.1	7.19	47.5	8.0	53.6	14.1	39.5	3.80	-0.15	27.7	33.8	19.7
22	294.8	292.4	0.636	10.96	18.3	-6.7	7.27	48.2	8.0	54.9	14.7	40.2	3.74	-0.17	28.1	34.8	20.1
23	305.3	302.7	0.695	11.96	17.8	-7.2	7.35	49.2	8.0	56.4	15.2	41.2	3.71	-0.17	28.6	35.8	20.6
24	317.1	314.3	0.753	12.97	17.5	-7.5	7.44	50.3	8.0	57.8	15.5	42.3	3.73	-0.18	29.1	36.6	21.1
25	322.3	319.3	0.811	13.97	17.1	-7.9	7.52	50.4	8.0	58.3	15.9	42.4	3.67	-0.19	29.2	37.1	21.2
26	327.1	323.9	0.853	14.70	16.9	-8.1	7.59	50.7	8.0	58.8	16.1	42.7	3.65	-0.19	29.3	37.4	21.3

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CU 8/2006 Rev. 1

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01*
Boring No.: *B-02*
Depth: *27-29 ft.*
Elevation: *-5 to -7 ft*
Confining Stress (psi): *12.0*

Date: *9/30/2014*

Reviewed by: *CJS*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.887	2.87
Height (in)	5.762	5.72
Area (in^2)	6.55	6.46
Moisture (%)	27.0	
W_{solids} (lbs)	2.11	
ρ_{wet} (pcf)	122.5	
ρ_{dry} (pcf)	96.5	98.6
Void Ratio	0.75	0.71
Saturation, %	98	97

Shear Testing Conditions	
Cell Pressure (psi):	37.0
Back Pressure (psi):	25.0
Eff. Confining Stress (psi):	12.0
Final B check	1.00
t_{50} (min.):	60.0
Rate of Strain (%/min):	0.00667

Filter strips used? *NO*

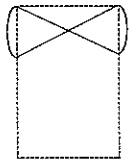
Specimen Type: *Tube Sample*

Soil Description: *SANDY LEAN CLAY (CL), contains gravel, blue gray*

Liquid Limit: *49*
Plasticity Index: *30*
% finer that No. 200: *52.4*
Specific Gravity: *2.70*

Remarks: *Gs assumed.*

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	25.0	0.0	6.46	12.0	12.0	12.0	12.0	0.0	1.00	0.00	12.0	12.0	0.0
1	27.9	27.8	0.006	0.10	27.2	2.2	6.46	16.3	12.0	14.1	9.8	4.3	1.44	0.51	14.2	12.0	2.2
2	44.7	44.7	0.012	0.20	28.9	3.9	6.47	18.9	12.0	15.0	8.1	6.9	1.85	0.56	15.5	11.6	3.5
3	52.6	52.5	0.018	0.31	29.9	4.9	6.48	20.1	12.0	15.2	7.1	8.1	2.14	0.60	16.1	11.2	4.1
4	58.8	58.7	0.023	0.41	30.5	5.5	6.48	21.1	12.0	15.6	6.5	9.1	2.39	0.61	16.5	11.0	4.5
5	63.4	63.3	0.029	0.51	31.0	6.0	6.49	21.8	12.0	15.8	6.0	9.8	2.63	0.62	16.9	10.9	4.9
6	67.7	67.6	0.035	0.61	31.3	6.3	6.50	22.4	12.0	16.1	5.7	10.4	2.83	0.61	17.2	10.9	5.2
7	71.3	71.1	0.041	0.71	31.6	6.6	6.50	22.9	12.0	16.3	5.4	10.9	3.03	0.60	17.5	10.9	5.5
8	74.8	74.7	0.047	0.82	31.8	6.8	6.51	23.5	12.0	16.7	5.2	11.5	3.21	0.59	17.7	10.9	5.7
9	77.8	77.6	0.053	0.92	31.9	6.9	6.52	23.9	12.0	17.0	5.1	11.9	3.33	0.58	18.0	11.1	6.0
10	80.9	80.6	0.058	1.02	32.1	7.1	6.52	24.4	12.0	17.3	4.9	12.4	3.52	0.57	18.2	11.1	6.2
11	90.9	90.6	0.082	1.43	32.2	7.2	6.55	25.8	12.0	18.6	4.8	13.8	3.88	0.52	18.9	11.7	6.9
12	101.7	101.3	0.111	1.94	32.0	7.0	6.58	27.4	12.0	20.4	5.0	15.4	4.08	0.45	19.7	12.7	7.7
13	110.2	109.7	0.140	2.45	31.7	6.7	6.62	28.6	12.0	21.9	5.3	16.6	4.13	0.40	20.3	13.6	8.3
14	116.9	116.2	0.169	2.96	31.5	6.5	6.65	29.5	12.0	23.0	5.5	17.5	4.18	0.37	20.7	14.2	8.7
15	122.0	121.1	0.228	3.98	31.0	6.0	6.72	30.0	12.0	24.0	6.0	18.0	4.00	0.33	21.0	15.0	9.0
16	123.5	122.4	0.286	5.00	30.5	5.5	6.80	30.0	12.0	24.5	6.5	18.0	3.77	0.31	21.0	15.5	9.0
17	124.4	123.1	0.343	6.00	29.9	4.9	6.87	29.9	12.0	25.0	7.1	17.9	3.53	0.27	21.0	16.1	9.0
18	123.8	122.3	0.397	6.94	29.5	4.5	6.94	29.6	12.0	25.1	7.5	17.6	3.35	0.26	20.8	16.3	8.8
19	121.8	120.1	0.455	7.96	29.3	4.3	7.01	29.1	12.0	24.8	7.7	17.1	3.22	0.25	20.6	16.3	8.6
20	122.6	120.6	0.514	8.98	28.9	3.9	7.09	29.0	12.0	25.1	8.1	17.0	3.10	0.23	20.5	16.6	8.5
21	124.3	122.1	0.572	10.00	28.7	3.7	7.17	29.0	12.0	25.3	8.3	17.0	3.05	0.22	20.5	16.8	8.5
22	123.1	120.7	0.630	11.02	28.3	3.3	7.26	28.6	12.0	25.3	8.7	16.6	2.91	0.20	20.3	17.0	8.3
23	124.1	121.6	0.683	11.93	28.2	3.2	7.33	28.6	12.0	25.4	8.8	16.6	2.88	0.19	20.3	17.1	8.3
24	126.0	123.2	0.741	12.95	28.1	3.1	7.42	28.6	12.0	25.5	8.9	16.6	2.87	0.19	20.3	17.2	8.3
25	126.9	123.9	0.800	13.97	28.1	3.1	7.50	28.5	12.0	25.4	8.9	16.5	2.85	0.19	20.3	17.2	8.3
26	126.1	122.9	0.851	14.87	28.1	3.1	7.58	28.2	12.0	25.1	8.9	16.2	2.82	0.19	20.1	17.0	8.1

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CU 8/2006 Rev. 1

Schnabel ENGINEERING

Consolidated Undrained Triaxial Compression Test

ASTM D4767

Project: *Dominion - Possum Point*
Ash Ponds ABC - Phase 2
Location: *Prince William County, Virginia*

Schnabel Contract: *14221002.01* Date: *9/30/2014*
Boring No.: *B-02*
Depth: *27-29 ft.*
Elevation: *-5 to -7 ft* Reviewed by: *CJS*
Confining Stress (psi): *16.0*

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.877	2.83
Height (in)	5.815	5.78
Area (in^2)	6.50	6.31
Moisture (%)	23.9	
W_{solids} (lbs)	2.22	
ρ_{wet} (pcf)	125.9	
ρ_{dry} (pcf)	101.6	105.3
Void Ratio	0.66	0.60
Saturation, %	98	99

Shear Testing Conditions	
Cell Pressure (psi):	41.0
Back Pressure (psi):	25.0
Eff. Confining Stress (psi):	16.0
Final B check	0.98
t_{50} (min.):	2.4
Rate of Strain (%/min):	0.0208

Filter strips used? *NO*

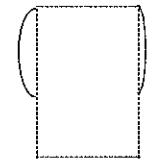
Specimen Type: *Tube Sample*

Soil Description: *SANDY LEAN CLAY (CL), contains gravel, blue gray*

Liquid Limit: *49*
Plasticity Index: *30*
% finer that No. 200: *52.4*
Specific Gravity: *2.70*

Remarks: *Gs assumed.*

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected[1] Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area[2] (in^2)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A_{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	25.0	0.0	6.31	16.0	16.0	16.0	16.0	0.0	1.00	0.00	16.0	16.0	0.0
1	29.6	29.6	0.005	0.09	27.9	2.9	6.32	20.7	16.0	17.8	13.1	4.7	1.36	0.62	18.3	15.4	2.3
2	48.1	48.1	0.011	0.19	29.7	4.7	6.32	23.6	16.0	18.9	11.3	7.6	1.67	0.62	19.8	15.1	3.8
3	58.5	58.4	0.017	0.29	30.8	5.8	6.33	25.2	16.0	19.4	10.2	9.2	1.90	0.63	20.6	14.8	4.6
4	66.5	66.4	0.023	0.40	31.6	6.6	6.34	26.5	16.0	19.9	9.4	10.5	2.11	0.63	21.2	14.6	5.2
5	73.0	72.8	0.029	0.50	32.1	7.1	6.34	27.5	16.0	20.4	8.9	11.5	2.29	0.62	21.7	14.6	5.7
6	78.3	78.0	0.035	0.60	32.4	7.4	6.35	28.3	16.0	20.9	8.6	12.3	2.43	0.60	22.1	14.7	6.1
7	82.8	82.5	0.040	0.70	32.6	7.6	6.35	29.0	16.0	21.4	8.4	13.0	2.54	0.59	22.5	14.9	6.5
8	86.6	86.3	0.046	0.80	32.8	7.8	6.36	29.6	16.0	21.8	8.2	13.6	2.65	0.58	22.8	15.0	6.8
9	90.3	89.9	0.052	0.90	32.9	7.9	6.37	30.1	16.0	22.2	8.1	14.1	2.74	0.56	23.1	15.2	7.1
10	93.7	93.3	0.058	1.00	33.0	8.0	6.37	30.6	16.0	22.6	8.0	14.6	2.83	0.55	23.3	15.3	7.3
11	108.1	107.5	0.087	1.51	33.0	8.0	6.41	32.8	16.0	24.8	8.0	16.8	3.10	0.48	24.4	16.4	8.4
12	120.0	119.1	0.116	2.01	32.8	7.8	6.44	34.5	16.0	26.7	8.2	18.5	3.26	0.42	25.3	17.5	9.3
13	132.2	131.1	0.145	2.52	32.6	7.6	6.47	36.3	16.0	28.7	8.4	20.3	3.41	0.38	26.1	18.5	10.1
14	138.7	137.5	0.169	2.92	32.3	7.3	6.50	37.1	16.0	29.8	8.7	21.1	3.43	0.35	26.6	19.3	10.6
15	151.5	149.8	0.227	3.93	31.8	6.8	6.57	38.8	16.0	32.0	9.2	22.8	3.48	0.30	27.4	20.6	11.4
16	162.8	160.7	0.286	4.94	31.1	6.1	6.64	40.2	16.0	34.1	9.9	24.2	3.45	0.25	28.1	22.0	12.1
17	175.6	173.1	0.344	5.95	30.4	5.4	6.71	41.8	16.0	36.4	10.6	25.8	3.43	0.21	28.9	23.5	12.9
18	185.8	182.9	0.402	6.96	29.8	4.8	6.78	43.0	16.0	38.2	11.2	27.0	3.41	0.18	29.5	24.7	13.5
19	195.0	191.5	0.461	7.97	29.2	4.2	6.86	43.9	16.0	39.7	11.8	27.9	3.37	0.15	30.0	25.8	14.0
20	203.8	199.9	0.519	8.98	28.6	3.6	6.93	44.8	16.0	41.2	12.4	28.8	3.33	0.12	30.4	26.8	14.4
21	212.3	208.0	0.577	9.99	28.1	3.1	7.01	45.7	16.0	42.6	12.9	29.7	3.30	0.10	30.8	27.7	14.8
22	219.8	215.1	0.636	11.00	27.6	2.6	7.09	46.3	16.0	43.7	13.4	30.3	3.26	0.09	31.2	28.6	15.2
23	225.9	220.7	0.694	12.01	27.2	2.2	7.17	46.8	16.0	44.6	13.8	30.8	3.23	0.07	31.4	29.2	15.4
24	232.5	227.0	0.747	12.92	26.9	1.9	7.25	47.3	16.0	45.4	14.1	31.3	3.22	0.06	31.7	29.8	15.7
25	238.7	232.7	0.805	13.93	26.7	1.7	7.33	47.7	16.0	46.0	14.3	31.7	3.22	0.05	31.9	30.2	15.9
26	242.5	236.2	0.863	14.93	26.5	1.5	7.42	47.8	16.0	46.3	14.5	31.8	3.20	0.05	31.9	30.4	15.9

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CU 8/2006 Rev. 1

APPENDIX C

SLOPE STABILITY ANALYSES

GeoStudio 2012, SLOPE/W Embankment Sections with Results

Section at Test Boring B-02

Normal Pool Static Stability
Design Surcharge Pool Static Stability
Normal Pool Pseudostatic Seismic Stability

Section at Test Boring B-06

Normal Pool Static Stability
Design Surcharge Pool Static Stability
Normal Pool Pseudostatic Seismic Stability

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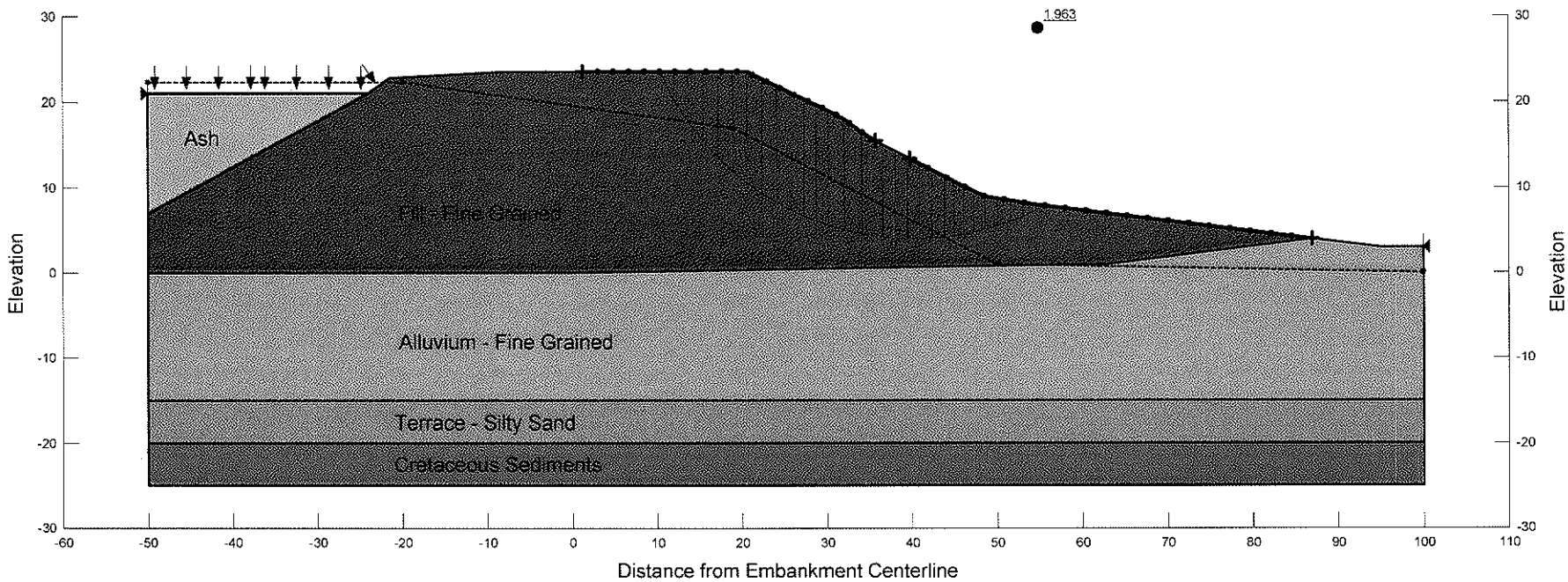
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-2

File: Possum Point ABC Slope - B-2_ Proposed - Rev2.gsz
Analysis Name: a - NP - Static Normal Pool
Method: Morgenstern-Price

Horz Seismic Coef.:

Normal Pool Level: El 22.3

Materials:
Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: Alluvium - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 500 psf Phi': 24 ° Phi-B: 0 ° Piezometric Line: 1
Name: Terrace - Silty Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 ° Piezometric Line: 1
Name: Cretaceous Sediments (effective stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 300 psf Phi': 34 ° Phi-B: 0 ° Piezometric Line: 1



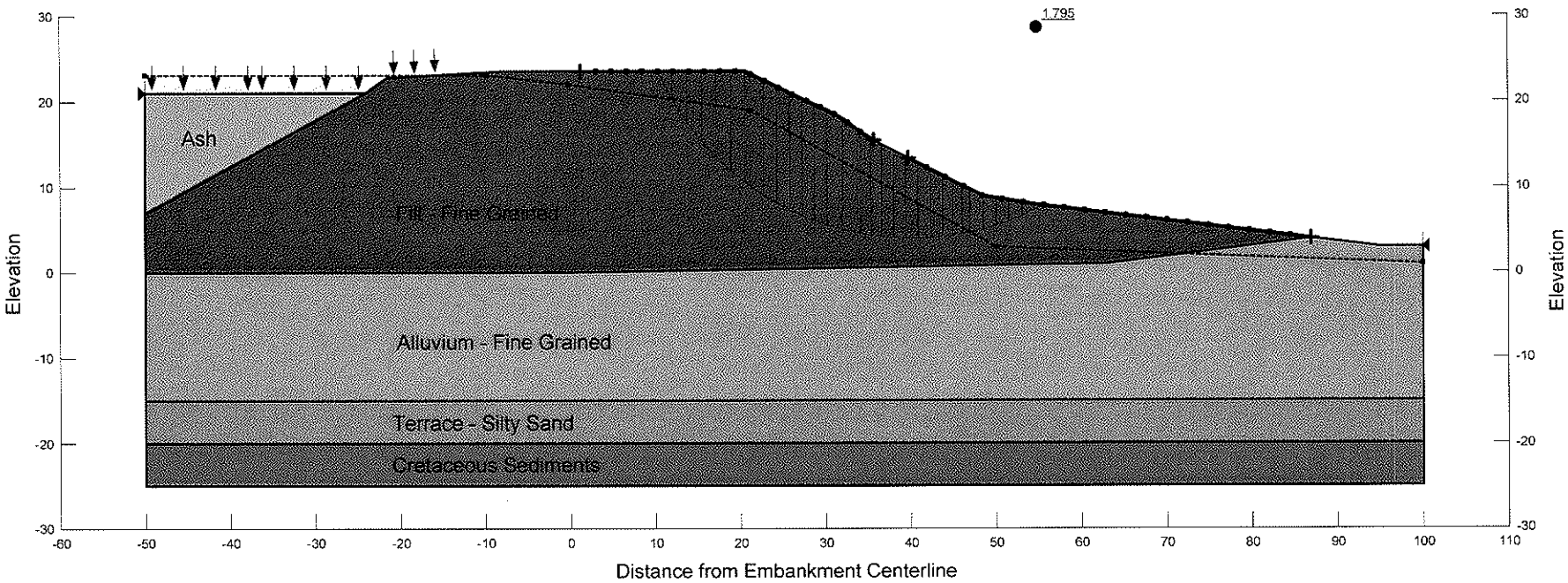
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-2

File: Possum Point ABC Slope - B-2_ Proposed - Rev2.gsz
Analysis Name: b - DSP - Static Design Surcharge Pool
Method: Morgenstern-Price

Horz Seismic Coef.:

Design Surcharge Pool Level: El 23.1

Materials:
Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: Alluvium - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 500 psf Phi': 24 ° Phi-B: 0 ° Piezometric Line: 1
Name: Terrace - Silty Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 ° Piezometric Line: 1
Name: Cretaceous Sediments (effective stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 300 psf Phi': 34 ° Phi-B: 0 ° Piezometric Line: 1



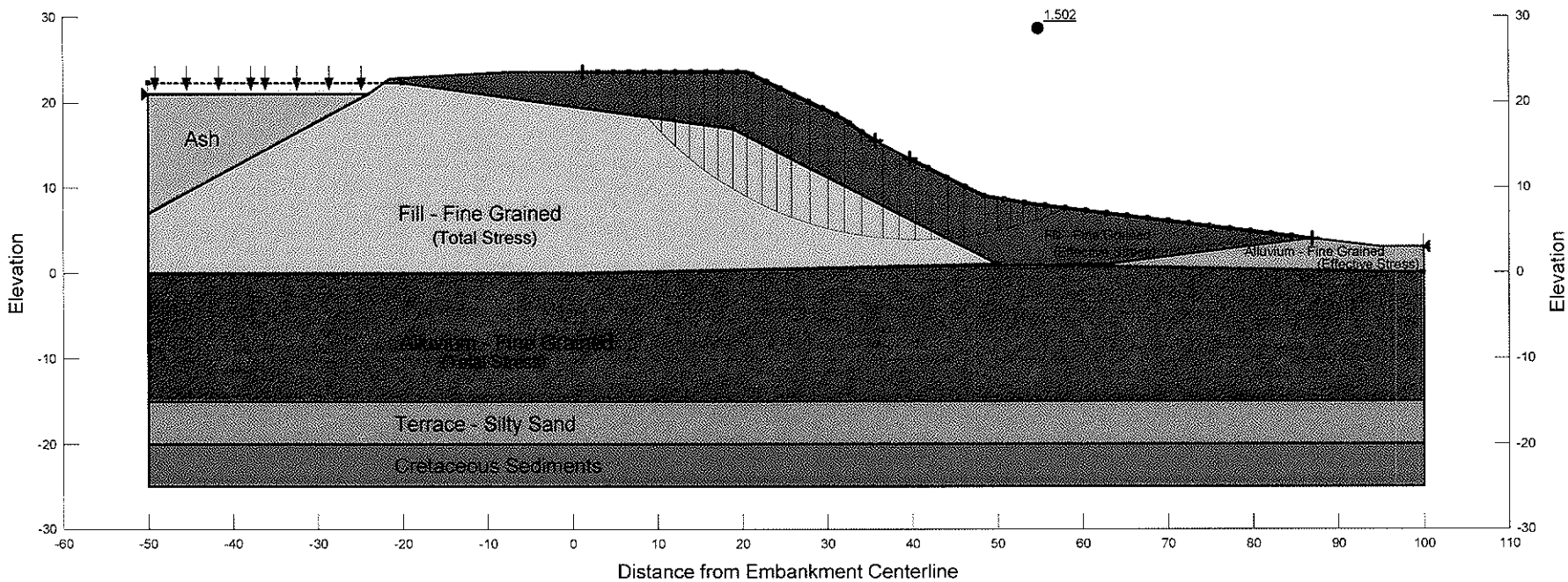
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-2

File: Possum Point ABC Slope - B-2_ Proposed - Rev2.gsz
Analysis Name: c - NP - Pseudostatic Normal Pool
Method: Morgenstern-Price

Horz Seismic Coef.: 0.1

Normal Pool Level: El 22.3

Materials:
Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: Cretaceous Sediments (total stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 3,000 psf Phi': 0 ° Phi-B: 0 °
Name: Alluvium - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 500 psf Phi': 24 ° Phi-B: 0 °
Name: Terrace - Silty Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 °
Name: FILL - Fine Grained (total stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 290 psf Phi': 14 ° Phi-B: 0 °
Name: Alluvium - Fine Grained (total stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 530 psf Phi': 17 ° Phi-B: 0 °



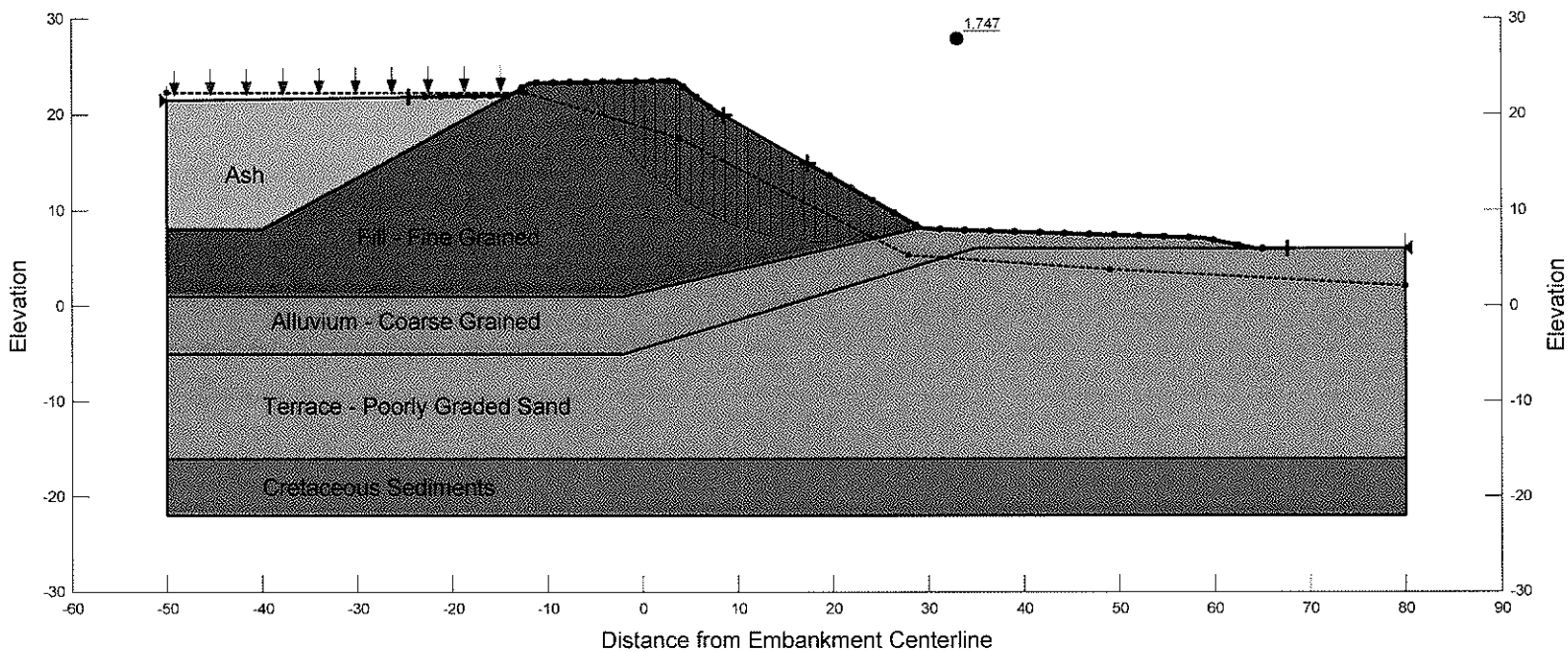
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-6

File Name: Possum Point ABC Slope - B-6_ Proposed - Rev2.gsz
Name: a - NP - Static Normal Pool
Method: Morgenstern-Price

Horz Seismic Coef.:

Normal Pool Level: El 22.3

Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 ° Piezometric Line: 1
Name: Cretaceous Sediments (effective stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 300 psf Phi': 34 ° Phi-B: 0 ° Piezometric Line: 1
Name: Terrace - Poorly Graded Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: Alluvium - Coarse Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 200 psf Phi': 32 ° Phi-B: 0 ° Piezometric Line: 1



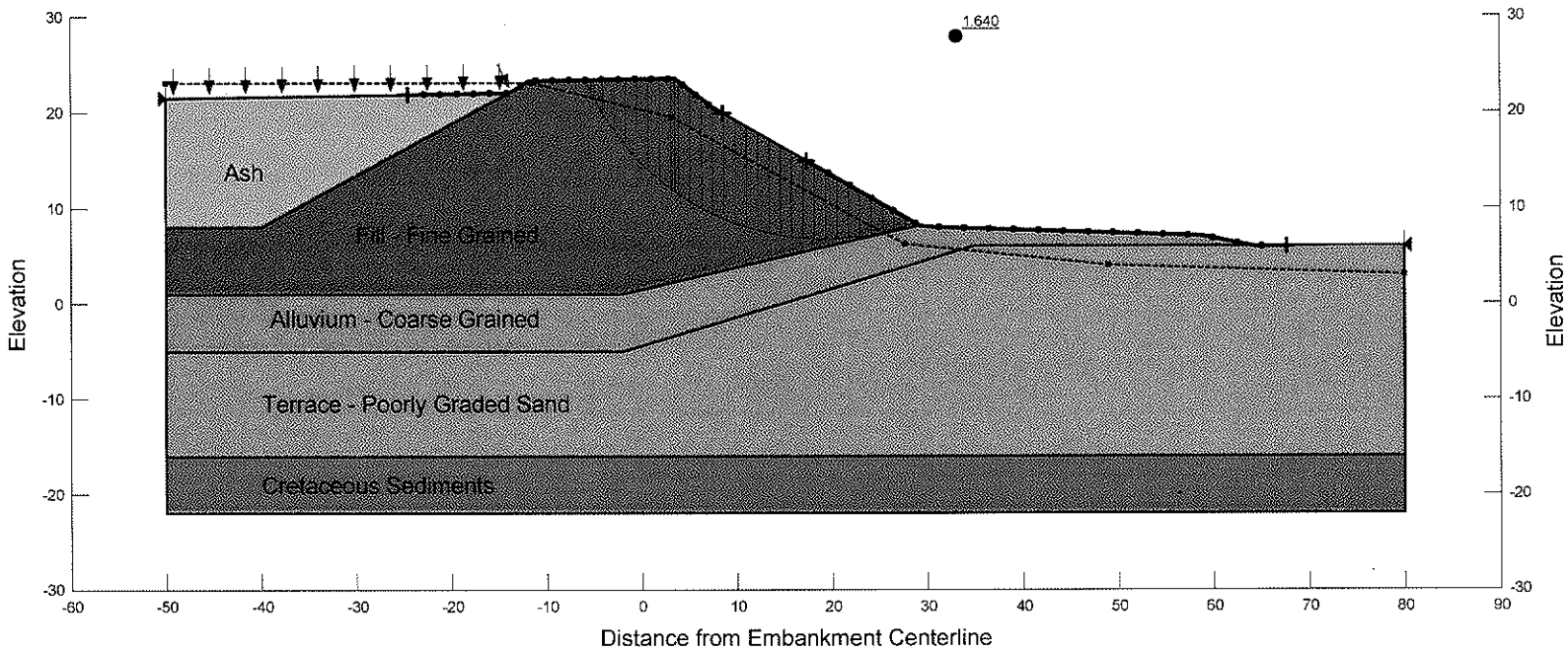
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-6

File Name: Possum Point ABC Slope - B-6_ Proposed - Rev2.gsz
Name: b - DSP - Static Design Surcharge Pool
Method: Morgenstern-Price

Horz Seismic Coef.:

Design Surcharge Pool Level: El 23.1

Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 ° Piezometric Line: 1
Name: Cretaceous Sediments (effective stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 300 psf Phi': 34 ° Phi-B: 0 ° Piezometric Line: 1
Name: Terrace - Poorly Graded Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: Alluvium - Coarse Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 200 psf Phi': 32 ° Phi-B: 0 ° Piezometric Line: 1



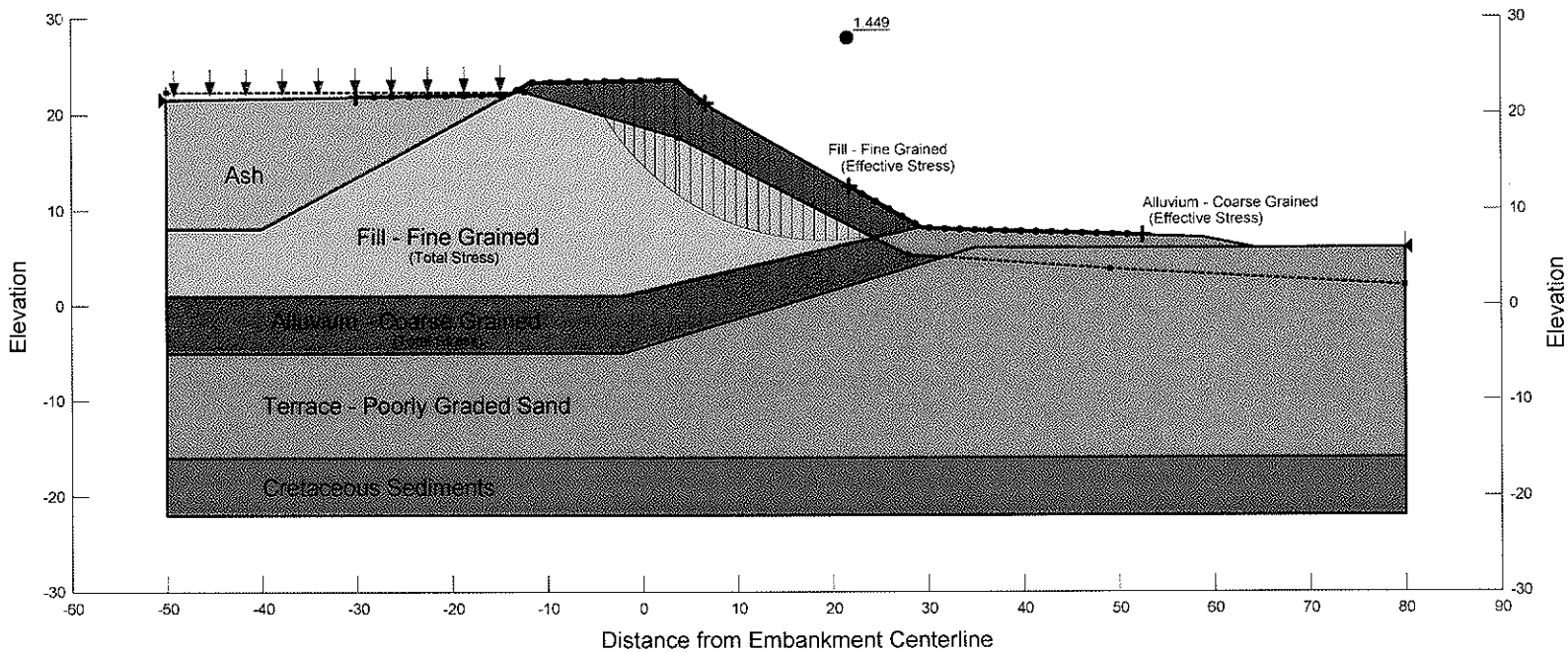
Dominion Power - Possum Point Ash Ponds A, B, & C
Project No. 14221002.01
Embankment Section at Boring B-6

File Name: Possum Point ABC Slope - B-6_ Proposed - Rev2.gsz
Name: c - NP - Pseudostatic Normal Pool
Method: Morgenstern-Price

Horz Seismic Coef.: 0.1

Normal Pool Level: El 22.3

Name: Sluiced Ash Model: S=f(overburden) Unit Weight: 110 pcf Tau/Sigma Ratio: 0.3 Minimum Strength: 100 Piezometric Line: 1
Name: FILL - Fine Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 230 psf Phi': 23 ° Phi-B: 0 °
Name: Terrace - Poorly Graded Sand Model: Mohr-Coulomb Unit Weight: 135 pcf Cohesion': 0 psf Phi': 36 ° Phi-B: 0 ° Piezometric Line: 1
Name: Alluvium - Coarse Grained (effective stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 200 psf Phi': 32 ° Phi-B: 0 °
Name: FILL - Fine Grained (total stress) Model: Mohr-Coulomb Unit Weight: 123 pcf Cohesion': 290 psf Phi': 14 ° Phi-B: 0 °
Name: Alluvium - Coarse Grained (total stress) Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion': 300 psf Phi': 18 ° Phi-B: 0 °
Name: Cretaceous Sediments (total stress) Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 3,000 psf Phi': 0 ° Phi-B: 0 °



Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 14, 2015

Ms. Susan Mackert
Department of Environmental Quality
Northern Regional Office
13901 Crown Court,
Woodbridge, VA 22193

Re: Dominion - Possum Point Power Station – VA0002071
Placement of Ash Notification

Dear Ms. Mackert:

The following information is provided in accordance with Possum Point Power Station's VPDES permit VA0002071 Part I, Condition F.11. Dominion is providing this notice that we intend to begin mechanically dredging material from Ash Ponds A, B, and C to Ash Pond D. Placement of the material in Pond D will be completed prior to October 16, 2015. Dominion estimates that a maximum of 402,000 cubic yards of ash and soil materials will be dredged from Ponds A, B, and C to Pond D.

Sampling and analysis of the material in Ponds A, B, and C were conducted in accordance with Part I, Condition F.11(c). A sampling plan describing sample collection methods and analytical results using the forms provided in Attachment B of the permit are provided as attachments to this letter. All measured analytical results were below threshold levels listed in the permit.

Dominion would like to begin dredging operations as soon as possible in order to support the project schedule. To that end, we are requesting that DEQ waive the requirement to provide notice at least 30 days prior to the placement of material in Pond D and grant authorization to proceed upon review of this submission.

If you have any questions and/or comments regarding this information please contact Ken Roller, of Dominion Electric Environmental Services, at (804) 273-3494.

I certify under penalty of law that this document 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.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Attachments

File Name: **2015 7-14 PP Placement of Ash Notification**

Please send electronic renamed copy to:

David Craymer
Pam Faggert
Sidney Bragg
Cathy Taylor
Karen Canody
Ken Roller
Oula Shehab
Amelia Boschen
Jeff Heffelman
Jeff Marcell
Documentum: Possum Point P.S. / NPDES-Water / Compliance Reporting and Supporting Documentation

Ponds A, B, and C Sampling and Analysis Report

The work consisted of conducting in-situ dredge material sampling and analytical laboratory analysis at Ponds A, B, and C in accordance with the requirements of Condition I.F.11 of Possum Point Power Station's VPDES Permit (Permit No. VA0002071).

Project Background

Based on a review of the available information concerning pond construction and ash placement, it is estimated that Ponds A, B, and C contain approximately 335,000 cubic yards (CY) of ash. The depth of ash varies within the ponds, but it is estimated that the average thickness is approximately 10 feet.

As part of the clean closure activities planned for Ponds A, B, and C, ash is proposed to be mechanically dredged from the ponds and transported to Pond D. In order to meet the requirements of Condition I.F.11 of the VPDES Permit, the dredge material was sampled and analyzed.

Scope of Work

The Ponds A, B, and C sampling and laboratory analysis were completed in accordance with applicable state and federal guidelines, regulations, and requirements as applicable to the subsurface conditions encountered. The sampling and laboratory analysis evaluated the ash material for comparison to criteria established under Condition I.F.11 of the VPDES Permit.

In accordance with Condition I.F.11 of the VPDES Permit, for volumes greater than 300,000 CY, one representative sample is required for each 100,000 CY of dredge material. The sample should be a composite of the proposed dredge material to the depth of the intended dredge. Based on evaluation of the ash thickness and pond dimensions, the dredge volume from Ponds A, B, and C has been estimated to be approximately 335,000 CY. Using a volume estimate factor of 20% to account for additional volumes due to estimation error and over excavation of pond bottom material, the final estimated volume of dredge is 402,000 CY.

Based on an estimated 402,000 CY of dredge, and in accordance with the requirements of one sample per 100,000 CY of dredge material, a total of five representative samples plus one quality assurance/quality control (QA/QC) sample (six total samples) were collected.

Sample Location Determination

To facilitate collection of samples representative of the approximately 17.4 acre ponds and estimated thickness of ash, a total of five soil borings were advanced across Ponds A, B, and C. Boring locations were selected using a systematic random sampling technique in order to generate a representative sampling of the pond material. Soil boring locations were generated using the Visual Sampling Plan (VSP) Software. VSP is a software tool developed by Pacific Northwest National Laboratory (PNNL) for the United States (US) Department of Energy (DOE). The software was designed for selecting the right number and/or location of environmental samples so that the results of the statistical tests performed on the data collected via the sampling plan would have the required confidence for decision making.

Using the simple random sampling option of VSP, random sampling locations were generated within a pre-defined study area. Using the general perimeter of Ponds A, B, and C as the study area and specifying a total of five sample locations, a sample location map was developed. Black diamond symbols presented on the attached Figure 1 (Exhibit A) represent the sample locations generated using the VSP software.

Due to conflicts with overhead power lines, one sample location (ABC 3) was slightly adjusted. The final locations of adjusted samples are presented as blue squares on the attached Figure 1. Coordinates for each sample location are provided in the attached Table 1 (Exhibit B).

Sample Collection

Soil borings were advanced at the designated sample locations to facilitate collection of the required dredge material samples. Soil borings advanced within the ash areas of the ponds were advanced using a track mounted drilling rig. Soil borings advanced within the ash areas were backfilled with auger cuttings.

In all cases, soil borings were advanced from the ground/water surface to a depth of at least two feet below the bottom of the ash material or auger refusal, whichever was encountered first. For this investigation, auger refusal was not encountered in any of the boreholes prior to reaching the planned depth of drilling.

Soil borings were advanced using a combination of continuous split-spoon sampling and hollow stem auger drilling. Each split-spoon sample was examined by the GAI field environmental scientist immediately after removal from the sampler, visually characterized, and inspected for the presence of staining, discoloration, separate-phase hydrocarbon product, or other visible indicators of contamination. The split spoon samples were scanned with a photoionization detector (PID), calibrated daily to isobutylene, for the presence and concentration of volatile organic vapors. Soil boring logs with ash/soil descriptions and PID readings for each of the soil borings were prepared by the GAI environmental scientist and are provided in the attached Exhibit C.

GAI collected six environmental samples (one sample per soil boring plus one QA/QC sample) for laboratory analyses to evaluate the proposed dredge material. The sample collected for laboratory analysis of all parameters, excluding the volatile organic fraction, was collected as a single composite from each soil boring. A composite sample was collected by retaining a portion of each split-spoon retrieved from a given soil boring in a clean disposable container. Once an individual soil boring was completed, the retained sample was transferred to a stainless steel mixing bowl and thoroughly mixed. The thoroughly mixed sample was then transferred in equal portions to appropriate laboratory supplied sample jars.

For collection of the volatile organic fraction, each split spoon was visually examined for the presence of suspected contamination and screened with a PID. Soil samples for volatile organic analyses were selected from a discrete interval in each boring exhibiting the highest PID readings or other indicators of possible impacts. If no indicators of potential impacts were observed, the sample was collected from a randomly selected depth interval. Selection of the depth interval took into consideration previously completed soil borings in an effort to distribute samples between the top, middle, and bottom thirds of the dredge material. Samples collected for the volatile organic fraction analyses were transferred into the appropriate laboratory provided sample jars or pre-preserved sample vials depending on the analyses required.

Equipment used for sample collection was properly decontaminated before use to prevent cross-contamination from prior sampling locations. Field sampling equipment used to collect or hold non-aqueous samples were decontaminated prior to use as follows:

1. Remove visible contamination from the equipment using a brush and/or paper towel saturated with potable water and laboratory grade soap.
2. Rinse the equipment with potable water to remove residual soap and solids.
3. Rinse the equipment with distilled/deionized water meeting ASTM Type II specifications.

Laboratory Analysis

Samples collected for laboratory analysis were properly labeled with the sampling time, date, and sample identification, and were immediately placed into an iced chest and maintained at four degrees Celsius. Samples were submitted, under chain of custody procedures, to ALS Environmental, a VA certified analytical laboratory, under a standard turn-around for results. Samples were submitted for analysis of the required parameters and using appropriate laboratory test methods as specified in Condition 11 of VPDES Permit No. VA0002071.

Reporting

Results of the completed laboratory analysis are presented in the attached Exhibit D. Analytical results are presented on the appropriate VPDES Permit No. VA0002071, Dredge Spoils Monitoring, Attachment B forms. The ALS laboratory analytical data reports providing all results for the submitted samples are provided in Exhibit E. Analytical results indicate all constituent concentrations are below applicable threshold values provided in Attachment B of VPDES Permit No. VA0002071.

EXHIBIT A
Figure 1 – Sample Locations

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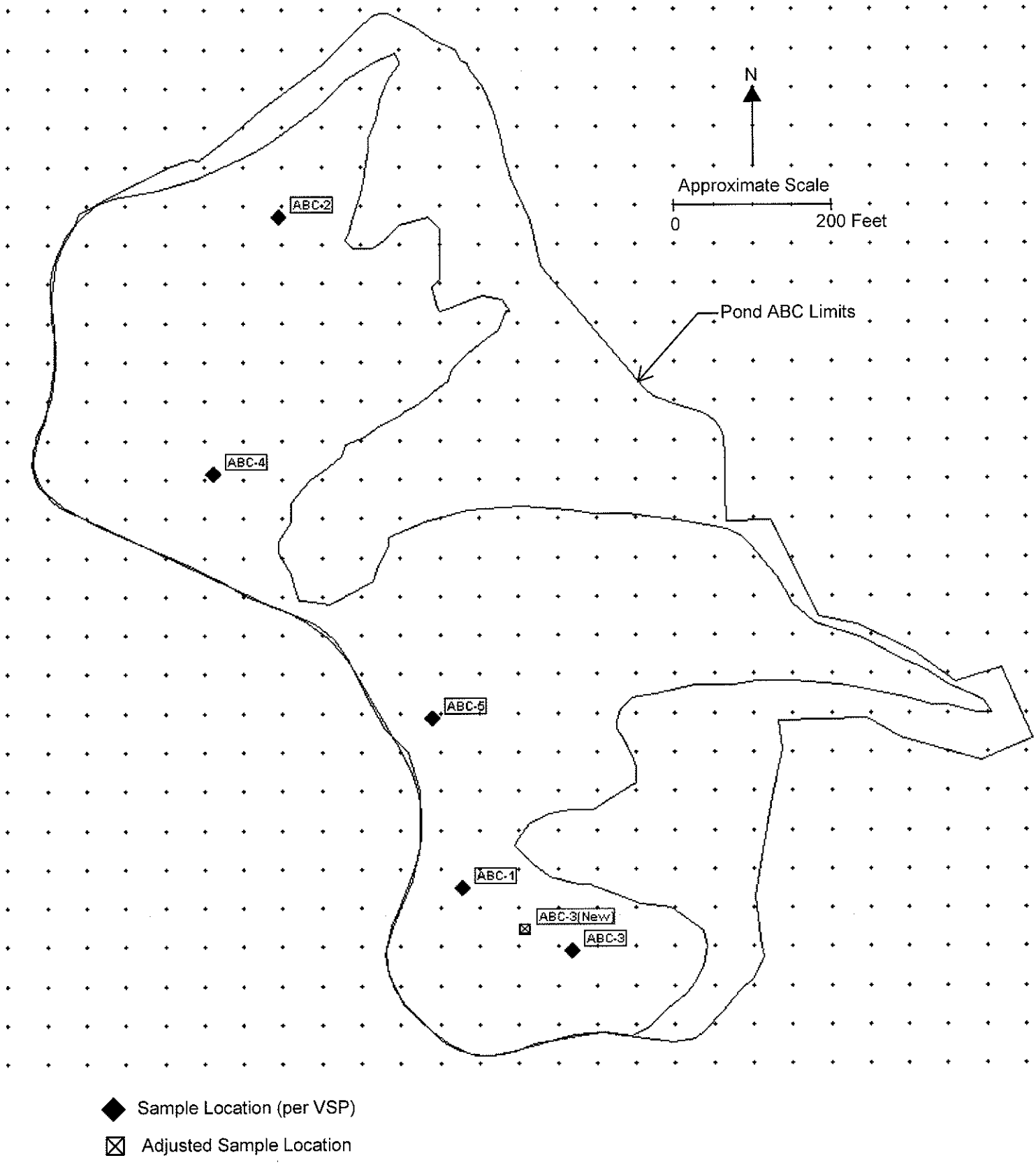

Figure 1 - Sample Locations
Pond ABC Sampling and Analysis

EXHIBIT B
Table 1 – Sample Location Coordinates

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Table 1
Pond ABC Sampling and Analysis
Sample Location Coordinates

Sample Location	Easting	Northing
ABC-1	11830728.4528	6882725.1720
ABC-2	11830495.6403	6883584.6164
ABC-3	11830868.1403	6882643.3202
ABC-4	11830411.2457	6883257.2090
ABC-5	11830690.6207	6882943.4436

Adjusted Locations	Easting	Northing
ABC-3 (New)	11830808.1400	6882672.2600

EXHIBIT C
Boring Logs

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PROJECT Possum Point Ash Pond ABC

ELEVATION N/A
DATE 6/8/15
LOGGED BY EJC

GW level while drilling- 4.00

BORING # ABC 1
PROJECT # C150132.00.049
PAGE 1 of 1

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	BLOW COUNTS / 0.5 FT	SAMPLE TYPE AND NO. / PROFILE	SOIL CONSISTENCY	COLOR	MATERIAL CLASSIFICATION	PHOTOIONIZATION DETECTOR READING (ppm)	REMARKS*
1	2	3	4	5	6	7	8	9
		W.O.H. / 6	S-1		Dark gray / black	Coal fly ash (fine to coarse)	3.8	No odor, moist
1.0	0.67	2						
		1	(0-2)'	Very loose		* TCLP VOC and VOC samples collected		
2.0	34%	0						
		W.O.H. / 18	S-2				3.1	No odor, moist
3.0	0.25							
			(2-4)'	Very loose				
4.0	13%	1						
		W.O.H. / 24	S-3				0.0	No odor, wet
5.0	0.00							
			(4-6)'	Very loose				
6.0	0%							
		W.O.H. / 24	S-4				0.0	No odor, wet
7.0	1.25							
			(6-8)'	Very loose				
8.0	63%							
		1/24	S-5				0.0	No odor, wet
9.0	0.25							
			(8-10)'	Very loose				
10.0	13%							
			S-6				0.0	No odor, wet
11.0	0.00					SPOON SANK DOWN TO 14 FT.		
			(10-12)'	Very loose		WHEN TAKING THE 10 FT. SAMPLE		
12.0	0%							
			S-7				0.0	No odor, wet
13.0	0.00							
			(12-14)'	Very loose				
14.0	0%							
		1/24	S-8				0.0	No odor, wet
15.0	0.25							
			(14-16)'	Very loose				
16.0	13%					BOTTOM OF COAL ASH AT 16 FT.		
		5	S-9		Light brown/gray	Fine to coarse gravelly sand with clay	0.0	No odor, wet
17.0	1.5	5				(SP-CL)		
		5	(16-18)'	Medium				
18.0	75%	5		dense				
		4	S-10				0.0	No odor, moist
19.0	1.0	5						
		6	(18-20)'	Medium				
20.0	50%	6		dense		END OF BORING AT 20 FT.		

Borings completed by Connelly and Associates, Inc. using a Diedrich D50 Track Rig with 2¼" HSA with SPT.
W.O.H./W.O.R.- Weight of Hammer/ Weight of Rods is equivalent to 0 blow counts while the spoon advances a certain increment in feet.
* Sample submitted to laboratory for analysis.

BORING NO.: ABC 1

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PROJECT Possum Point Ash Pond ABC

ELEVATION N/A
DATE 6/9/15
LOGGED BY EJC

GW level while drilling- 3.00

BORING # ABC 2
PROJECT # C150132.00.049
PAGE 1 of 1

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	BLOW COUNTS / 0.5 FT	SAMPLE TYPE AND NO. / PROFILE	SOIL CONSISTENCY	COLOR	MATERIAL CLASSIFICATION	PHOTOIONIZATION DETECTOR READING (ppm)	REMARKS*
1	2	3	4	5	6	7	8	9
		1/12	S-1		Dark gray / black	Coal fly ash (fine to coarse)	0.0	No odor, very dry
1.0	1.33							
		1/12	(0-2)'	Loose				
2.0	50%							
		2	S-2				0.0	No odor, moist
3.0	1.67	1/18				* TCLP VOC and VOC samples collected		
			(2-4)'	Very loose				
4.0	84%							
		1/12	S-3				0.0	No odor, wet
5.0	2.00							
		1/12	(4-6)'	Very loose				
6.0	100%							
		W.O.H./18	S-4				0.0	No odor, wet
7.0	2.0							
			(6-8)'	Very loose				
8.0	100%	3						
		W.O.H./12	S-5	Very loose			0.0	No odor, wet
9.0	2.0					BOTTOM OF COAL ASH AT 9 FT.		
		5	(8-10)'	Medium	Light brown to	Fine to coarse sand, trace clay (SP)	0.0	No odor, wet
10.0	100%	7		dense	light gray			
		4	S-6				0.0	No odor, wet
11.0	2.0	6						
		6	(10-12)'	Medium				
12.0	100%	7		dense		END OF BORING AT 12 FT.		

Borings completed by Connelly and Associates, Inc. using a Diedrich D50 Track Rig with 2 $^{1/4}$" HSA with SPT.
W.O.H./W.O.R.- Weight of Hammer/ Weight of Rods is equivalent to 0 blow counts while the spoon advances a certain increment in feet.
* Sample submitted to laboratory for analysis.

BORING NO.: ABC 2

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PROJECT Possum Point Ash Pond ABC

ELEVATION N/A
DATE 6/9/15
LOGGED BY EJC

GW level while drilling- 5.00

BORING # ABC 3 (New)
PROJECT # C150132.00.049
PAGE 1 of 1

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	BLOW COUNTS / 0.5 FT	SAMPLE TYPE AND NO. / PROFILE	SOIL CONSISTENCY	COLOR	MATERIAL CLASSIFICATION	PHOTOIONIZATION DETECTOR READING [1] (ppm)	REMARKS*
1	2	3	4	5	6	7	8	9
		1	S-1		Dark gray / black	Coal fly ash (fine to coarse)	0.0	No odor, moist
1.0	0.17	1/12						
			(0-2)'	Very loose				
2.0	9%	1						
		1/24	S-2				0.0	No odor, wet
3.0	0.25							
			(2-4)'	Very loose				
4.0	13%							
		W.O.H./ 24	S-3				0.0	No odor, wet
5.0	1.0					* TCLP VOC and VOC samples collected		
			(4-6)'	Very loose				
6.0	50%							
		W.O.H./ 24	S-4				0.0	No odor, wet
7.0	1.0							
			(6-8)'	Very loose				
8.0	50%							
		W.O.H./24	S-5				0.0	No odor, wet
9.0	2.0							
			(8-10)'	Very loose				
10.0	100%							
		W.O.H./24	S-6				0.0	No odor, wet
11.0	0.75							
			(10-12)'	Very loose				
12.0	38%							
		W.O.H./24	S-7				0.0	No odor, wet
13.0	1.67							
			(12-14)'	Very loose				
14.0	84%							
		W.O.H./24	S-8				0.0	No odor, wet
15.0	1.0							
			(14-16)'	Very loose				
16.0	50%							
		W.O.H./24	S-9				0.0	No odor, wet
17.0	1.33							
			(16-18)'	Very loose				
18.0	67%							
		W.O.H./12	S-10	Very loose			0.0	No odor, wet
19.0	2.0					BOTTOM OF COAL ASH AT 19 FT.		
		6	(18-20)'	Medium	Light brown to	Fine to coarse silty sand (SM)	0.0	No odor, wet
20.0	100%	7		dense	light gray			
		8	S-11				0.0	No odor, wet
21.0	2.0	9						
		9	(20-22)'	Medium				
22.0	100%	14		dense		END OF BORING AT 22 FT.		

Borings completed by Connelly and Associates, Inc. using a Diedrich D50 Track Rig with 2¼" HSA with SPT.
W.O.H./W.O.R.- Weight of Hammer/ Weight of Rods is equivalent to 0 blow counts while the spoon advances a certain increment in feet.
* Sample submitted to laboratory for analysis.

BORING NO.: ABC 3 (New)

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PROJECT **Possum Point Ash Pond ABC**

ELEVATION N/A
DATE 6/9/15
LOGGED BY EJC

GW level while drilling- 5.00

BORING # **ABC 4**
PROJECT # **C150132.00.049**
PAGE 1 of 1

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	BLOW COUNTS / 0.5 FT	SAMPLE TYPE AND NO. / PROFILE	SOIL CONSISTENCY	COLOR	MATERIAL CLASSIFICATION	PHOTOIONIZATION DETECTOR READING [1] (ppm)	REMARKS*
1	2	3	4	5	6	7	8	9
		3	S-4		Dark gray / black	Coal fly ash (fine to coarse)	0.0	No odor, dry
1.0	1.0	3						
		3	(6-8)'	Loose				
2.0	50%	2						
		2	S-4				0.0	No odor, dry
3.0	1.25	1						
		1/12	(6-8)'	Loose				
4.0	63%							
		1	(6-8)'	Loose			0.0	No odor, moist
5.0	1.17	1						
		1/12	(4-6)'	Very loose				
6.0	59%							
		W.O.H./24	S-4				0.0	No odor, wet
7.0	1.5							
			(6-8)'	Loose				
8.0	75%							
		W.O.H./24	S-5				0.0	No odor, wet
9.0	2.0							
			(8-10)'	Very loose				
10.0	100%							
		W.O.H./24	S-6				0.0	No odor, wet
11.0	2.0							
			(10-12)'	Very loose				
12.0	100%							
		W.O.H./24	S-7				0.0	No odor, wet
13.0	1.7							
			(12-14)'	Very loose				
14.0	84%							
		W.O.H./24	S-8				0.0	No odor, wet
15.0	2.0							
			(14-16)'	Very loose				
16.0	100%							
		W.O.H./24	S-9				0.0	No odor, wet
17.0	2.0					*** TCLP VOC and VOC samples collected**		
			(16-18)'	Very loose				
18.0	100%							
		W.O.H./12	S-10				0.0	No odor, wet
19.0	2.0			Very loose		**BOTTOM OF COAL ASH AT 19 FT.**		
		3	(18-20)'	Loose	Light brown	Fine to coarse sand (SP)	0.0	No odor, wet
20.0	100%	4						
		3	S-11				0.0	No odor, wet
21.0	2.0	4						
		5	(20-22)'	Medium				
22.0	100%	9		dense				

Borings completed by Connelly and Associates, Inc. using a Diedrich D50 Track Rig with 2¼" HSA with SPT.
W.O.H./W.O.R.- Weight of Hammer/ Weight of Rods is equivalent to 0 blow counts while the spoon advances a certain increment in feet.
*** Sample submitted to laboratory for analysis.**

BORING NO.: **ABC 4**

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PROJECT **Possum Point Ash Pond ABC**

ELEVATION N/A
DATE 6/8/15
LOGGED BY EJC

GW level while drilling- 4.00

BORING # **ABC 5**
PROJECT # **C150132.00.049**
PAGE 1 of 1

DEPTH (FEET)	RECOVERY IN FEET / % RECOVERY	BLOW COUNTS / 0.5 FT	SAMPLE TYPE AND NO. / PROFILE	SOIL CONSISTENCY	COLOR	MATERIAL CLASSIFICATION	PHOTOIONIZATION DETECTOR READING[1] (ppm)	REMARKS*
1	2	3	4	5	6	7	8	9
		W.O.H./6	S-1		Dark gray / black	Coal fly ash (fine to coarse)	0.0	No odor, moist
1.0	0.67	1						
		1	(0-2)'	Very loose				
2.0	34%	1						
		1	S-2				0.0	No odor, moist
3.0	0.33	1						
		1	(2-4)'	Very loose				
4.0	17%	1						
		W.O.H./24	S-4				0.0	No odor, wet
5.0	1.0							
			(4-6)'	Very loose				
6.0	100%							
		W.O.H./24	S-4				0.0	No odor, wet
7.0	0.67							
			(6-8)'	Very loose				
8.0	34%							
		W.O.H./24	S-5				0.0	No odor, wet
9.0	1.0							
			(8-10)'	Very loose		*** TCLP VOC and VOC samples collected**		
10.0	50%							
		W.O.H./24	S-6				0.0	No odor, wet
11.0	0.42							
			(10-12)'	Very loose				
12.0	21%							
		W.O.H./12	S-7				0.0	No odor, wet
13.0	1.50							
		W.O.H./12	(12-14)'	Very loose				
14.0	75%							
		W.O.H./24	S-8				0.0	No odor, wet
15.0	1.50							
			(14-16)'	Very loose				
16.0	75%							
		W.O.H./24	S-9				0.0	No odor, wet
17.0	1.50							
			(16-18)'	Very loose				
18.0	75%							
		W.O.H./24	S-10				0.0	No odor, wet
19.0	1.50							
			(18-20)'	Very loose				
20.0	75%							
		W.O.H./24	S-11				0.0	No odor, wet
21.0	1.67							
			(20-22)'	Very loose				
22.0	84%							
		W.O.H./24	S-12				0.0	No odor, wet
23.0	1.50							
			(22-24)'	Very loose				
24.0	75%							
		W.O.H./24	S-13				0.0	No odor, wet
25.0	1.50							
			(24-26)'	Very loose				
26.0	75%					**BOTTOM OF COAL ASH AT 26 FT.**		
		4	S-14		Light brown	Fine to coarse silty sand (SM)	0.0	No odor, wet
27.0	1.33	3		Loose				
		2	(26-28)'					
28.0	67.0	2						
		6	S-15		Light brown to	Silt, trace of fine to medium sand (ML)	0.0	No odor, wet
29.0	1.50	7			light gray			
		9	(28-30)'	Very Stiff				
30.0	75%	10				**END OF BORING AT 30 FT.**		

Borings completed by Connelly and Associates, Inc. using a Diedrich D50 Track Rig with 2¼" HSA with SPT.
W.O.H./W.O.R.- Weight of Hammer/ Weight of Rods is equivalent to 0 blow counts while the spoon advances a certain increment in feet.
*** Sample submitted to laboratory for analysis.**
BORING NO.: **ABC 5**

EXHIBIT D
VPDES Permit No. VA0002071 Attachment B Forms

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DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 1

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/l)	Reporting Results [1] (mg/l)	Sample Type [2]	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	4.0	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 1

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	1.7	4.5	G
457	1327-53-3	Arsenic III	1632	0.240	5.36	G
441	16055-83-1	Chromium III	Calculation	3.7	21.3	G
231	18540-29-9	Chromium VI	7196A	3.6	< 3.6	G
442	744-50-8	Copper	6020A	4.2	59.0	G
445	7440-02-0	Nickel	6020A	4.2	30.1	G
--	7440-28-0	Thallium	6020A	0.83	1.4	G
448	7440-66-6	Zinc	6020A	4.2	26.1	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.015	< 0.015	G
334		Chlorpyrifos Dursban	8141B	0.062	< 0.062	G
--	72-54-8	DDD	8081B	0.0292	< 0.0292	G
--	72-55-9	DDE	8081B	0.0292	< 0.0292	G
335	50-29-3	DDT	8081B	0.0292	< 0.0292	G
336	8065-48-3	Demeton	8141B	0.062	< 0.062	G
337	60-57-1	Dieldrin	8081B	0.0292	< 0.0292	G
746	959-98-8	Alpha-Endosulfan	8081B	0.015	< 0.015	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0292	< 0.0292	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0292	< 0.0292	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0292	< 0.0292	G
340	86-50-0	Guthion	8141B	0.062	< 0.062	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.015	< 0.015	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.015	< 0.015	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.015	< 0.015	G
--	143-50-0	Kepone	8270D	1.75	< 1.75	G
343	121-75-5	Malathion	8141B	0.062	< 0.062	G
345	2385-85-5	Mirex	8081B	0.0292	< 0.0292	G
346	56-38-2	Parathion	8141B	0.062	< 0.062	G
--	1336-36-3	Total PCB	8082A	0.058	< 0.058	G
641	53469-21-9	PCB-1242	8082A	0.058	< 0.058	G
642	11097-69-1	PCB-1254	8082A	0.058	< 0.058	G
643	11104-28-2	PCB-1221	8082A	0.058	< 0.058	G
644	11141-16-5	PCB-1232	8082A	0.058	< 0.058	G
645	12672-29-6	PCB-1248	8082A	0.058	< 0.058	G
618	11096-82-5	PCB-1260	8082A	0.058	< 0.058	G
646	12674-11-2	PCB-1016	8082A	0.058	< 0.058	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.175	< 0.175	G
275	120-12-7	Anthracene	8270D	0.175	< 0.175	G
--	92-87-5	Benzidine	8270D	1.4	< 1.4	G
276	56-55-3	Benzo(a) anthracene	8270D	0.175	< 0.175	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 1

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/kg)	Reporting Results (1) (mg/kg)	Sample Type (2)
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.175	< 0.175	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.175	< 0.175	G
277	50-32-8	Benzo(a)pyrene	8270D	0.175	< 0.175	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.175	< 0.175	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.175	< 0.175	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.175	< 0.175	G
--	91-58-7	2-Chloronaphthalene	8270D	0.175	< 0.175	G
282	218-01-9	Chrysene	8270D	0.175	< 0.175	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.175	< 0.175	G
206	84-74-2	Dibutyl phthalate	8270D	0.175	< 0.175	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.175	< 0.175	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.175	< 0.175	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.262	< 0.262	G
285	84-66-2	Diethyl phthalate	8270D	0.175	< 0.175	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.175	< 0.175	G
286	131-11-3	Dimethyl Phthalate	8270D	0.175	< 0.175	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.175	< 0.175	G
287	206-44-0	Fluoranthene	8270D	0.175	< 0.175	G
288	86-73-7	Fluorene	8270D	0.175	< 0.175	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.472	< 0.472	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.175	< 0.175	G
650	78-59-1	Isophorone	8270D	0.175	< 0.175	G
293	91-20-3	Naphthalene	8270D	0.175	< 0.175	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.175	< 0.175	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.175	< 0.175	G
575	621-64-7	N-Nitrosodi-n-proplyamine	8270D	0.175	< 0.175	G
296	129-00-0	Pyrene	8270D	0.175	< 0.175	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.175	< 0.175	G
		Volatiles (Part B.4)				
171	107-02-8	Acrolein	8260B	0.061	< 0.061	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0122	< 0.0122	G
484	75-25-2	Bromoform	8260B	0.0024	< 0.0024	G
652	124-48-1	Chlorodibromomethane	8260B	0.0024	< 0.0024	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0024	< 0.0024	G
244	75-27-4	Dichlorobromomethane	8260B	0.0024	< 0.0024	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0024	< 0.0024	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0024	< 0.0024	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0049	< 0.0049	G
172	100-41-4	Ethylbenzene	8260B	0.0024	< 0.0024	G
--	74-83-9	Methyl Bromide	8260B	0.0024	< 0.0024	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0122	< 0.0122	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0024	< 0.0024	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 1

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0024	< 0.0024	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0024	< 0.0024	G
155	79-01-6	Trichloroethylene	8260B	0.0024	< 0.0024	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.472	< 0.472	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.350	< 0.350	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.472	< 0.472	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.472	< 0.472	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.350	< 0.350	G
175	108-95-2	Phenol	8270D	0.472	< 0.472	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.48	< 0.48	G
350		Tributyltin	Krone	0.0016	< 0.0016	G
257		TPH (Total petroleum Hydrocarbons)	9071B	377	< 377	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 2

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/l)	Reporting Results (1) (mg/l)	Sample Type (2)	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	3.8	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	<0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	<0.16	G	200.0
512		Cresols, Total	1311	0.16	<0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	<0.060	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	<0.060	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	<0.060	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	<0.060	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	<0.060	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	<0.060	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	<0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	<0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	<0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	<0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.020	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 2

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/kg)	Reporting Results (1) (mg/kg)	Sample Type (2)
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	0.11	0.16	G
457		Arsenic III	1632	1.96	15.0	G
441	16055-83-1	Chromium III	Calculation	3.5	<3.5	G
231	18540-29-9	Chromium VI	7196A	3.4	< 3.4	G
442	744-50-8	Copper	6020A	0.27	1.7	G
445	7440-02-0	Nickel	6020A	0.27	0.73	G
	7440-28-0	Thallium	6020A	0.053	<0.053	G
448	7440-66-6	Zinc	6020A	0.27	1.1	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0146	< 0.0146	G
334		Chlorpyrifos Dursban	8141B	0.0604	< 0.0604	G
--	72-54-8	DDD	8081B	0.0283	< 0.0283	G
--	72-55-9	DDE	8081B	0.0283	< 0.0283	G
335	50-29-3	DDT	8081B	0.0283	< 0.0283	G
336	8065-48-3	Demeton	8141B	0.0604	< 0.0604	G
337	60-57-1	Dieldrin	8081B	0.0283	< 0.0283	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0146	< 0.0146	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0283	< 0.0283	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0283	< 0.0283	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0283	< 0.0283	G
340	86-50-0	Guthion	8141B	0.0604	< 0.0604	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0146	< 0.0146	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0146	< 0.0146	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0146	< 0.0146	G
--	143-50-0	Kepone	8270D	1.64	< 1.64	G
343	121-75-5	Malathion	8141B	0.0604	< 0.0604	G
345	2385-85-5	Mirex	8081B	0.0283	< 0.0283	G
346	56-38-2	Parathion	8141B	0.0604	< 0.0604	G
--	1336-36-3	Total PCB	8082A	0.057	< 0.057	G
641	53469-21-9	PCB-1242	8082A	0.057	< 0.057	G
642	11097-69-1	PCB-1254	8082A	0.057	< 0.057	G
643	11104-28-2	PCB-1221	8082A	0.057	< 0.057	G
644	11141-16-5	PCB-1232	8082A	0.057	< 0.057	G
645	12672-29-6	PCB-1248	8082A	0.057	< 0.057	G
618	11096-82-5	PCB-1260	8082A	0.057	< 0.057	G
646	12674-11-2	PCB-1016	8082A	0.057	< 0.057	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.164	< 0.164	G
275	120-12-7	Anthracene	8270D	0.164	< 0.164	G
--	92-87-5	Benzidine	8270D	1.31	< 1.31	G
276	56-55-3	Benzo(a) anthracene	8270D	0.164	< 0.164	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 2

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.164	< 0.164	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.164	< 0.164	G
277	50-32-8	Benzo(a)pyrene	8270D	0.164	< 0.164	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.164	< 0.164	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.164	< 0.164	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.164	< 0.164	G
--	91-58-7	2-Chloronaphthalene	8270D	0.164	< 0.164	G
282	218-01-9	Chrysene	8270D	0.164	< 0.164	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.164	< 0.164	G
206	84-74-2	Dibutyl phthalate	8270D	0.164	< 0.164	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.164	< 0.164	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.164	< 0.164	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.246	< 0.246	G
285	84-66-2	Diethyl phthalate	8270D	0.164	< 0.164	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.164	< 0.164	G
286	131-11-3	Dimethyl Phthalate	8270D	0.164	< 0.164	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.164	< 0.164	G
287	206-44-0	Fluoranthene	8270D	0.164	< 0.164	G
288	86-73-7	Fluorene	8270D	0.164	< 0.164	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.442	< 0.442	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.164	< 0.164	G
650	78-59-1	Isophorone	8270D	0.164	< 0.164	G
293	91-20-3	Naphthalene	8270D	0.164	< 0.164	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.164	< 0.164	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.164	< 0.164	G
575	621-64-7	N-Nitrosodi-n-propiyamine	8270D	0.164	< 0.164	G
296	129-00-0	Pyrene	8270D	0.164	< 0.164	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.164	< 0.164	G
Volatiles (Part B.4)						
171	107-02-8	Acrolein	8260B	0.0475	< 0.0475	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0095	< 0.0095	G
484	75-25-2	Bromoform	8260B	0.0019	< 0.0019	G
652	124-48-1	Chlorodibromomethane	8260B	0.0019	< 0.0019	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0019	< 0.0019	G
244	75-27-4	Dichlorobromomethane	8260B	0.0019	< 0.0019	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0019	< 0.0019	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0019	< 0.0019	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0038	< 0.0038	G
172	100-41-4	Ethylbenzene	8260B	0.0019	< 0.0019	G
--	74-83-9	Methyl Bromide	8260B	0.0019	< 0.0019	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0095	< 0.0095	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0019	< 0.0019	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 2

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0019	< 0.0019	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0019	< 0.0019	G
155	79-01-6	Trichloroethylene	8260B	0.0019	< 0.0019	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.442	< 0.442	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.328	< 0.328	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.442	< 0.442	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.442	< 0.442	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.328	< 0.328	G
175	108-95-2	Phenol	8270D	0.442	< 0.442	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.44	< 0.44	G
350		Tributyltin	Krone	0.0016	< 0.0016	G
257		TPH (Total petroleum Hydrocarbons)	9071B	349	819	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 3

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/l)	Reporting Results [1] (mg/l)	Sample Type [2]	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	3.9	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 3

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	0.11	0.13	G
457		Arsenic III	1632	0.498	2.33	G
441	16055-83-1	Chromium III	Calculation	3.7	<3.7	G
231	18540-29-9	Chromium VI	7196A	3.5	< 3.5	G
442	744-50-8	Copper	6020A	0.28	2.0	G
445	7440-02-0	Nickel	6020A	0.28	0.70	G
	7440-28-0	Thallium	6020A	0.057	< 0.057	G
448	7440-66-6	Zinc	6020A	0.28	1.6	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0153	< 0.0153	G
334		Chlorpyrifos Dursban	8141B	0.0624	< 0.0624	G
--	72-54-8	DDD	8081B	0.0296	< 0.0296	G
--	72-55-9	DDE	8081B	0.0296	< 0.0296	G
335	50-29-3	DDT	8081B	0.0296	< 0.0296	G
336	8065-48-3	Demeton	8141B	0.0624	< 0.0624	G
337	60-57-1	Dieldrin	8081B	0.0296	< 0.0296	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0153	< 0.0153	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0296	< 0.0296	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0296	< 0.0296	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0296	< 0.0296	G
340	86-50-0	Guthion	8141B	0.0624	< 0.0624	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0153	< 0.0153	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0153	< 0.0153	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0153	< 0.0153	G
--	143-50-0	Kepone	8270D	1.79	< 1.79	G
343	121-75-5	Malathion	8141B	0.0624	< 0.0624	G
345	2385-85-5	Mirex	8081B	0.0296	< 0.0296	G
346	56-38-2	Parathion	8141B	0.0624	< 0.0624	G
--	1336-36-3	Total PCB	8082A	0.059	< 0.059	G
641	53469-21-9	PCB-1242	8082A	0.059	< 0.059	G
642	11097-69-1	PCB-1254	8082A	0.059	< 0.059	G
643	11104-28-2	PCB-1221	8082A	0.059	< 0.059	G
644	11141-16-5	PCB-1232	8082A	0.059	< 0.059	G
645	12672-29-6	PCB-1248	8082A	0.059	< 0.059	G
618	11096-82-5	PCB-1260	8082A	0.059	< 0.059	G
646	12674-11-2	PCB-1016	8082A	0.059	< 0.059	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.179	< 0.179	G
275	120-12-7	Anthracene	8270D	0.179	< 0.179	G
--	92-87-5	Benzidine	8270D	1.44	< 1.44	G
276	56-55-3	Benzo(a) anthracene	8270D	0.179	< 0.179	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 3

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/kg)	Reporting Results (1) (mg/kg)	Sample Type (2)
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.179	< 0.179	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.179	< 0.179	G
277	50-32-8	Benzo(a)pyrene	8270D	0.179	< 0.179	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.179	< 0.179	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.179	< 0.179	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.179	< 0.179	G
--	91-58-7	2-Chloronaphthalene	8270D	0.179	< 0.179	G
282	218-01-9	Chrysene	8270D	0.179	< 0.179	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.179	< 0.179	G
206	84-74-2	Dibutyl phthalate	8270D	0.179	< 0.179	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.179	< 0.179	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.179	< 0.179	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.269	< 0.269	G
285	84-66-2	Diethyl phthalate	8270D	0.179	< 0.179	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.179	< 0.179	G
286	131-11-3	Dimethyl Phthalate	8270D	0.179	< 0.179	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.179	< 0.179	G
287	206-44-0	Fluoranthene	8270D	0.179	< 0.179	G
288	86-73-7	Fluorene	8270D	0.179	< 0.179	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.484	< 0.484	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.179	< 0.179	G
650	78-59-1	Isophorone	8270D	0.179	< 0.179	G
293	91-20-3	Naphthalene	8270D	0.179	< 0.179	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.179	< 0.179	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.179	< 0.179	G
575	621-64-7	N-Nitrosodi-n-proplyamine	8270D	0.179	< 0.179	G
296	129-00-0	Pyrene	8270D	0.179	< 0.179	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.179	< 0.179	G
Volatiles (Part B.4)						
171	107-02-8	Acrolein	8260B	0.0529	< 0.0529	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0106	< 0.0106	G
484	75-25-2	Bromoform	8260B	0.0021	< 0.0021	G
652	124-48-1	Chlorodibromomethane	8260B	0.0021	< 0.0021	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0021	< 0.0021	G
244	75-27-4	Dichlorobromomethane	8260B	0.0021	< 0.0021	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0021	< 0.0021	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0021	< 0.0021	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0042	< 0.0042	G
172	100-41-4	Ethylbenzene	8260B	0.0021	< 0.0021	G
--	74-83-9	Methyl Bromide	8260B	0.0021	< 0.0021	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0106	< 0.0106	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0021	< 0.0021	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 3

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0021	< 0.0021	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0021	< 0.0021	G
155	79-01-6	Trichloroethylene	8260B	0.0021	< 0.0021	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.484	< 0.484	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.359	< 0.359	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.484	< 0.484	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.484	< 0.484	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.359	< 0.359	G
175	108-95-2	Phenol	8270D	0.484	< 0.484	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.46	< 0.46	G
350		Tributyltin	Krone	0.0017	< 0.0017	G
257		TPH (Total petroleum Hydrocarbons)	9071B	366	805	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 4

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/l)	Reporting Results (1) (mg/l)	Sample Type (2)	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	3.7	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	0.24	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 4

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	0.11	0.21	G
457		Arsenic III	1632	0.23	3.01	G
441	16055-83-1	Chromium III	Calculation	3.4	<3.4	G
231	18540-29-9	Chromium VI	7196A	3.4	< 3.4	G
442	744-50-8	Copper	6020A	0.26	2.1	G
445	7440-02-0	Nickel	6020A	0.26	0.85	G
	7440-28-0	Thallium	6020A	0.053	0.059	G
448	7440-66-6	Zinc	6020A	0.26	0.87	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0144	< 0.0144	G
334		Chlorpyrifos Dursban	8141B	0.0578	< 0.0578	G
--	72-54-8	DDD	8081B	0.028	< 0.028	G
--	72-55-9	DDE	8081B	0.028	< 0.028	G
335	50-29-3	DDT	8081B	0.028	< 0.028	G
336	8065-48-3	Demeton	8141B	0.0578	< 0.0578	G
337	60-57-1	Dieldrin	8081B	0.028	< 0.028	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0144	< 0.0144	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.028	< 0.028	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.028	< 0.028	G
--	7421-93-4	Endrin Aldehyde	8081B	0.028	< 0.028	G
340	86-50-0	Guthion	8141B	0.0578	< 0.0578	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0144	< 0.0144	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0144	< 0.0144	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0144	< 0.0144	G
--	143-50-0	Kepone	8270D	1.66	< 1.66	G
343	121-75-5	Malathion	8141B	0.0578	< 0.0578	G
345	2385-85-5	Mirex	8081B	0.028	< 0.028	G
346	56-38-2	Parathion	8141B	0.0578	< 0.0578	G
--	1336-36-3	Total PCB	8082A	0.056	< 0.056	G
641	53469-21-9	PCB-1242	8082A	0.056	< 0.056	G
642	11097-69-1	PCB-1254	8082A	0.056	< 0.056	G
643	11104-28-2	PCB-1221	8082A	0.056	< 0.056	G
644	11141-16-5	PCB-1232	8082A	0.056	< 0.056	G
645	12672-29-6	PCB-1248	8082A	0.056	< 0.056	G
618	11096-82-5	PCB-1260	8082A	0.056	< 0.056	G
646	12674-11-2	PCB-1016	8082A	0.056	< 0.056	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.166	< 0.166	G
275	120-12-7	Anthracene	8270D	0.166	< 0.166	G
--	92-87-5	Benzidine	8270D	1.33	< 1.33	G
276	56-55-3	Benzo(a) anthracene	8270D	0.166	< 0.166	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 4

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.166	< 0.166	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.166	< 0.166	G
277	50-32-8	Benzo(a)pyrene	8270D	0.166	< 0.166	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.166	< 0.166	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.166	< 0.166	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.166	< 0.166	G
--	91-58-7	2-Chloronaphthalene	8270D	0.166	< 0.166	G
282	218-01-9	Chrysene	8270D	0.166	< 0.166	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.166	< 0.166	G
206	84-74-2	Dibutyl phthalate	8270D	0.166	< 0.166	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.166	< 0.166	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.166	< 0.166	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.250	< 0.250	G
285	84-66-2	Diethyl phthalate	8270D	0.166	< 0.166	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.166	< 0.166	G
286	131-11-3	Dimethyl Phthalate	8270D	0.166	< 0.166	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.166	< 0.166	G
287	206-44-0	Fluoranthene	8270D	0.166	< 0.166	G
288	86-73-7	Fluorene	8270D	0.166	< 0.166	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.449	< 0.449	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.166	< 0.166	G
650	78-59-1	Isophorone	8270D	0.166	< 0.166	G
293	91-20-3	Naphthalene	8270D	0.166	< 0.166	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.166	< 0.166	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.166	< 0.166	G
575	621-64-7	N-Nitrosodi-n-propiyamine	8270D	0.166	< 0.166	G
296	129-00-0	Pyrene	8270D	0.166	< 0.166	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.166	< 0.166	G
Volatiles (Part B.4)						
171	107-02-8	Acrolein	8260B	0.041	< 0.041	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0082	< 0.0082	G
484	75-25-2	Bromoform	8260B	0.0016	< 0.0016	G
652	124-48-1	Chlorodibromomethane	8260B	0.0016	< 0.0016	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0016	< 0.0016	G
244	75-27-4	Dichlorobromomethane	8260B	0.0016	< 0.0016	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0016	< 0.0016	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0016	< 0.0016	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0033	< 0.0033	G
172	100-41-4	Ethylbenzene	8260B	0.0016	< 0.0016	G
--	74-83-9	Methyl Bromide	8260B	0.0016	< 0.0016	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0082	< 0.0082	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0016	< 0.0016	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 4

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0016	< 0.0016	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0016	< 0.0016	G
155	79-01-6	Trichloroethylene	8260B	0.0016	< 0.0016	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.449	< 0.449	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.333	< 0.333	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.449	< 0.449	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.449	< 0.449	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.333	< 0.333	G
175	108-95-2	Phenol	8270D	0.449	< 0.449	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.42	< 0.42	G
350		Tributyltin	Krone	0.0016	< 0.0016	G
257		TPH (Total petroleum Hydrocarbons)	9071B	336	605	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/l)	Reporting Results [1] (mg/l)	Sample Type [2]	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	0.15	G	5.0
151	7440-39-3	Barium	1311	2.8	5.3	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	1.4	3.2	G
457	1327-53-3	Arsenic III	1632	2.32	23.1	G
441	16055-83-1	Chromium III	Calculation	3.4	17.2	G
231	18540-29-9	Chromium VI	7196A	3.4	< 3.4	G
442	744-50-8	Copper	6020A	3.6	49.9	G
445	7440-02-0	Nickel	6020A	3.6	18.7	G
	7440-28-0	Thallium	6020A	0.71	1.1	G
448	7440-66-6	Zinc	6020A	3.6	31.7	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.014	< 0.014	G
334		Chlorpyrifos Dursban	8141B	0.0567	< 0.0567	G
--	72-54-8	DDD	8081B	0.0272	< 0.0272	G
--	72-55-9	DDE	8081B	0.0272	< 0.0272	G
335	50-29-3	DDT	8081B	0.0272	< 0.0272	G
336	8065-48-3	Demeton	8141B	0.0567	< 0.0567	G
337	60-57-1	Dieldrin	8081B	0.0272	< 0.0272	G
746	959-98-8	Alpha-Endosulfan	8081B	0.014	< 0.014	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0272	< 0.0272	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0272	< 0.0272	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0272	< 0.0272	G
340	86-50-0	Guthion	8141B	0.0567	< 0.0567	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.014	< 0.014	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.014	< 0.014	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.014	< 0.014	G
--	143-50-0	Kepone	8270D	1.66	< 1.66	G
343	121-75-5	Malathion	8141B	0.0567	< 0.0567	G
345	2385-85-5	Mirex	8081B	0.0272	< 0.0272	G
346	56-38-2	Parathion	8141B	0.0567	< 0.0567	G
--	1336-36-3	Total PCB	8082A	0.054	< 0.054	G
641	53469-21-9	PCB-1242	8082A	0.054	< 0.054	G
642	11097-69-1	PCB-1254	8082A	0.054	< 0.054	G
643	11104-28-2	PCB-1221	8082A	0.054	< 0.054	G
644	11141-16-5	PCB-1232	8082A	0.054	< 0.054	G
645	12672-29-6	PCB-1248	8082A	0.054	< 0.054	G
618	11096-82-5	PCB-1260	8082A	0.054	< 0.054	G
646	12674-11-2	PCB-1016	8082A	0.054	< 0.054	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.166	< 0.166	G
275	120-12-7	Anthracene	8270D	0.166	< 0.166	G
--	92-87-5	Benzidine	8270D	1.33	< 1.33	G
276	56-55-3	Benzo(a) anthracene	8270D	0.166	< 0.166	G

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Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.166	< 0.166	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.166	< 0.166	G
277	50-32-8	Benzo(a)pyrene	8270D	0.166	< 0.166	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.166	< 0.166	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.166	< 0.166	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.166	< 0.166	G
--	91-58-7	2-Chloronaphthalene	8270D	0.166	< 0.166	G
282	218-01-9	Chrysene	8270D	0.166	< 0.166	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.166	< 0.166	G
206	84-74-2	Dibutyl phthalate	8270D	0.166	< 0.166	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.166	< 0.166	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.166	< 0.166	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.249	< 0.249	G
285	84-66-2	Diethyl phthalate	8270D	0.166	< 0.166	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.166	< 0.166	G
286	131-11-3	Dimethyl Phthalate	8270D	0.166	< 0.166	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.166	< 0.166	G
287	206-44-0	Fluoranthene	8270D	0.166	< 0.166	G
288	86-73-7	Fluorene	8270D	0.166	< 0.166	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.449	< 0.449	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.166	< 0.166	G
650	78-59-1	Isophorone	8270D	0.166	< 0.166	G
293	91-20-3	Naphthalene	8270D	0.166	< 0.166	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.166	< 0.166	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.166	< 0.166	G
575	621-64-7	N-Nitrosodi-n-propiyamine	8270D	0.166	< 0.166	G
296	129-00-0	Pyrene	8270D	0.166	< 0.166	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.166	< 0.166	G
		Volatiles (Part B.4)				
171	107-02-8	Acrolein	8260B	0.0473	< 0.0473	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0095	< 0.0095	G
484	75-25-2	Bromoform	8260B	0.0019	< 0.0019	G
652	124-48-1	Chlorodibromomethane	8260B	0.0019	< 0.0019	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0019	< 0.0019	G
244	75-27-4	Dichlorobromomethane	8260B	0.0019	< 0.0019	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0019	< 0.0019	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0019	< 0.0019	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0038	< 0.0038	G
172	100-41-4	Ethylbenzene	8260B	0.0019	< 0.0019	G
--	74-83-9	Methyl Bromide	8260B	0.0019	< 0.0019	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0095	< 0.0095	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0019	< 0.0019	G

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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0019	< 0.0019	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0019	< 0.0019	G
155	79-01-6	Trichloroethylene	8260B	0.0019	< 0.0019	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.449	< 0.449	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.332	< 0.332	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.449	< 0.449	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.449	< 0.449	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.332	< 0.332	G
175	108-95-2	Phenol	8270D	0.449	< 0.449	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.43	< 0.43	G
350		Tributyltin	Krone	0.0018	< 0.0018	G
257		TPH (Total petroleum Hydrocarbons)	9071B	337	371	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

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Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5 DUP

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/l)	Reporting Results (1) (mg/l)	Sample Type (2)	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	0.25	G	5.0
151	7440-39-3	Barium	1311	2.8	6.9	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5 DUP

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/kg)	Reporting Results (1) (mg/kg)	Sample Type (2)
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	1.7	3.1	G
457	1327-53-3	Arsenic III	1632	2.44	21.2	G
441	16055-83-1	Chromium III	Calculation	3.4	16.9	G
231	18540-29-9	Chromium VI	7196A	3.3	< 3.3	G
442	744-50-8	Copper	6020A	4.2	47.3	G
445	7440-02-0	Nickel	6020A	4.2	18.1	G
	7440-28-0	Thallium	6020A	0.85	1.1	G
448	7440-66-6	Zinc	6020A	4.2	32.8	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0141	< 0.0141	G
334		Chlorpyrifos Dursban	8141B	0.0575	< 0.0575	G
--	72-54-8	DDD	8081B	0.0273	< 0.0273	G
--	72-55-9	DDE	8081B	0.0273	< 0.0273	G
335	50-29-3	DDT	8081B	0.0273	< 0.0273	G
336	8065-48-3	Demeton	8141B	0.0575	< 0.0575	G
337	60-57-1	Dieldrin	8081B	0.0273	< 0.0273	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0141	< 0.0141	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0273	< 0.0273	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0273	< 0.0273	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0273	< 0.0273	G
340	86-50-0	Guthion	8141B	0.0575	< 0.0575	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0141	< 0.0141	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0141	< 0.0141	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0141	< 0.0141	G
--	143-50-0	Kepone	8270D	1.61	< 1.61	G
343	121-75-5	Malathion	8141B	0.0575	< 0.0575	G
345	2385-85-5	Mirex	8081B	0.0273	< 0.0273	G
346	56-38-2	Parathion	8141B	0.0575	< 0.0575	G
--	1336-36-3	Total PCB	8082A	0.055	< 0.055	G
641	53469-21-9	PCB-1242	8082A	0.055	< 0.055	G
642	11097-69-1	PCB-1254	8082A	0.055	< 0.055	G
643	11104-28-2	PCB-1221	8082A	0.055	< 0.055	G
644	11141-16-5	PCB-1232	8082A	0.055	< 0.055	G
645	12672-29-6	PCB-1248	8082A	0.055	< 0.055	G
618	11096-82-5	PCB-1260	8082A	0.055	< 0.055	G
646	12674-11-2	PCB-1016	8082A	0.055	< 0.055	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.161	< 0.161	G
275	120-12-7	Anthracene	8270D	0.161	< 0.161	G
--	92-87-5	Benzidine	8270D	1.29	< 1.29	G
276	56-55-3	Benzo(a) anthracene	8270D	0.161	< 0.161	G

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Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5 DUP

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.161	< 0.161	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.161	< 0.161	G
277	50-32-8	Benzo(a)pyrene	8270D	0.161	< 0.161	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.161	< 0.161	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.161	< 0.161	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.161	< 0.161	G
--	91-58-7	2-Chloronaphthalene	8270D	0.161	< 0.161	G
282	218-01-9	Chrysene	8270D	0.161	< 0.161	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.161	< 0.161	G
206	84-74-2	Dibutyl phthalate	8270D	0.161	< 0.161	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.161	< 0.161	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.161	< 0.161	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.242	< 0.242	G
285	84-66-2	Diethyl phthalate	8270D	0.161	< 0.161	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.161	< 0.161	G
286	131-11-3	Dimethyl Phthalate	8270D	0.161	< 0.161	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.161	< 0.161	G
287	206-44-0	Fluoranthene	8270D	0.161	< 0.161	G
288	86-73-7	Fluorene	8270D	0.161	< 0.161	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.435	< 0.435	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.161	< 0.161	G
650	78-59-1	Isophorone	8270D	0.161	< 0.161	G
293	91-20-3	Naphthalene	8270D	0.161	< 0.161	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.161	< 0.161	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.161	< 0.161	G
575	621-64-7	N-Nitrosodi-n-propiyamine	8270D	0.161	< 0.161	G
296	129-00-0	Pyrene	8270D	0.161	< 0.161	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.161	< 0.161	G
Volatiles (Part B.4)						
171	107-02-8	Acrolein	8260B	0.0445	< 0.0445	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0089	< 0.0089	G
484	75-25-2	Bromoform	8260B	0.0018	< 0.0018	G
652	124-48-1	Chlorodibromomethane	8260B	0.0018	< 0.0018	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0018	< 0.0018	G
244	75-27-4	Dichlorobromomethane	8260B	0.0018	< 0.0018	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0018	< 0.0018	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0018	< 0.0018	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0036	< 0.0036	G
172	100-41-4	Ethylbenzene	8260B	0.0018	< 0.0018	G
--	74-83-9	Methyl Bromide	8260B	0.0018	< 0.0018	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0089	< 0.0089	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0018	< 0.0018	G

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Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Possum Pond ABC Ash - ABC 5 DUP

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0018	< 0.0018	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0018	< 0.0018	G
155	79-01-6	Trichloroethylene	8260B	0.0018	< 0.0018	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.435	< 0.435	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.323	< 0.323	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.435	< 0.435	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.435	< 0.435	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.323	< 0.323	G
175	108-95-2	Phenol	8270D	0.435	< 0.435	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.43	< 0.43	G
350		Tributyltin	Krone	0.0098	< 0.0098	G
257		TPH (Total petroleum Hydrocarbons)	9071B	340	561	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation, System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/14/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

EXHIBIT E
Analytical Laboratory Reports

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July 9, 2015

Mr. Ed Sciulli
GAI Consultants
385 E. Waterfront Dr.
Homestead, PA 15120

Certificate of Analysis

Revised Report - 7/9/2015 11:19:23 AM - See workorder comment section for explanation

Project Name:	**2015-VIRGINIA POWER-POSSUM**	Workorder:	**2075868**
Purchase Order:		Workorder ID:	**Dominion Possum Point**

Dear Mr. Sciulli:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, June 9, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Katie Tuite

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2075868 Dominion Possum Point

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2075868001	ABC 1 Grab	Solid	6/8/2015 11:00	6/9/2015 19:55	Collected by Client
2075868002	ABC 1 Comp	Solid	6/8/2015 11:10	6/9/2015 19:55	Collected by Client
2075868003	ABC 5 Grab	Solid	6/8/2015 13:50	6/9/2015 19:55	Collected by Client
2075868004	ABC 5 Comp	Solid	6/8/2015 14:00	6/9/2015 19:55	Collected by Client
2075868005	ABC 5 Grab Dup	Solid	6/8/2015 13:50	6/9/2015 19:55	Collected by Client
2075868006	ABC 5 Comp Dup	Solid	6/8/2015 14:10	6/9/2015 19:55	Collected by Client

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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PROJECT SUMMARY

Workorder: 2075868 Dominion Possum Point

Workorder Comments

See attached subcontracted tributylin results from ALS-Kelso. VLF 7/7/15

See attached subcontracted trivalent arsenic results from Brooks Rand. VLF 7/7/15

This report was modified on 7/7/15 to attach subcontracting and add PCB. VLF

Sample Comments

Lab ID: 2075868002 **Sample ID:** ABC 1 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2075868004 **Sample ID:** ABC 5 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2075868005 **Sample ID:** ABC 5 Grab Dup **Sample Type:** SAMPLE

One or more of the method 8260 internal standards were recovered outside of the control limits. The sample was re-analyzed with similar results, indicating a significant matrix interference.

Lab ID: 2075868006 **Sample ID:** ABC 5 Comp Dup **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868001** Date Collected: 6/8/2015 11:00 Matrix: Solid

Sample ID: **ABC 1 Grab** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/15/15 08:20	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/15/15 08:20	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	99.3		%	62 - 133	SW846 8260B			6/15/15 08:20	JPA	D
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B			6/15/15 08:20	JPA	D
Dibromofluoromethane (S)	96.1		%	78 - 116	SW846 8260B			6/15/15 08:20	JPA	D
Toluene-d8 (S)	94.4		%	76 - 127	SW846 8260B			6/15/15 08:20	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	61.0	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Acrylonitrile	ND		ug/kg	12.2	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Bromodichloromethane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Bromoform	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Bromomethane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
2-Butanone	ND		ug/kg	12.2	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Chlorodibromomethane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
1,2-Dichloropropane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	4.9	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Ethylbenzene	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Methylene Chloride	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Toluene	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Trichloroethene	ND		ug/kg	2.4	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	102		%	56 - 124	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
4-Bromofluorobenzene (S)	103		%	51 - 128	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
Dibromofluoromethane (S)	115		%	62 - 123	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868001** Date Collected: 6/8/2015 11:00 Matrix: Solid

Sample ID: **ABC 1 Grab** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	104		%	59 - 131	SW846 8260B	6/8/15	JPA	6/11/15 11:56	JPA	A
WET CHEMISTRY										
Moisture	41.7		%	0.1	S2540G-11			6/15/15 15:46	JP	A
Total Solids	58.3		%	0.1	S2540G-11			6/15/15 15:46	JP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Anthracene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Benzidine	ND		ug/kg	1400	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Benzo(a)anthracene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Benzo(a)pyrene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Butylbenzylphthalate	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2-Chloronaphthalene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2-Chlorophenol	ND		ug/kg	472	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Chrysene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Di-n-Butylphthalate	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	262	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2,4-Dichlorophenol	ND		ug/kg	350	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Diethylphthalate	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2,4-Dimethylphenol	ND		ug/kg	472	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Dimethylphthalate	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2,4-Dinitrophenol	ND		ug/kg	350	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Fluoranthene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Fluorene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	472	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Isophorone	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Kepone	ND		ug/kg	1750	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	472	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Naphthalene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Phenol	ND		ug/kg	472	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	175	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	58.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	60.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	58.1		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	59.4		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	49.3		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	49.1		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Nitrobenzene-d5 (S)	54.3		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	56		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	50.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	51.9		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Terphenyl-d14 (S)	58		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	62.3		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 13:58	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1016	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1221	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1232	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1242	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1248	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1254	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Aroclor-1260	ND		mg/kg	0.058	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	95.2		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
Tetrachloro-m-xylene (S)	54.3		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 14:25	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
alpha-BHC	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
beta-BHC	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
delta-BHC	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
gamma-BHC	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
alpha-Chlordane	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
gamma-Chlordane	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
4,4'-DDD	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
4,4'-DDE	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
4,4'-DDT	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Dieldrin	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endosulfan I	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endosulfan II	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endosulfan Sulfate	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endrin	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endrin Aldehyde	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Endrin Ketone	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Heptachlor	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Heptachlor Epoxide	ND		ug/kg	15.0	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Methoxychlor	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Mirex	ND		ug/kg	29.2	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Toxaphene	ND		ug/kg	115	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	46.1		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
Tetrachloro-m-xylene (S)	35.7		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 18:07	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Alachlor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Atrazine	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Azinphos Methyl	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Bolstar	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Bromacil	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Butachlor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Chlorpyrifos	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Coumaphos	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Cyanizine	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Demeton	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Diazinon	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Dichlorovos	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Dimethoate	85.6		ug/kg	79.7	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
EPN	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Ethoprop	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Fensulfothion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Fenthion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Malathion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Methyl Parathion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Metolachlor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Metribuzin	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Mevinphos	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Molinate	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Parathion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Phorate	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Prometon	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Propachlor	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Ronnel	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Simazine	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Sulfotep	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Tetrachlorinphos	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Tokuthion	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Trichloronate	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Trifluralin	ND		ug/kg	62.0	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	37.7		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 17:07	EGO	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	61.4		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	51.4		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 02:01	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.48	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	ND		mg/kg	377	SW846 9071B			6/17/15 13:00	AT	A
Hexavalent Chromium	ND		mg/kg	3.6	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	46.4		%	0.1	S2540G-11			6/11/15 09:47	JP	A
Silica Gel Treated HEM	ND		mg/kg	377	SW846 9071B			6/17/15 13:00	AT	A
Total Solids	53.6		%	0.1	S2540G-11			6/11/15 09:47	JP	A
METALS										
Trivalent Chromium	21.3		mg/kg	3.7	Calculation			6/18/15 15:01	CF	A
Antimony, Total	4.5		mg/kg	1.7	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
Arsenic, Total	93.2	6	mg/kg	2.5	SW846 6020A	6/11/15	JPS	6/12/15 12:30	MO	A1
Chromium, Total	21.3		mg/kg	1.7	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
Copper, Total	59.0	1	mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
Nickel, Total	30.1	2	mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
Thallium, Total	1.4		mg/kg	0.83	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
Zinc, Total	26.1		mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 02:58	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Barium, Total	4.0		mg/L	2.8	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/15/15	MNP	6/15/15 13:43	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/15/15	JPS	6/16/15 11:44	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868002** Date Collected: 6/8/2015 11:10 Matrix: Solid

Sample ID: **ABC 1 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Pyridine	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	73		%	40 - 125	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
2-Fluorobiphenyl (S)	58.3		%	50 - 110	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
2-Fluorophenol (S)	41.6		%	20 - 75	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Nitrobenzene-d5 (S)	64		%	40 - 110	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Phenol-d5 (S)	26.1		%	13 - 49	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
Terphenyl-d14 (S)	81.8		%	50 - 122	SW846 8270D	6/16/15	LEH	6/16/15 17:43	CGS	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Endrin	ND	3	ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Methoxychlor	ND	4	ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Toxaphene	ND	5	ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	59.7		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
Tetrachloro-m-xylene (S)	75.2		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 12:52	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 14:01	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 14:01	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	104		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 14:01	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID:	**2075868002**	Date Collected:	6/8/2015 11:10	Matrix:	Solid
Sample ID:	**ABC 1 Comp**	Date Received:	6/9/2015 19:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868003** Date Collected: 6/8/2015 13:50 Matrix: Solid

Sample ID: **ABC 5 Grab** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/15/15 08:55	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/15/15 08:55	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.2		%	62 - 133	SW846 8260B			6/15/15 08:55	JPA	D
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			6/15/15 08:55	JPA	D
Dibromofluoromethane (S)	94.6		%	78 - 116	SW846 8260B			6/15/15 08:55	JPA	D
Toluene-d8 (S)	93.7		%	76 - 127	SW846 8260B			6/15/15 08:55	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	47.3	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Acrylonitrile	ND		ug/kg	9.5	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Bromodichloromethane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Bromoform	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Bromomethane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
2-Butanone	ND		ug/kg	9.5	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Chlorodibromomethane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
1,2-Dichloropropane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	3.8	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Ethylbenzene	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Methylene Chloride	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Toluene	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Trichloroethene	ND		ug/kg	1.9	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	56 - 124	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
4-Bromofluorobenzene (S)	128		%	51 - 128	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
Dibromofluoromethane (S)	119		%	62 - 123	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868003** Date Collected: 6/8/2015 13:50 Matrix: Solid

Sample ID: **ABC 5 Grab** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	121		%	59 - 131	SW846 8260B	6/8/15	JPA	6/11/15 12:19	JPA	A
WET CHEMISTRY										
Moisture	40.4		%	0.1	S2540G-11			6/11/15 09:47	JP	A
Total Solids	59.6		%	0.1	S2540G-11			6/11/15 09:47	JP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Benzidine	ND		ug/kg	1330	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Benzo(a)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Benzo(a)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Butylbenzylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2-Chloronaphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2-Chlorophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Chrysene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Di-n-Butylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	249	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2,4-Dichlorophenol	ND		ug/kg	332	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Diethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2,4-Dimethylphenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Dimethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2,4-Dinitrophenol	ND		ug/kg	332	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Fluorene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Isophorone	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Kepone	ND		ug/kg	1660	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Naphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Phenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.7		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.6		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2-Fluorobiphenyl (S)	76.1		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	74.4		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
2-Fluorophenol (S)	70		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	69.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Nitrobenzene-d5 (S)	73.7		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	75.9		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Phenol-d5 (S)	70.9		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	68.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	69.8		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	74.9		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 14:23	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1016	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1221	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1232	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1242	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1248	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1254	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Aroclor-1260	ND		mg/kg	0.054	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Decachlorobiphenyls (S)	86.9		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
Tetrachloro-m-xylene (S)	65.3		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 14:36	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
alpha-BHC	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
beta-BHC	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
delta-BHC	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
gamma-BHC	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
alpha-Chlordane	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
gamma-Chlordane	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
4,4'-DDD	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
4,4'-DDE	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
4,4'-DDT	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Dieldrin	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endosulfan I	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endosulfan II	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endosulfan Sulfate	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endrin	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endrin Aldehyde	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Endrin Ketone	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Heptachlor	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.0	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Methoxychlor	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Mirex	ND		ug/kg	27.2	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Toxaphene	ND		ug/kg	107	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	55		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
Tetrachloro-m-xylene (S)	45.1		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 18:23	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND	15	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Alachlor	ND	6	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Atrazine	ND	4	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Azinphos Methyl	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Bolstar	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Bromacil	ND	7	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Butachlor	ND	11	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Chlorpyrifos	ND	1	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Coumaphos	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Cyanizine	ND	9	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Demeton	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Diazinon	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Dichlorovos	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Dimethoate	ND		ug/kg	72.9	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
EPN	ND		ug/kg	97.2	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Ethoprop	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Fensulfothion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Fenthion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Malathion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Methyl Parathion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Metolachlor	ND	8	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Metribuzin	ND	5	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Mevinphos	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Molinate	ND	12	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Parathion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Pendimethalin(Prowl)	ND	10	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Phorate	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Prometon	ND	14	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Propachlor	ND	2	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Ronnel	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Simazine	ND	3	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Sulfotep	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Tetrachlorinphos	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Tokuthion	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Trichloronate	ND		ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Trifluralin	ND	13	ug/kg	56.7	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	55		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 17:38	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	55.5		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	70.3		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 02:38	KJH	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.43	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	371		mg/kg	337	SW846 9071B			6/17/15 13:00	AT	A
Hexavalent Chromium	ND		mg/kg	3.4	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	40.6		%	0.1	S2540G-11			6/11/15 09:47	JP	A
Silica Gel Treated HEM	ND		mg/kg	337	SW846 9071B			6/17/15 13:00	AT	A
Total Solids	59.4		%	0.1	S2540G-11			6/11/15 09:47	JP	A
METALS										
Trivalent Chromium	17.2		mg/kg	3.4	Calculation			6/18/15 15:01	CF	A
Antimony, Total	3.2		mg/kg	1.4	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
Arsenic, Total	70.0		mg/kg	2.1	SW846 6020A	6/11/15	JPS	6/12/15 12:45	MO	A1
Chromium, Total	17.2		mg/kg	1.4	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
Copper, Total	49.9		mg/kg	3.6	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
Nickel, Total	18.7		mg/kg	3.6	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
Thallium, Total	1.1		mg/kg	0.71	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
Zinc, Total	31.7		mg/kg	3.6	SW846 6020A	6/11/15	JPS	6/12/15 03:13	ZMC	A1
TCLP METALS										
Arsenic, Total	0.15		mg/L	0.14	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Barium, Total	5.3		mg/L	2.8	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/15/15	MNP	6/15/15 13:44	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/15/15	JPS	6/16/15 11:48	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Pyridine	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868004** Date Collected: 6/8/2015 14:00 Matrix: Solid

Sample ID: **ABC 5 Comp** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	93.6		%	40 - 125	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
2-Fluorobiphenyl (S)	75.6		%	50 - 110	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
2-Fluorophenol (S)	51.2		%	20 - 75	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Nitrobenzene-d5 (S)	84.9		%	40 - 110	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Phenol-d5 (S)	32.7		%	13 - 49	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
Terphenyl-d14 (S)	87.1		%	50 - 122	SW846 8270D	6/16/15	LEH	6/16/15 18:59	CGS	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	65		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
Tetrachloro-m-xylene (S)	76.7		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 13:39	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 14:38	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 14:38	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	113		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 14:38	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868005** Date Collected: 6/8/2015 13:50 Matrix: Solid

Sample ID: **ABC 5 Grab Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/15/15 09:29	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/15/15 09:29	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.2		%	62 - 133	SW846 8260B			6/15/15 09:29	JPA	D
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			6/15/15 09:29	JPA	D
Dibromofluoromethane (S)	96.5		%	78 - 116	SW846 8260B			6/15/15 09:29	JPA	D
Toluene-d8 (S)	91.5		%	76 - 127	SW846 8260B			6/15/15 09:29	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	44.5	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Acrylonitrile	ND		ug/kg	8.9	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Bromodichloromethane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Bromoform	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Bromomethane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
2-Butanone	ND		ug/kg	8.9	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Chlorodibromomethane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
trans-1,2-Dichloroethene	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
1,2-Dichloropropane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
1,3-Dichloropropene, Total	ND		ug/kg	3.6	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Ethylbenzene	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Methylene Chloride	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Toluene	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
1,1,2-Trichloroethane	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Trichloroethene	ND		ug/kg	1.8	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	192	7	%	56 - 124	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
4-Bromofluorobenzene (S)	166	9	%	51 - 128	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
Dibromofluoromethane (S)	209	6	%	62 - 123	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868005** Date Collected: 6/8/2015 13:50 Matrix: Solid

Sample ID: **ABC 5 Grab Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Toluene-d8 (S)	178	8	%	59 - 131	SW846 8260B	6/8/15	TMP	6/12/15 17:39	TMP	B
WET CHEMISTRY										
Moisture	45.8		%	0.1	S2540G-11			6/11/15 09:47	JP	A
Total Solids	54.2		%	0.1	S2540G-11			6/11/15 09:47	JP	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Anthracene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Benzidine	ND		ug/kg	1290	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Benzo(a)anthracene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Benzo(a)pyrene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Butylbenzylphthalate	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2-Chloronaphthalene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2-Chlorophenol	ND		ug/kg	435	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Chrysene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Di-n-Butylphthalate	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	242	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2,4-Dichlorophenol	ND		ug/kg	323	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Diethylphthalate	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2,4-Dimethylphenol	ND		ug/kg	435	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Dimethylphthalate	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2,4-Dinitrophenol	ND		ug/kg	323	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Fluoranthene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Fluorene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	435	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Isophorone	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Kepone	ND		ug/kg	1610	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	435	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Naphthalene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Phenol	ND		ug/kg	435	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	161	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	72.4		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	75		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	63.2		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	64.6		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	57.8		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	57.5		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	63.5		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	61.7		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Phenol-d5 (S)	57.7		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	59.5		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Terphenyl-d14 (S)	64.1		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	68.7		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 14:47	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1016	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1221	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1232	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1242	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1248	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1254	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Aroclor-1260	ND		mg/kg	0.055	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	115		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
Tetrachloro-m-xylene (S)	74.8		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 14:48	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
alpha-BHC	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
beta-BHC	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
delta-BHC	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
gamma-BHC	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
alpha-Chlordane	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
gamma-Chlordane	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
4,4'-DDD	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
4,4'-DDE	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
4,4'-DDT	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Dieldrin	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endosulfan I	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endosulfan II	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endosulfan Sulfate	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endrin	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endrin Aldehyde	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Endrin Ketone	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Heptachlor	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.1	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Methoxychlor	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Mirex	ND		ug/kg	27.3	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Toxaphene	ND		ug/kg	108	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	60.8		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
Tetrachloro-m-xylene (S)	48.6		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 18:39	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Alachlor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Atrazine	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Azinphos Methyl	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Bolstar	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Bromacil	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Butachlor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Chlorpyrifos	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Coumaphos	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Cyanizine	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Demeton	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Diazinon	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Dichlorovos	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Dimethoate	ND		ug/kg	74.0	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
EPN	ND		ug/kg	98.6	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Ethoprop	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Fensulfothion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Fenthion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Malathion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Methyl Parathion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Metolachlor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Metribuzin	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Mevinphos	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Molinate	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Parathion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Phorate	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Prometon	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Propachlor	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Ronnel	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Simazine	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Sulfotep	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Tetrachlorinphos	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Tokuthion	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Trichloronate	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Trifluralin	ND		ug/kg	57.5	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	56.7		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 18:41	EGO	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	70.9		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	82.4		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:15	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.43	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	561		mg/kg	340	SW846 9071B			6/17/15 13:00	AT	A
Hexavalent Chromium	ND		mg/kg	3.3	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	41.1		%	0.1	S2540G-11			6/11/15 09:47	JP	A
Silica Gel Treated HEM	ND		mg/kg	340	SW846 9071B			6/17/15 13:00	AT	A
Total Solids	58.9		%	0.1	S2540G-11			6/11/15 09:47	JP	A
METALS										
Trivalent Chromium	16.9		mg/kg	3.4	Calculation			6/18/15 15:01	CF	A
Antimony, Total	3.1		mg/kg	1.7	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
Arsenic, Total	58.6		mg/kg	2.5	SW846 6020A	6/11/15	JPS	6/12/15 12:49	MO	A1
Chromium, Total	16.9		mg/kg	1.7	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
Copper, Total	47.3		mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
Nickel, Total	18.1		mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
Thallium, Total	1.1		mg/kg	0.85	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
Zinc, Total	32.8		mg/kg	4.2	SW846 6020A	6/11/15	JPS	6/12/15 03:28	ZMC	A1
TCLP METALS										
Arsenic, Total	0.25		mg/L	0.14	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Barium, Total	6.9		mg/L	2.8	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/15/15	MNP	6/15/15 13:45	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/15/15	JPS	6/16/15 11:52	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A

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ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID: **2075868006** Date Collected: 6/8/2015 14:10 Matrix: Solid

Sample ID: **ABC 5 Comp Dup** Date Received: 6/9/2015 19:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Pyridine	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	90.5		%	40 - 125	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
2-Fluorobiphenyl (S)	73.8		%	50 - 110	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
2-Fluorophenol (S)	51.7		%	20 - 75	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Nitrobenzene-d5 (S)	82.3		%	40 - 110	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Phenol-d5 (S)	32.7		%	13 - 49	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
Terphenyl-d14 (S)	82.9		%	50 - 122	SW846 8270D	6/16/15	LEH	6/16/15 19:25	CGS	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	64.2		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
Tetrachloro-m-xylene (S)	67.5		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 13:55	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 15:15	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 15:15	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	112		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 15:15	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

Lab ID:	**2075868006**	Date Collected:	6/8/2015 14:10	Matrix:	Solid
Sample ID:	**ABC 5 Comp Dup**	Date Received:	6/9/2015 19:55		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2075868002	1	ABC 1 Comp	SW846 6020A	Copper, Total

One of the two matrix spike analyses performed on this sample failed to meet acceptable recovery limits. The other matrix spike was within acceptable recovery limits. Matrix interferences are the possible cause for the failure.

2075868002	2	ABC 1 Comp	SW846 6020A	Nickel, Total

One of the two matrix spike analyses performed on this sample failed to meet acceptable recovery limits. The other matrix spike was within acceptable recovery limits. Matrix interferences are the possible cause for the failure.

2075868002	3	ABC 1 Comp	SW846 8081B	Endrin

The QC sample type MSD for method SW846 8081B was outside the control limits for the analyte Endrin. The RPD was reported as 31 and the upper control limit is 28.

2075868002	4	ABC 1 Comp	SW846 8081B	Methoxychlor

The QC sample type MSD for method SW846 8081B was outside the control limits for the analyte Methoxychlor. The RPD was reported as 30.9 and the upper control limit is 21.

2075868002	5	ABC 1 Comp	SW846 8081B	Toxaphene

The QC sample type MSD for method SW846 8081B was outside the control limits for the analyte Toxaphene. The RPD was reported as 0 and the upper control limit is .

2075868002	6	ABC 1 Comp	SW846 6020A	Arsenic, Total

The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. The sample was post-digestion spiked, and this matrix spike was within acceptable recovery limits.

2075868004	1	ABC 5 Comp	SW846 8141B	Chlorpyrifos

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Chlorpyrifos. The % Recovery was reported as 63.7 and the control limits were 70 to 130.

2075868004	2	ABC 5 Comp	SW846 8141B	Propachlor

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Propachlor. The % Recovery was reported as 57.1 and the control limits were 70 to 130.

2075868004	3	ABC 5 Comp	SW846 8141B	Simazine

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Simazine. The % Recovery was reported as 42.7 and the control limits were 70 to 130.

2075868004	4	ABC 5 Comp	SW846 8141B	Atrazine

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Atrazine. The % Recovery was reported as 50.4 and the control limits were 70 to 130.

2075868004	5	ABC 5 Comp	SW846 8141B	Metribuzin

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Metribuzin. The % Recovery was reported as 49.7 and the control limits were 70 to 130.

2075868004	6	ABC 5 Comp	SW846 8141B	Alachlor

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Alachlor. The % Recovery was reported as 58.7 and the control limits were 70 to 130.

2075868004	7	ABC 5 Comp	SW846 8141B	Bromacil

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Bromacil. The % Recovery was reported as 65.6 and the control limits were 70 to 130.

2075868004	8	ABC 5 Comp	SW846 8141B	Metolachlor

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Metolachlor. The % Recovery was reported as 60.8 and the control limits were 70 to 130.

2075868004	9	ABC 5 Comp	SW846 8141B	Cyanizine

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Cyanizine. The % Recovery was reported as 37.9 and the control limits were 70 to 130.

2075868004	10	ABC 5 Comp	SW846 8141B	Pendimethalin(Prowl)

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Pendimethalin(Prowl). The % Recovery was reported as 68.1 and the control limits were 70 to 130.

ANALYTICAL RESULTS

Workorder: 2075868 Dominion Possum Point

2075868004	11	ABC 5 Comp	SW846 8141B	Butachlor

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Butachlor. The % Recovery was reported as 64.5 and the control limits were 70 to 130.

2075868004	12	ABC 5 Comp	SW846 8141B	Molinate

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Molinate. The % Recovery was reported as 62.3 and the control limits were 70 to 130.

2075868004	13	ABC 5 Comp	SW846 8141B	Trifluralin

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Trifluralin. The % Recovery was reported as 69.2 and the control limits were 70 to 130.

2075868004	14	ABC 5 Comp	SW846 8141B	Prometon

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Prometon. The % Recovery was reported as 50.3 and the control limits were 70 to 130.

2075868004	15	ABC 5 Comp	SW846 8141B	Acetochlor

The QC sample type MS for method SW846 8141B was outside the control limits for the analyte Acetochlor. The % Recovery was reported as 59.5 and the control limits were 70 to 130.

2075868005	6	ABC 5 Grab Dup	SW846 8260B	Dibromofluoromethane

The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 209 and the control limits were 62 to 123. This result was reported at a dilution of 1.

2075868005	7	ABC 5 Grab Dup	SW846 8260B	1,2-Dichloroethane-d4

The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 192 and the control limits were 56 to 124. This result was reported at a dilution of 1.

2075868005	8	ABC 5 Grab Dup	SW846 8260B	Toluene-d8

The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 178 and the control limits were 59 to 131. This result was reported at a dilution of 1.

2075868005	9	ABC 5 Grab Dup	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 166 and the control limits were 51 to 128. This result was reported at a dilution of 1.

ALS Environmental

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Middletown, PA 17057
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER INSTRUCTIONS ON THE BACK

5B

Page 1 of 2

Courier:

Tracking #:

ETC

* 2 0 7 5 8 6 8 *

Co. Name: GAI CONSULTANTS, INC

Contact (Report to): ED SCIULLI, PG

Phone: 412-476-2000

Address: 385 E. WATERFRONT DR. HOMESTEAD, PA 15120

Bill to (if different than Report to):

PO#:

Project Name/#: DOMINION POSSUM POINT

ALS Quote #:

TAT: [✓] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? ✓-Y E. SCIULLI@GAICONSULTANTS.COM

Fax? -Y No.:

	1	2	3	4	5	6	7
***Container Type	C	C	C	~~C~~ A/C	C	C	A
***Container Size	32 oz	40 ml	40 ml	4 oz	4 oz	8 oz	4 oz
***Preservative	NONE	Na 4 OH	MeOH	NONE	NONE	NONE	NONE
ANALYSES/METHOD REQUESTED	METALS (PART 8,1), PCBs (PART 8,...), TCLP (EXCEPT VOA) PART A, SVA (PART 8,3/BS) MISC (8,...)	VOC'S (PART 8,4)	VOC'S (PART 8,4)	TCLP WASTE (PART A) ~~(EXCEPT VOA)~~ (VOA) ETC 6/9/15	AS3 (SVB TO KELSO)	TRIBUTYLTIN (SVB TO KELSO)	VOC'S (PART 8,4) (EXTRA CONTAINER)

Enter Number of Containers Per Analysis (ETC 6/9/15)

#	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	1	2	3	4	5	6	7
1	ABC 1 GRAB		6/8/15	11:00	G	SO		2	1	~~2~~ 1			1
2	ABC 1 COMP		↓	11:10	C	↓	2				1	1	
3	ABC 5 GRAB		↓	13:50	G	↓		2	1	~~2~~ 1 6/9/15			1
4	ABC 5 COMP		↓	14:00	C	↓	2				1	1	
5	ABC 5 GRAB DUP.		↓	13:55	G	↓		2	1	~~2~~ 1 6/9/15			1
6	ABC 5 COMP DUP		↓	14:10	C	↓	2				1	1	
7													
8													

6/10

Receipt Information (completed by Sample Receiving)

Performed by: [signature]

Cooler Temp: 1

Therm. ID: 29

No. of Coolers:

Notes:

Circle appropriate Y or N.	
Correct containers?	Y
Correct sample volume?	Y
Correct preservation?	Y
Headspace/Volatiles?	Y
Custody seals Present?	Y N
(If present) Seals Intact?	Y N
Received on ice?	Y N
COC/Labels complete/accurate?	Y N
Container in good condition?	Y N

SAMPLED BY (Please Print): EUGENE COONEY JR

Project Comments:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] GAI CONSULTANTS	6/9/15	7:00	2	[signature] / ALS	6/9	958
3	[signature] / ALS	6/9/15		4	[signature]	6/9	1641
5	[signature]	6/9	1955	6	SES	6/9	1955
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [ ] If yes, format type:

SDWA Forms? ⇒ yes [ ] yes [ ] yes [ ] yes [ ] Other

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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Rev 01-2013

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental
TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin										Sample/COC Comments
Container Type			C												
Container Size			8 oz												
Preservative			None												
					Enter Number of Containers Per Sample or Field Results Below.										
2075868 002	6/8/15	1110	G	SO	1										Subcontract: ALS-Kelso
2075868 004	6/8/15	1400	G	SO	1										
2075868 006	6/8/15	1410	G	SO	1										

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier Tracking #: _____

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:
LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/15/15	1545	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT: [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.

Container Type	C
Container Size	4 oz
Preservative	None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic
2075868 002	6/8/15	1110	G	SO	1
2075868 004	6/8/15	1400	G	SO	1
2075868 006	6/8/15	1410	G	SO	1

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments
Subcontract: Brooks Rand Labs
3958 6th Avenue NW
Seattle, WA 98107

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	6/15/15	1540	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ USACE ☐

Special Processing: USACE ☐ Navy ☐ ☐

State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☐ NC ☐ other

Reportable to PADEP? Yes ☐
PWSID # _____

Sample Disposal: Lab ☐ Special ☐

EDDs: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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F : +1 360 636 1068
www.alsglobal.com

July 05, 2015

Analytical Report for Service Request No: K1506481

Vicki Forney
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

RE: 2075868

Dear Vicki,

Enclosed are the results of the sample(s) submitted to our laboratory June 16, 2015
For your reference, these analyses have been assigned our service request number **K1506481.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

ALS Environmental
ALS Group USA, Corp
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Kelso, WA 98626
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General Chemistry
Butyltins (as cation)

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

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Thursday, July 09, 2015 11:19:37 AM
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Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 14506481
ALSI Quote #:
1 of 1

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name#:
Bill To: ALS Environmental
TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.:

Container Type: G
Container Size: 8 oz
Preservative: None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin
2075868 002	6/8/15	1110	G	SO	1
2075868 004	6/8/15	1400	G	SO	1
2075868 006	6/8/15	1410	G	SO	1

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. In Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier Tracking #: _____

Sample/COC Comments
Subcontract: ALS-Kelso

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	6/15/15	1545	2 [signature] ALS	6/16/15	0915
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ]
PWSID #:
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type:

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY Rev 5/05

PC HH

Cooler Receipt and Preservation Form

Client / Project: ALS Middletown Service Request K15 06481

Received: 6/16/15 Opened: 6/16/15 By: CM Unloaded: 6/16/15 By: CM

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
-0.4	-0.4	2.1	2.1	0	353		7738 3605 4133	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. ~~Were appropriate bottles/containers and volumes received for the tests indicated?~~ NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was Cl2/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified By

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Environmental

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Collected:**	06/8/15
Sample Matrix:	Soil	**Date Received:**	06/16/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	NA

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
2075868 002	K1506481-001	64.4	-	1	06/16/15 16:38	
2075868 004	K1506481-002	58.0	-	1	06/16/15 16:38	
2075868 006	K1506481-003	60.9	-	1	06/16/15 16:38	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project	2075868	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Analyzed:	06/16/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	Percent
Lab Code:	K1505626-015	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1505626-015DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	92.8	92.6	92.7	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 6/18/2015 1:38:43 PM

Superset Reference:15-0000335837 rev 00

ALS Environmental

Butyltins (as cation)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Collected:**	06/08/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2075868 002	**Units:**	ug/Kg
Lab Code:	K1506481-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.6	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	63	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Collected:**	06/08/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2075868 004	**Units:**	ug/Kg
Lab Code:	K1506481-002	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.8	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	64	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Collected:**	06/08/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2075868 006	**Units:**	ug/Kg
Lab Code:	K1506481-003	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.7	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	76	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Butyltins (as cation)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1505433-5	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	0.98	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	56	10-120	06/24/15	Acceptable

Comments:

Client: ALS Environmental - US
Project: 2075868
Sample Matrix: Sediment

Service Request: K1506481

Surrogate Recovery Summary
Butyltins (as cation)

Extraction Method: METHOD
Analysis Method: Krone

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
Batch QC	K1506354-001	75
2075868 002	K1506481-001	63
2075868 004	K1506481-002	64
2075868 006	K1506481-003	76
Batch QCDUP	KWG1505433-1	73
Method Blank	KWG1505433-5	56
Batch QCMS	KWG1505433-2	77
Batch QCDMS	KWG1505433-3	70
Lab Control Sample	KWG1505433-4	76

Surrogate Recovery Control Limits (%)

Sur1 = Tri-n-propyltin 10-120

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

		Batch QCMS KWG1505433-2 Matrix Spike			Batch QCDMS KWG1505433-3 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	ND	20.8	30.9	67	21.7	30.9	70	10-115	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Duplicate Sample Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

Analyte Name	MRL	Sample Result	Batch QCDUP KWG1505433-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Tri-n-butyltin Cation	1.4	ND	ND	ND	-	40

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506481
Project:	2075868	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Lab Control Spike Summary
Butyltins (as cation)

Extraction Method:	METHOD	**Units:**	ug/Kg
Analysis Method:	Krone	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1505433

	Lab Control Sample KWG1505433-4 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Tri-n-butyltin Cation	16.8	22.2	76	10-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BROOKS RAND LABS
MEANINGFUL METALS DATA

June 30, 2015

ALS - Middletown
ATTN: Vicki Forney
34 Dogwood Lane
Middletown PA 17057
vicki.forney@alsglobal.com

RE: Project ALS-MD1501 Client Project: 2075868

Dear Vicki Forney,

This report contains results for the 3 samples received by Brooks Rand Labs (BRL) on June 16, 2015. The samples were logged-in for the contracted analyses according to the chain-of-custody form(s). The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

The matrix spike/matrix spike duplicate (MS/MSD) set was spiked at a concentration much less than the native sample and were not analyzed. A post-preparation spike (PS) was analyzed and recovered within acceptance criteria.

The results were method blank corrected as described in the calculations section of the relevant BRL SOP(s) and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details. All additional data is reported without qualification and all other associated quality control sample results meet the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more details, please see the *Report Information* page in your report. Please feel free to contact me if you have any questions regarding this report.

Sincerely,

Lydia Greaves

Lydia Greaves
Project Manager
Lydia@brooksrand.com

3958 6th Avenue NW Seattle WA 98107 · P(206) 632-6206 · F(206) 632-6017 · brl@brooksrand.com · www.brooksrand.com

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/about/accreditations-certifications/>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCB	continuing calibration blank	**N/C**	not calculated
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
D	dissolved fraction	**RPD**	relative percent difference
DUP	duplicate	**RSD**	relative standard deviation
IBL	instrument blank	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

- **B** Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
- **E** An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
- **H** Holding time and/or preservation requirements not met. Result is estimated.
- **J** Estimated value. A full explanation is presented in the narrative.
- **J-M** Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
- **J-N** Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
- **M** Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
- **N** Spike recovery was not within acceptance criteria. Result is estimated.
- **R** Rejected, unusable value. A full explanation is presented in the narrative.
- **U** Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
- **X** Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

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Project ID: ALS-MD1501
PM: Lydia Greaves

BROOKS RAND LABS
MEANINGFUL METALS DATA

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
2075868 002	1525013-01	Soil	Sample	06/08/2015	06/16/2015
2075868 004	1525013-02	Soil	Sample	06/08/2015	06/16/2015
2075868 006	1525013-03	Soil	Sample	06/08/2015	06/16/2015

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
%TS	Soil/Sediment	SM 2540G	06/24/2015	06/28/2015	B150975	N/A
As(III)	Soil/Sediment	EPA 1632	06/24/2015	06/24/2015	B150974	1500505

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
2075868 002										
1525013-01	%TS	Soil	NA	59.61		0.36	1.20	%	B150975	N/A
1525013-01	As(III)	Soil	dry	5.36		0.240	0.720	mg/kg	B150974	1500505
2075868 004										
1525013-02	%TS	Soil	NA	59.61		0.36	1.20	%	B150975	N/A
1525013-02	As(III)	Soil	dry	23.1		2.32	6.95	mg/kg	B150974	1500505
2075868 006										
1525013-03	%TS	Soil	NA	58.80		0.36	1.20	%	B150975	N/A
1525013-03	As(III)	Soil	dry	21.2		2.44	7.31	mg/kg	B150974	1500505

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Accuracy & Precision Summary

Batch: B150974
Lab Matrix: Soil/Sediment
Method: EPA 1632

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150974-BS1	**Laboratory Fortified Blank (1523014)**						
	As(III)		1.204	1.171	mg/kg	97% 50-150	
B150974-BS2	**Laboratory Fortified Blank (1523029)**						
	As(III)		1.204	1.128	mg/kg	94% 50-150	
B150974-SRM1	**Certified Reference Material (1505010, PACS-3)**						
	As(III)		4.752	5.887	mg/kg	124% 50-150	
B150974-DUP1	**Duplicate (1525011-01)**						
	As(III)	14.95		13.00	mg/kg		14% 35
B150974-PS1	**Post Spike (1525011-01)**						
	As(III)	14.95	24.62	39.43	mg/kg	99% 65-135	

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Project ID: ALS-MD1501
PM: Lydia Greaves

Client PM: Vicki Forney

Accuracy & Precision Summary

Batch: B150975
Lab Matrix: Soil/Sediment
Method: SM 2540G

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150975-DUP1	**Duplicate (1525011-01)**						
	%TS	65.61		65.78	%		0.3% 15

3958 6th Avenue NW Seattle WA 98107 · P(206) 632-6206 · F(206) 632-6017 · brl@brooksrand.com · www.brooksrand.com

Project ID: ALS-MD1501
PM: Lydia Greaves

Client PM: Vicki Forney

Method Blanks & Reporting Limits

Batch: B150974
Matrix: Soil/Sediment
Method: EPA 1632
Analyte: As(III)

Sample	Result	Units
B150974-BLK1	0.051	mg/kg wet
B150974-BLK2	0.046	mg/kg wet
B150974-BLK3	0.047	mg/kg wet
B150974-BLK4	0.049	mg/kg wet

Average: 0.048 **Standard Deviation:** 0.002 **MDL:** 0.040
Limit: 0.080 **Limit:** 0.027 **MRL:** 0.120

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Method Blanks & Reporting Limits

Batch: B150975
Matrix: Soil/Sediment
Method: SM 2540G
Analyte: %TS

Sample	Result	Units
B150975-BLK1	0.00	%
B150975-BLK2	0.00	%
Average:	0.00	
Limit:	1.20	

MDL: 0.36
MRL: 1.20

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Project ID: ALS-MD1501
PM: Lydia Greaves

Client PM: Vicki Forney

Sample Containers

Lab ID: 1525013-01
Sample: 2075868 002

Report Matrix: Soil
Sample Type: Sample

Collected: 06/08/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8 oz	not provided	none	none		cooler

Lab ID: 1525013-02
Sample: 2075868 004

Report Matrix: Soil
Sample Type: Sample

Collected: 06/08/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8 oz	not provided	none	none		cooler

Lab ID: 1525013-03
Sample: 2075868 006

Report Matrix: Soil
Sample Type: Sample

Collected: 06/08/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8 oz	not provided	none	none		cooler

Shipping Containers

cooler
Received: June 16, 2015 9:05
Tracking No: 773836255661 via FedEx
Coolant Type: Ice
Temperature: 0.1 °C

Description: cooler
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes

3958 6th Avenue NW Seattle WA 98107 · P(206) 632-6206 · F(206) 632-6017 · brl@brooksrand.com · www.brooksrand.com

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: BRL Report 1525013 — 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane, Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental
TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: Approved By:
Email?: [x] Y almdt.subcontract@ALSGlobal.com
Fax?: [ ] Y No

Receipt Information (completed by Receiving Lab)
Cooler Temp: Therm. ID:
No. of Coolers:

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/ Tracking #:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic	Sample/COC Comments
					Container Type: C; Container Size: 4 oz; Preservative: None	
2075868.002	6/8/15	1110	G	SO	1	Subcontract: Brooks Rand Labs
2075868.004	6/8/15	1400	G	SO	1	3958 6th Avenue NW
2075868.006	6/8/15	1410	G	SO	1	Seattle, WA 98107

Enter Number of Containers Per Sample or Field Results Below.

ALSI Field Services: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

Project Comments:
LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/15/15	1340	2 / BRL	6/16/15	0905
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type:

* G=Grab; C=Composite **Matrix - At=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 5/05

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/l)	Reporting Results [1] (mg/l)	Sample Type[2]	Threshold Levels (mg/l)
Toxicity Characteristic Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311			G	5.0
151	7440-39-3	Barium	1311			G	100.0
216	71-43-2	Benzene	1311			G	3.0
096	7440-43-9	Cadmium	1311			G	1.0
236	56-23-5	Carbon Tetrachloride	1311			G	0.5
333	57-74-9	Chlordane	1311			G	0.03
280	108-90-7	Chlorobenzene	1311			G	100.0
223	67-66-3	Chloroform	1311			G	6.0
016	7440-47-3	Chromium	1311			G	5.0
510	95-48-7	o-Cresol *	1311			G	200.0
509	108-39-4	m-Cresol *	1311			G	200.0
511	106-44-5	p-Cresol *	1311			G	200.0
512		Cresols, Total	1311			G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311			G	7.5
260	107-06-2	1,2-Dichloroethane	1311			G	0.5
258	75-35-4	1,1-Dichloroethylene	1311			G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311			G	0.13
339	72-20-8	Endrin	1311			G	0.02
341	76-44-8	Heptachlor	1311			G	0.008
289	118-74-1	Hexachlorobenzene	1311			G	0.13
290	87-68-3	Hexachlorobutadiene	1311			G	0.5
291	67-72-1	Hexachloroethane	1311			G	5.0
034	7439-92-1	Lead	1311			G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311			G	0.4
042	7439-97-6	Mercury	1311			G	0.2
344	72-43-5	Methoxychlor	1311			G	10.0
	78-93-3	Methyl Ethyl Ketone	1311			G	200.0
294	98-95-3	Nitrobenzene	1311			G	2.0
210	87-86-5	Pentachlorophenol	1311			G	100.0
	110-86-1	Pyridine	1311			G	5.0
152	7782-49-2	Selenium	1311			G	1.0
037	7440-22-4	Silver	1311			G	5.0
220	127-18-4	Tetrachloroethylene	1311			G	0.7
349	8001-35-2	Toxaphene	1311			G	0.5
602	79-01-6	Trichloroethylene	1311			G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311			G	400
602	88-06-2	2,4,6-Trichlorophenol	1311			G	2.0
173	75-01-4	Vinyl Chloride	1311			G	0.2

* If o-, m- and p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[2]
		Metals (Part B.1.)				
178	7429-90-5	Antimony	(3)	(4)		G
457		Arsenic III	(3)	(4)		G
441	16055-83-1	Chromium III	(3)	(4)		G
231	18540-29-9	Chromium VI	(3)	(4)		G
442	744-50-8	Copper	(3)	(4)		G
445	7440-02-0	Nickel	(3)	(4)		G
	7440-28-0	Thallium	(3)	(4)		G
448	7440-66-6	Zinc	(3)	(4)		G
		Pesticides/PCB'S (Part B.2.)				
332	309-00-2	Aldrin	(3)	(4)		G
334		Chlorpyrifos Dursban	(3)	(4)		G
--	72-54-8	DDD	(3)	(4)		G
--	72-55-9	DDE	(3)	(4)		G
335	50-29-3	DDT	(3)	(4)		G
336	8065-48-3	Demeton	(3)	(4)		G
337	60-57-1	Dieldrin	(3)	(4)		G
746	959-98-8	Alpha-Endosulfan	(3)	(4)		G
640	33213-65-9	Alpha-Endosulfan	(3)	(4)		G
617	1031-07-8	Endosulfan Sulfate	(3)	(4)		G
--	7421-93-4	Endrin Aldehyde	(3)	(4)		G
340	86-50-0	Guthion	(3)	(4)		G
--	1024-57-3	Heptachlor Epoxide	(3)	(4)		G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	(3)	(4)		G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	(3)	(4)		G
--	143-50-0	Kepone	(3)	(4)		G
343	121-75-5	Malathion	(3)	(4)		G
345	2385-85-5	Mirex	(3)	(4)		G
346	56-38-2	Parathion	(3)	(4)		G
--	1336-36-3	Total PCB	(3)	(4)		G
641	53469-21-9	PCB-1242	(3)	(4)		G
642	11097-69-1	PCB-1254	(3)	(4)		G
643	11104-28-2	PCB-1221	(3)	(4)		G
644	11141-16-5	PCB-1232	(3)	(4)		G
645	12672-29-6	PCB-1248	(3)	(4)		G
618	11096-82-5	PCB-1260	(3)	(4)		G
646	12674-11-2	PCB-1016	(3)	(4)		G
		Base Neutral Extractable (Part B.3.)				
273	208-96-8	Acenaphthene	(3)	(4)		G
275	120-12-7	Anthracene	(3)	(4)		G
--	92-87-5	Benzidine	(3)	(4)		G
276	56-55-3	Benzo(a) anthracene	(3)	(4)		G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[1]
648	50-32-8	Benzo(b) fluoranthene (3,4-Benzofluoranthene)	(3)	(4)		G
278	207-08-9	Benzo(k) fluoranthene	(3)	(4)		G
277	50-32-8	Benzo(a)pyrene	(3)	(4)		G
–	111-44-4	Bis 2-Chloroethyl Ether	(3)	(4)		G
279	102-60-1	Bis 2-Chloroiso-Propyl Ether	(3)	(4)		G
486	85-68-7	Butyl benzyl phthalate	(3)	(4)		G
–	91-58-7	2-Chloronaphthalene	(3)	(4)		G
282	218-01-9	Chrysene	(3)	(4)		G
654	53-70-3	Dibenz(a,h) anthracene	(3)	(4)		G
206	84-74-2	Dibutyl phthalate	(3)	(4)		G
259	95-50-1	1,2-Dichlorobenzene	(3)	(4)		G
264	541-73-1	1,3-Dichlorobenzene	(3)	(4)		G
527	91-94-1	3,3-Dichlorobenzidine	(3)	(4)		G
285	84-66-2	Diethyl phthalate	(3)	(4)		G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethylhexyl) Phthalate)	(3)	(4)		G
286	131-11-3	Dimethyl Phthalate	(3)	(4)		G
535	122-66-7	1,2-Diphenylhydrazine	(3)	(4)		G
287	206-44-0	Fluoranthene	(3)	(4)		G
288	86-73-7	Fluorene	(3)	(4)		G
538	77-47-4	Hexachlorocyclopentadiene	(3)	(4)		G
651	193-39-5	Indeno(1,2,3-cd) pyrene	(3)	(4)		G
650	78-59-1	Isophorone	(3)	(4)		G
293	91-20-3	Naphthalene	(3)	(4)		G
573	62-75-9	N-Nitrosodimethylamine	(3)	(4)		G
574	86-30-6	N-Nitrosodiphenylamine	(3)	(4)		G
575	621-64-7	N-Nitrosodi-n-proplyamine	(3)	(4)		G
296	129-00-0	Pyrene	(3)	(4)		G
263	129-82-1	1,2,4 Trichlorobenzene	(3)	(4)		G
		Volatiles (Part B.4.)				
171	107-02-8	Acrolein	(3)	(4)		G
204	107-13-1	Acrylonitrile (Vinyl cyanide)	(3)	(4)		G
484	75-25-2	Bromoform	(3)	(4)		G
652	124-48-1	Chlorodibromomethane	(3)	(4)		G
649	75-09-2	Dichloromethane (Methylene chloride)	(3)	(4)		G
244	75-27-4	Dichlorobromomethane	(3)	(4)		G
262	156-60-5	Trans 1,2-Dichloroethylene	(3)	(4)		G
261	78-87-5	1,2-Dichloropropane	(3)	(4)		G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	(3)	(4)		G
172	100-41-4	Ethylbenzene	(3)	(4)		G
--	74-83-9	Methyl Bromide	(3)	(4)		G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	(3)	(4)		G
596	79-34-5	1,1,2,2-Tetrachloroethane	(3)	(4)		G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[2]
222	108-88-3	Toluene	[3]	[4]		G
373	79-00-5	1,1,2-Trichloroethane	[3]	[4]		G
155	79-01-6	Trichloroethylene	[3]	[4]		G
		Acids Extratables (Part B.5.)				
267	95-57-8	2-Chlorophenol	[3]	[4]		G
268	120-83-2	2,4 Dichlorophenol	[3]	[4]		G
269	105-67-9	2,4 Dimethylphenol	[3]	[4]		G
–	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	[3]	[4]		G
270	51-28-5	2,4-Dinitrophenol	[3]	[4]		G
175	108-95-2	Phenol	[3]	[4]		G
		Miscellaneous (Part B.6.)				
018		Cyanide, Total	[3]	[4]		G
350		Tributyltin	[3]	[4]		G
257		TPH (Total Petroleum Hydrocarbons)	[3]	[4]		G

I certify under penalty of law that this document 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. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

Name of Principal Executive Officer or Authorized Agent — Title

Signature of Principal Executive Officer or Authorized Agent — Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.
Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilograms (mg/kg) unless otherwise specified. Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<[QL]" on the Attachment B form, where the actual test method QL shall be substituted for "[QL]".

(2) Sample Type:
G = Grab - An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported.

(3) Any approved method presented in 40 CFR Part 136.

(4) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/l)	Reporting Results[1] (mg/l)	Sample Type[1]	Threshold Levels (mg/l)
Toxicity Characteristic Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311			G	5.0
151	7440-39-3	Barium	1311			G	100.0
216	71-43-2	Benzene	1311			G	3.0
096	7440-43-9	Cadmium.	1311			G	1.0
236	56-23-5	Carbon Tetrachloride	1311			G	0.5
333	57-74-9	Chlordane	1311			G	0.03
280	108-90-7	Chlorobenzene	1311			G	100.0
223	67-66-3	Chloroform	1311			G	6.0
016	7440-47-3	Chromium	1311			G	5.0
510	95-48-7	o-Cresol *	1311			G	200.0
509	108-39-4	m-Cresol *	1311			G	200.0
511	106-44-5	p-Cresol *	1311			G	200.0
512		Cresols, Total	1311			G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311			G	7.5
260	107-06-2	1,2-Dichloroethane	1311			G	0.5
258	75-35-4	1,1-Dichloroethylene	1311			G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311			G	0.13
339	72-20-8	Endrin	1311			G	0.02
341	76-44-8	Heptachlor	1311			G	0.008
289	118-74-1	Hexachlorobenzene	1311			G	0.13
290	87-68-3	Hexachlorobutadiene	1311			G	0.5
291	67-72-1	Hexachloroethane	1311			G	3.0
034	7439-92-1	Lead	1311			G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311			G	0.4
042	7439-97-6	Mercury	1311			G	0.2
344	72-43-5	Methoxychlor	1311			G	10.0
	78-93-3	Methyl Ethyl Ketone	1311			G	200.0
294	98-95-3	Nitrobenzene	1311			G	2.0
210	87-86-5	Pentachlorophenol	1311			G	100.0
	110-86-1	Pyridine	1311			G	5.0
152	7782-49-2	Selenium	1311			G	1.0
037	7440-22-4	Silver	1311			G	5.0
220	127-18-4	Tetrachloroethylene	1311			G	0.7
349	8001-35-2	Toxaphene	1311			G	0.5
602	79-01-6	Trichloroethylene	1311			G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311			G	400
602	88-06-2	2,4,6-Trichlorophenol	1311			G	2.0
173	75-01-4	Vinyl Chloride	1311			G	0.2

* If o-, m- and p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[1]
		Metals (Part B.1.)				
178	7429-90-5	Antimony	(3)	(4)		G
457		Arsenic III	(3)	(4)		G
441	16055-83-1	Chromium III	(3)	(4)		G
231	18540-29-9	Chromium VI	(3)	(4)		G
442	744-50-8	Copper	(3)	(4)		G
445	7440-02-0	Nickel	(3)	(4)		G
	7440-28-0	Thallium	(3)	(4)		G
448	7440-66-6	Zinc	(3)	(4)		G
		Pesticides/PCB'S (Part B.2.)				
332	309-00-2	Aldrin	(3)	(4)		G
334		Chlorpyrifos Dursban	(3)	(4)		G
--	72-54-8	DDD	(3)	(4)		G
--	72-55-9	DDE	(3)	(4)		G
335	50-29-3	DDT	(3)	(4)		G
336	8065-48-3	Demeton	(3)	(4)		G
337	60-57-1	Dieldrin	(3)	(4)		G
746	959-98-8	Alpha-Endosulfan	(3)	(4)		G
640	33213-65-9	Alpha-Endosulfan	(3)	(4)		G
617	1031-07-8	Endosulfan Sulfate	(3)	(4)		G
--	7421-93-4	Endrin Aldehyde	(3)	(4)		G
340	86-50-0	Guthion	(3)	(4)		G
--	1024-57-3	Heptachlor Epoxide	(3)	(4)		G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	(3)	(4)		G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	(3)	(4)		G
--	143-50-0	Kepone	(3)	(4)		G
343	121-75-5	Malathion	(3)	(4)		G
345	2385-85-5	Mirex	(3)	(4)		G
346	56-38-2	Parathion	(3)	(4)		G
--	1336-36-3	Total PCB	(3)	(4)		G
641	53469-21-9	PCB-1242	(3)	(4)		G
642	11097-69-1	PCB-1254	(3)	(4)		G
643	11104-28-2	PCB-1221	(3)	(4)		G
644	11141-16-5	PCB-1232	(3)	(4)		G
645	12672-29-6	PCB-1248	(3)	(4)		G
618	11096-82-5	PCB-1260	(3)	(4)		G
646	12674-11-2	PCB-1016	(3)	(4)		G
		Base Neutral Extractable (Part B.3.)				
273	208-96-8	Acenaphthene	(3)	(4)		G
275	120-12-7	Anthracene	(3)	(4)		G
--	92-87-5	Benzidine	(3)	(4)		G
276	56-55-3	Benzo(a) anthracene	(3)	(4)		G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[1]
648	50-32-8	Benzo(b) fluoranthene (3,4-Bensofluoranthene)	(3)	(4)		G
278	207-08-9	Benzo(k) fluoranthene	(3)	(4)		G
277	50-32-8	Benzo(a)pyrene	(3)	(4)		G
--	111-44-4	Bis 2-Chloroethyl Ether	(3)	(4)		G
279	102-60-1	Bis 2-Chloroiso-Propyl Ether	(3)	(4)		G
486	85-68-7	Butyl benzyl phthalate	(3)	(4)		G
--	91-58-7	2-Chloronaphthalene	(3)	(4)		G
282	218-01-9	Chrysene	(3)	(4)		G
654	53-70-3	Dibenz(a,h) anthracene	(3)	(4)		G
206	84-74-2	Dibutyl phthalate	(3)	(4)		G
259	95-50-1	1,2-Dichlorobenzene	(3)	(4)		G
264	541-73-1	1,3-Dichlorobenzene	(3)	(4)		G
527	91-94-1	3,3-Dichlorobenzidine	(3)	(4)		G
285	84-66-2	Diethyl phthalate	(3)	(4)		G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethylhexyl) Phthalate)	(3)	(4)		G
286	131-11-3	Dimethyl Phthalate	(3)	(4)		G
535	122-66-7	1,2-Diphenylhydrazine	(3)	(4)		G
287	206-44-0	Fluoranthene	(3)	(4)		G
288	86-73-7	Fluorene	(3)	(4)		G
538	77-47-4	Hexachlorocyclopentadiene	(3)	(4)		G
651	193-39-5	Indeno(1,2,3-cd) pyrene	(3)	(4)		G
650	78-59-1	Isophorone	(3)	(4)		G
293	91-20-3	Naphthalene	(3)	(4)		G
573	62-75-9	N-Nitrosodimethylamine	(3)	(4)		G
574	86-30-6	N-Nitrosodiphenylamine	(3)	(4)		G
575	621-64-7	N-Nitrosodi-n-propylamine	(3)	(4)		G
296	129-00-0	Pyrene	(3)	(4)		G
263	129-82-1	1,2,4 Trichlorobenzene	(3)	(4)		G
		Volatiles (Part B.4.)				
171	107-02-8	Acrolein	(3)	(4)		G
204	107-13-1	Acrylonitrile (Vinyl cyanide)	(3)	(4)		G
484	75-25-2	Bromoform	(3)	(4)		G
652	124-48-1	Chlorodibromomethane	(3)	(4)		G
649	75-09-2	Dichloromethane (Methylene chloride)	(3)	(4)		G
244	75-27-4	Dichlorobromomethane	(3)	(4)		G
262	156-60-5	Trans 1,2-Dichloroethylene	(3)	(4)		G
261	78-87-5	1,2-Dichloropropane	(3)	(4)		G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	(3)	(4)		G
172	100-41-4	Ethylbenzene	(3)	(4)		G
--	74-83-9	Methyl Bromide	(3)	(4)		G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	(3)	(4)		G
596	79-34-5	1,1,2,2-Tetrachloroethane	(3)	(4)		G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power – Possum Point VPDES PERMIT NO. : VA0002071

DATE: PROJECT:

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level[1] (mg/kg)	Reporting Results[1] (mg/kg)	Sample Type[2]
222	108-88-3	Toluene	[3]	[4]		G
373	79-00-5	1,1,2-Trichloroethane	[3]	[4]		G
155	79-01-6	Trichloroethylene	[3]	[4]		G
		Acids Extratables (Part B.5.)				
267	95-57-8	2-Chlorophenol	[3]	[4]		G
268	120-83-2	2,4 Dichlorophenol	[3]	[4]		G
269	105-67-9	2,4 Dimethylphenol	[3]	[4]		G
-	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	[3]	[4]		G
270	51-28-5	2,4-Dinitrophenol	[3]	[4]		G
175	108-95-2	Phenol	[3]	[4]		G
		Miscellaneous (Part B.6.)				
018		Cyanide, Total	[3]	[4]		G
350		Tributyltin	[3]	[4]		G
257		TPH (Total Petroleum Hydrocarbons)	[3]	[4]		G

I certify under penalty of law that this document 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. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

Name of Principal Executive Officer or Authorized Agent | Title

Signature of Principal Executive Officer or Authorized Agent | Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.
Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilograms (mg/kg) unless otherwise specified.
Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<[QL]" on the Attachment B form, where the actual test method QL shall be substituted for "[QL]".

(2) Sample Type:
G = Grab - An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported.

(3) Any approved method presented in 40 CFR Part 136.

(4) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

July 9, 2015

Mr. Ed Sciulli
GAI Consultants
385 E. Waterfront Dr.
Homestead, PA 15120

Certificate of Analysis

Revised Report - 7/9/2015 11:20:00 AM - See workorder comment section for explanation

Project Name:	**2015-VIRGINIA POWER-POSSUM**	Workorder:	**2076025**
Purchase Order:		Workorder ID:	**Dominion Possum Point**

Dear Mr. Sciulli:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, June 10, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Katie Tuite

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2076025 Dominion Possum Point

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2076025001	ABC 2 Grab	Solid	6/9/2015 11:00	6/10/2015 19:50	Collected by Client
2076025002	ABC 2 Comp	Solid	6/9/2015 11:15	6/10/2015 19:50	Collected by Client
2076025003	ABC 3 Grab	Solid	6/9/2015 09:00	6/10/2015 19:50	Collected by Client
2076025004	ABC 3 Comp	Solid	6/9/2015 09:15	6/10/2015 19:50	Collected by Client
2076025005	ABC 4 Grab	Solid	6/9/2015 12:45	6/10/2015 19:50	Collected by Client
2076025006	ABC 4 Comp	Solid	6/9/2015 13:00	6/10/2015 19:50	Collected by Client
2076025007	Low Volume C Grab	Solid	6/10/2015 10:00	6/10/2015 19:50	Collected by Client
2076025008	Low Volume C Comp	Solid	6/10/2015 10:05	6/10/2015 19:50	Collected by Client
2076025009	Low Volume D Grab	Solid	6/10/2015 10:10	6/10/2015 19:50	Collected by Client
2076025010	Low Volume D Comp	Solid	6/10/2015 10:15	6/10/2015 19:50	Collected by Client

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SAMPLE SUMMARY

Workorder: 2076025 Dominion Possum Point

Notes

- -- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- -- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- -- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- -- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- -- The Chain of Custody document is included as part of this report.
- -- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- -- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

PROJECT SUMMARY

Workorder: 2076025 Dominion Possum Point

Workorder Comments

See attached subcontracted tributylin results from ALS-Kelso. VLF 7/7/15

See attached subcontracted trivalent arsenic results from Brooks Rand. VLF 7/7/15

This report was modified on 7/7/15 to attach subcontracting and add PCB. VLF

Sample Comments

Lab ID: 2076025002 **Sample ID:** ABC 2 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025004 **Sample ID:** ABC 3 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025005 **Sample ID:** ABC 4 Grab **Sample Type:** SAMPLE

One or more of the method 8260 internal standards were recovered outside of the control limits. The sample was re-analyzed with similar results, indicating a significant matrix interference.

Lab ID: 2076025006 **Sample ID:** ABC 4 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025008 **Sample ID:** Low Volume C Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025010 **Sample ID:** Low Volume D Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025001** Date Collected: 6/9/2015 11:00 Matrix: Solid

Sample ID: **ABC 2 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:25	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.6		%	62 - 133	SW846 8260B			6/18/15 08:25	JPA	D
4-Bromofluorobenzene (S)	86.9		%	79 - 114	SW846 8260B			6/18/15 08:25	JPA	D
Dibromofluoromethane (S)	98.5		%	78 - 116	SW846 8260B			6/18/15 08:25	JPA	D
Toluene-d8 (S)	97.7		%	76 - 127	SW846 8260B			6/18/15 08:25	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	47.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Acrylonitrile	ND		ug/kg	9.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromodichloromethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromoform	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromomethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
2-Butanone	ND		ug/kg	9.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Chlorodibromomethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,2-Dichloropropane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	3.8	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Ethylbenzene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Methylene Chloride	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Toluene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Trichloroethene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	56 - 124	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
4-Bromofluorobenzene (S)	116		%	51 - 128	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Dibromofluoromethane (S)	114		%	62 - 123	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025001** Date Collected: 6/9/2015 11:00 Matrix: Solid

Sample ID: **ABC 2 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	108		%	59 - 131	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
WET CHEMISTRY										
Moisture	41.9		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	58.1		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzidine	ND		ug/kg	1310	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(a)anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(a)pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Butylbenzylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Chloronaphthalene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Chlorophenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Chrysene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Di-n-Butylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	246	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dichlorophenol	ND		ug/kg	328	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Diethylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dimethylphenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Dimethylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dinitrophenol	ND		ug/kg	328	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Fluorene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Isophorone	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Kepone	ND		ug/kg	1640	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Naphthalene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Phenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	85.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	70.6		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	72.2		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	65.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	65.4		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	72		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	69.9		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	70.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	67.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Terphenyl-d14 (S)	77.7		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	72.5		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1016	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1221	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1232	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1242	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1248	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1254	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1260	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	187	1	%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Tetrachloro-m-xylene (S)	112		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
alpha-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
beta-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
delta-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
gamma-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
alpha-Chlordane	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
gamma-Chlordane	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDD	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDE	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDT	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Dieldrin	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan I	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan II	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan Sulfate	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin Aldehyde	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin Ketone	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Heptachlor	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Methoxychlor	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Mirex	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Toxaphene	ND		ug/kg	111	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	70.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Tetrachloro-m-xylene (S)	54.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Alachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Atrazine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Azinphos Methyl	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Bolstar	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Bromacil	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Butachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Chlorpyrifos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Coumaphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Cyanizine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Demeton	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Diazinon	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Dichlorovos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Dimethoate	ND		ug/kg	77.6	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
EPN	ND		ug/kg	104	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Ethoprop	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Fensulfothion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Fenthion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Malathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Methyl Parathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Metolachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Metribuzin	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Mevinphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Molinate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Parathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Phorate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Prometon	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Propachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Ronnel	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Simazine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Sulfotep	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Tetrachlorinphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Tokuthion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Trichloronate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Trifluralin	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
IS_Triphenylphosphate (S)	38.5		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	56		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	40		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.44	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	819		mg/kg	349	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.4	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	42.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	349	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	58.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.5	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.16		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Arsenic, Total	2.9		mg/kg	0.16	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Chromium, Total	0.61		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Copper, Total	1.7		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Nickel, Total	0.73		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Thallium, Total	ND		mg/kg	0.053	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Zinc, Total	1.1		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Barium, Total	3.8		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:55	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	68.1		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2-Fluorobiphenyl (S)	65.9		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2-Fluorophenol (S)	44.8		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Nitrobenzene-d5 (S)	69.2		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Phenol-d5 (S)	28		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Terphenyl-d14 (S)	78.5		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	56.4		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Tetrachloro-m-xylene (S)	81.1		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	105		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025002**	Date Collected:	6/9/2015 11:15	Matrix:	Solid
Sample ID:	**ABC 2 Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025003** Date Collected: 6/9/2015 09:00 Matrix: Solid

Sample ID: **ABC 3 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:43	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.4		%	62 - 133	SW846 8260B			6/18/15 08:43	JPA	D
4-Bromofluorobenzene (S)	85.5		%	79 - 114	SW846 8260B			6/18/15 08:43	JPA	D
Dibromofluoromethane (S)	95.6		%	78 - 116	SW846 8260B			6/18/15 08:43	JPA	D
Toluene-d8 (S)	96.8		%	76 - 127	SW846 8260B			6/18/15 08:43	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	52.9	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Acrylonitrile	ND		ug/kg	10.6	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromodichloromethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromoform	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromomethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
2-Butanone	ND		ug/kg	10.6	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Chlorodibromomethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,2-Dichloropropane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	4.2	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Ethylbenzene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Methylene Chloride	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Toluene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Trichloroethene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	56 - 124	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
4-Bromofluorobenzene (S)	122		%	51 - 128	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Dibromofluoromethane (S)	122		%	62 - 123	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025003** Date Collected: 6/9/2015 09:00 Matrix: Solid

Sample ID: **ABC 3 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	117		%	59 - 131	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
WET CHEMISTRY										
Moisture	40.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	59.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler

Ms. Shannon Butler
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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzidine	ND		ug/kg	1440	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(a)anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(a)pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Butylbenzylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Chloronaphthalene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Chlorophenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Chrysene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Di-n-Butylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	269	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dichlorophenol	ND		ug/kg	359	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Diethylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dimethylphenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Dimethylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dinitrophenol	ND		ug/kg	359	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Fluorene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Isophorone	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Kepone	ND		ug/kg	1790	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Naphthalene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Phenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	70.8		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	72.4		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	64.3		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	63.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Nitrobenzene-d5 (S)	70.1		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	72.2		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	63.4		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	65.8		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Terphenyl-d14 (S)	65.3		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	70		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1016	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1221	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1232	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1242	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1248	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1254	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1260	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	119		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Tetrachloro-m-xylene (S)	82.4		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
alpha-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
beta-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
delta-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
gamma-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
alpha-Chlordane	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
gamma-Chlordane	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDD	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDE	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDT	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Dieldrin	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan I	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan II	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan Sulfate	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin Aldehyde	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin Ketone	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Heptachlor	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Heptachlor Epoxide	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Methoxychlor	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Mirex	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Toxaphene	ND		ug/kg	117	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	62.4		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Tetrachloro-m-xylene (S)	43.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Alachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Atrazine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Azinphos Methyl	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Bolstar	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Bromacil	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Butachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Chlorpyrifos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Coumaphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Cyanizine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Demeton	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Diazinon	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Dichlorovos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Dimethoate	ND		ug/kg	80.2	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
EPN	ND		ug/kg	107	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Ethoprop	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Fensulfothion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Fenthion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Malathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Methyl Parathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Metolachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Metribuzin	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Mevinphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Molinate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Parathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Phorate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Prometon	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Propachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Ronnel	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Simazine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Sulfotep	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Tetrachlorinphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Tokuthion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Trichloronate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Trifluralin	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	38.3		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	65.5		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	55.7		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.46	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	805		mg/kg	366	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.5	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	45.4		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	366	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	54.6		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.7	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.13		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Arsenic, Total	3.1		mg/kg	0.17	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Chromium, Total	0.80		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Copper, Total	2.0		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Nickel, Total	0.70		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Thallium, Total	ND		mg/kg	0.057	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Zinc, Total	1.6		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Barium, Total	3.9		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:56	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	68.6		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2-Fluorobiphenyl (S)	65.4		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2-Fluorophenol (S)	47.9		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Nitrobenzene-d5 (S)	69.7		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Phenol-d5 (S)	30.6		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Terphenyl-d14 (S)	78.1		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	61.2		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Tetrachloro-m-xylene (S)	76.8		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	111		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025004**	Date Collected:	6/9/2015 09:15	Matrix:	Solid
Sample ID:	**ABC 3 Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025005** Date Collected: 6/9/2015 12:45 Matrix: Solid

Sample ID: **ABC 4 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 07:34	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.7		%	62 - 133	SW846 8260B			6/18/15 07:34	JPA	D
4-Bromofluorobenzene (S)	84.9		%	79 - 114	SW846 8260B			6/18/15 07:34	JPA	D
Dibromofluoromethane (S)	93.2		%	78 - 116	SW846 8260B			6/18/15 07:34	JPA	D
Toluene-d8 (S)	94.8		%	76 - 127	SW846 8260B			6/18/15 07:34	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	41.0	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Acrylonitrile	ND		ug/kg	8.2	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromodichloromethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromoform	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromomethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
2-Butanone	ND		ug/kg	8.2	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Chlorodibromomethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
trans-1,2-Dichloroethene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,2-Dichloropropane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,3-Dichloropropene, Total	ND		ug/kg	3.3	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Ethylbenzene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Methylene Chloride	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Toluene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,1,2-Trichloroethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Trichloroethene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	182	7	%	56 - 124	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
4-Bromofluorobenzene (S)	138	9	%	51 - 128	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Dibromofluoromethane (S)	201	6	%	62 - 123	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025005** Date Collected: 6/9/2015 12:45 Matrix: Solid

Sample ID: **ABC 4 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Toluene-d8 (S)	202	8	%	59 - 131	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
WET CHEMISTRY										
Moisture	45.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	54.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzidine	ND		ug/kg	1330	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(a)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(a)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Butylbenzylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Chloronaphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Chlorophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Chrysene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Di-n-Butylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	250	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dichlorophenol	ND		ug/kg	333	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Diethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dimethylphenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Dimethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dinitrophenol	ND		ug/kg	333	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Fluorene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Isophorone	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Kepone	ND		ug/kg	1660	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Naphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Phenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.9		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Fluorobiphenyl (S)	76.2		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	74.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Fluorophenol (S)	64.5		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	63.8		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Nitrobenzene-d5 (S)	74		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	76.2		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Phenol-d5 (S)	64.7		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	62.9		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Terphenyl-d14 (S)	80.6		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	75.2		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1016	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1221	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1232	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1242	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1248	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1254	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1260	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	113		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	84.8		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
alpha-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
beta-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
delta-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
gamma-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
alpha-Chlordane	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
gamma-Chlordane	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDD	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDE	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDT	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Dieldrin	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan I	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan II	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan Sulfate	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin Aldehyde	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin Ketone	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Heptachlor	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Methoxychlor	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Mirex	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Toxaphene	ND		ug/kg	110	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	53.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Tetrachloro-m-xylene (S)	52		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Alachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Atrazine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Azinphos Methyl	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Bolstar	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Bromacil	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Butachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Chlorpyrifos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Coumaphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Cyanizine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Demeton	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Diazinon	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Dichlorovos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Dimethoate	ND		ug/kg	74.4	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
EPN	ND		ug/kg	99.2	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Ethoprop	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Fensulfothion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Fenthion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Malathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Methyl Parathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Metolachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Metribuzin	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Mevinphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Molinate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Parathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Phorate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Prometon	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Propachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Ronnel	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Simazine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Sulfotep	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Tetrachlorinphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Tokuthion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Trichloronate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Trifluralin	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	47.8		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	72.1		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	48		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.42	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	605		mg/kg	336	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.4	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	41.1		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	336	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	58.9		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.4	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.21		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Arsenic, Total	3.9		mg/kg	0.16	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Chromium, Total	0.69		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Copper, Total	2.1		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Nickel, Total	0.85		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Thallium, Total	0.059		mg/kg	0.053	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Zinc, Total	0.87		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Barium, Total	3.7		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:57	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Silver, Total	0.24		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	62.2		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2-Fluorobiphenyl (S)	55		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2-Fluorophenol (S)	36.6		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Nitrobenzene-d5 (S)	56.8		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Phenol-d5 (S)	23.3		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Terphenyl-d14 (S)	76.2		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	52.8		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Tetrachloro-m-xylene (S)	64.8		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	119		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025007** Date Collected: 6/10/2015 10:00 Matrix: Solid

Sample ID: **Low Volume C Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 07:51	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	96.8		%	62 - 133	SW846 8260B			6/18/15 07:51	JPA	D
4-Bromofluorobenzene (S)	84.8		%	79 - 114	SW846 8260B			6/18/15 07:51	JPA	D
Dibromofluoromethane (S)	94.7		%	78 - 116	SW846 8260B			6/18/15 07:51	JPA	D
Toluene-d8 (S)	96		%	76 - 127	SW846 8260B			6/18/15 07:51	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	131	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Acrylonitrile	ND		ug/kg	26.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromodichloromethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromoform	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromomethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
2-Butanone	ND		ug/kg	26.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Chlorodibromomethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,2-Dichloropropane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	10.5	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Ethylbenzene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Methylene Chloride	ND	1	ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Toluene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Trichloroethene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	56 - 124	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
4-Bromofluorobenzene (S)	110		%	51 - 128	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Dibromofluoromethane (S)	116		%	62 - 123	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025007** Date Collected: 6/10/2015 10:00 Matrix: Solid
Sample ID: **Low Volume C Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	104		%	59 - 131	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
WET CHEMISTRY										
Moisture	70.9		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	29.1		%	0.1	S2540G-11			6/11/15 09:19	JP	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzidine	ND		ug/kg	2350	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(a)anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(a)pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Butylbenzylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Chloronaphthalene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Chlorophenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Chrysene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Di-n-Butylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	440	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dichlorophenol	ND		ug/kg	587	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Diethylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dimethylphenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Dimethylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dinitrophenol	ND		ug/kg	587	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Fluorene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Isophorone	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Kepone	ND		ug/kg	2940	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Naphthalene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Phenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.1		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Fluorobiphenyl (S)	69.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	71.1		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Fluorophenol (S)	71.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	71.7		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	73.5		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	75.7		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Phenol-d5 (S)	72		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	69.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	67.3		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	72.2		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1016	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1221	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1232	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1242	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1248	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1254	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1260	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	101		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Tetrachloro-m-xylene (S)	104		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
alpha-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
beta-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
delta-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
gamma-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
alpha-Chlordane	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
gamma-Chlordane	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDD	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDE	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDT	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Dieldrin	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan I	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan II	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan Sulfate	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin Aldehyde	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin Ketone	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Heptachlor	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Heptachlor Epoxide	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Methoxychlor	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Mirex	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Toxaphene	ND		ug/kg	195	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	63.4		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Tetrachloro-m-xylene (S)	44.4		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Alachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Atrazine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Azinphos Methyl	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Bolstar	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Bromacil	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Butachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Chlorpyrifos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Coumaphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Cyanizine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Demeton	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Diazinon	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Dichlorovos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Dimethoate	ND		ug/kg	137	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
EPN	ND		ug/kg	182	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Ethoprop	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Fensulfothion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Fenthion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Malathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Methyl Parathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Metolachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Metribuzin	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Mevinphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Molinate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Parathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Phorate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Prometon	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Propachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Ronnel	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Simazine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Sulfotep	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Tetrachlorinphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Tokuthion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Trichloronate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Trifluralin	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	71.2		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	79.6		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	111		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.73	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	5770		mg/kg	605	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	5.9	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	67.3		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	2990		mg/kg	605	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	32.7		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	35.6		mg/kg	6.1	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	ND		mg/kg	2.6	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Arsenic, Total	25.0		mg/kg	3.9	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Chromium, Total	35.6		mg/kg	2.6	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Copper, Total	272		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Nickel, Total	71.6		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Thallium, Total	ND		mg/kg	1.3	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Zinc, Total	296		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Barium, Total	ND		mg/L	2.8	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:58	MNP	A3
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	70.7		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2-Fluorobiphenyl (S)	69.3		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2-Fluorophenol (S)	47.5		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Nitrobenzene-d5 (S)	73.9		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Phenol-d5 (S)	29.4		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Terphenyl-d14 (S)	82.9		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	75.8		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Tetrachloro-m-xylene (S)	69.1		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	113		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025008**	Date Collected:	6/10/2015 10:05	Matrix:	Solid
Sample ID:	**Low Volume C Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025009** Date Collected: 6/10/2015 10:10 Matrix: Solid

Sample ID: **Low Volume D Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:08	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95		%	62 - 133	SW846 8260B			6/18/15 08:08	JPA	D
4-Bromofluorobenzene (S)	82.6		%	79 - 114	SW846 8260B			6/18/15 08:08	JPA	D
Dibromofluoromethane (S)	94.7		%	78 - 116	SW846 8260B			6/18/15 08:08	JPA	D
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			6/18/15 08:08	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	201	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Acrylonitrile	ND		ug/kg	40.2	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromodichloromethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromoform	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromomethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
2-Butanone	ND		ug/kg	40.2	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Chlorodibromomethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,2-Dichloropropane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	16.1	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Ethylbenzene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Methylene Chloride	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Toluene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Trichloroethene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	56 - 124	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
4-Bromofluorobenzene (S)	120		%	51 - 128	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Dibromofluoromethane (S)	116		%	62 - 123	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025009** Date Collected: 6/10/2015 10:10 Matrix: Solid

Sample ID: **Low Volume D Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	97.2		%	59 - 131	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
WET CHEMISTRY										
Moisture	79.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	20.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzidine	ND		ug/kg	3850	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(a)anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(a)pyrene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Butylbenzylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Chloronaphthalene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Chlorophenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Chrysene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Di-n-Butylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	721	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dichlorophenol	ND		ug/kg	962	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Diethylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dimethylphenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Dimethylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dinitrophenol	ND		ug/kg	962	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Fluoranthene	768		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Fluorene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Isophorone	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Kepone	ND		ug/kg	4810	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Naphthalene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Phenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	670		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	90.9		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	94.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Fluorobiphenyl (S)	78.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	76.7		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Fluorophenol (S)	74		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	73.5		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Nitrobenzene-d5 (S)	75.5		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	77.8		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	71.6		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	74.2		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	90.6		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	84.5		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1016	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1221	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1232	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1242	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1248	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1254	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1260	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	108		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Tetrachloro-m-xylene (S)	107		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
alpha-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
beta-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
delta-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
gamma-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
alpha-Chlordane	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
gamma-Chlordane	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDD	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDE	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDT	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Dieldrin	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan I	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan II	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan Sulfate	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin Aldehyde	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin Ketone	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Heptachlor	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Heptachlor Epoxide	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Methoxychlor	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Mirex	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Toxaphene	ND		ug/kg	321	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	61.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Tetrachloro-m-xylene (S)	46.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Alachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Atrazine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Azinphos Methyl	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Bolstar	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Bromacil	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Butachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Chlorpyrifos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Coumaphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Cyanizine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Demeton	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Diazinon	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Dichlorovos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Dimethoate	ND		ug/kg	221	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
EPN	ND		ug/kg	294	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Ethoprop	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Fensulfothion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Fenthion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Malathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Methyl Parathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Metolachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Metribuzin	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Mevinphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Molinate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Parathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Phorate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Prometon	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Propachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Ronnel	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Simazine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Sulfotep	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Tetrachlorinphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Tokuthion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Trichloronate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Trifluralin	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	77.1		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	83.6		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	60.4		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.3	SW846 9012B	6/13/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	6620		mg/kg	980	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	9.8	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	80.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	3380		mg/kg	980	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	20.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	80.5		mg/kg	10.0	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	ND		mg/kg	4.7	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Arsenic, Total	19.2		mg/kg	7.1	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Chromium, Total	80.5		mg/kg	4.7	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Copper, Total	417		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Nickel, Total	69.7		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Thallium, Total	ND		mg/kg	2.4	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Zinc, Total	440		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Barium, Total	ND		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:59	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachlorobutadiene	ND	2	ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachloroethane	ND	1	ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	66.7		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2-Fluorobiphenyl (S)	67.1		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2-Fluorophenol (S)	45.4		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Nitrobenzene-d5 (S)	69.8		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Phenol-d5 (S)	27.6		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Terphenyl-d14 (S)	79		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	62.1		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Tetrachloro-m-xylene (S)	73.9		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	113		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025010**	Date Collected:	6/10/2015 10:15	Matrix:	Solid
Sample ID:	**Low Volume D Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler
Ms. Shannon Butler
Project Coordinator

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2076025002	1	ABC 2 Comp	SW846 8082A	Decachlorobiphenyls
The surrogate Decachlorobiphenyls for method SW846 8082A was outside of control limits. The % Recovery was reported as 187 and the control limits were 46 to 120. This result was reported at a dilution of 1.				
2076025005	6	ABC 4 Grab	SW846 8260B	Dibromofluoromethane
The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 201 and the control limits were 62 to 123. This result was reported at a dilution of 1.				
2076025005	7	ABC 4 Grab	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 182 and the control limits were 56 to 124. This result was reported at a dilution of 1.				
2076025005	8	ABC 4 Grab	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 202 and the control limits were 59 to 131. This result was reported at a dilution of 1.				
2076025005	9	ABC 4 Grab	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 138 and the control limits were 51 to 128. This result was reported at a dilution of 1.				
2076025007	1	Low Volume C Grab	SW846 8260B	Methylene Chloride
The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 139 and the control limits were 68 to 133.				
2076025010	1	Low Volume D Comp	SW846 8270D	Hexachloroethane
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachloroethane. The RPD was reported as 30.1 and the upper control limit is 30.				
2076025010	2	Low Volume D Comp	SW846 8270D	Hexachlorobutadiene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorobutadiene. The RPD was reported as 31.9 and the upper control limit is 30.				

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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SB

Page 1 of 2

Courier:

Tracking #:

* 2 0 7 6 0 2 5 *

Co. Name: GAI CONSULTANTS, INC.

Contact (Report to): ED SCIULLI, PG

Phone: 412-476-2000

Address: 385 E. WATERFRONT DRIVE
HOMESTEAD, PA 15120

Bill to (if different than Report to):

PO#:

DOMINION POSSUM POINT

Project Name/#: C150132.00

ALS Quote #:

TAT: ✓ Normal-Standard TAT is 10-12 business days. ✓ Rush-Subject to ALS approval and surcharges (WATER SAMPLE ONLY)

Date Required:

Approved By:

Email? ✓ -Y E.SCIULLI@GAICONSULTANTS.COM

Fax? -Y No.:

***Container Type	C	C	C	C	C	C	A								
***Container Size	30 oz	40 mL	40 mL	4 oz	4 oz	8 oz	4 oz								
*** Preservative	NONE	Na OH	Me OH	NONE	NONE	NONE	NONE								

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	BVA (PART B3/ B5) MISC (PART B6)	METALS (PART B.1) PEST/PCBS (PART B.2) TCLP (EXCEPT VOA) (PART A)	VOC'S (PART B.4)	VOC'S (PART B.4)	TCLP WASTE VOA (PART A)	AS 3 (SUB TO KELSO)	TRIBUTYLIN (SUB TO KELSO)	VOC'S (PART B.4) EXTRA CONTAINER			
1	ABC 2 GRAB		6/9/15	11:00	G	SO			2	1	1			1			
2	ABC 2 COMP			11:15	C			2				1	1				
3	ABC 3 GRAB			9:00	G				2	1	1			1			
4	ABC 3 COMP			9:15	C			2				1	1				
5	ABC 4 GRAB			12:45	G				2	1	1			1			
6	ABC 4 COMP			13:00	C			2				1	1				
7	* SEE POSSUM POINT FULL LIST PARAMETERS FOR POND D#2									ON SEPARATE COC							
8	~~[illegible]~~	SW - SURFACE WATER * RUSH TAT	~~[illegible]~~	~~[illegible]~~						~~[illegible]~~				ATTACHED)			

Enter Number of Containers Per Analysis

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
1	Y	Y	Y	Y	
2	N	N	N	N	
3	Y	Y	Y	Y	
4	N	N	N	N	
5	Y	Y	Y	Y	
6	N	N	N	N	

(Completed by Sample Receiving)

Performed by: LMG

Cooler Temp: 1

Therm. ID: 291

No. of Coolers:

Notes:

Custody seals Present? Y

(if present) Seals Intact? Y

Received on ice? Y

COC/Labels complete/accurate? Y

Container in good condition? Y

SAMPLED BY (Please Print): EUGENE COONEY JR

Project Comments: RWL 6/11 137

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] GAI CONSULTANTS	6/9/15	18:00	2 [signature]	6/10/15	1103
3 [signature]	6/10/15	1700	4 [signature]	6/10	1905
5 [signature]	6/10	1950	6 SFS	6/10	1950
7			8		
9			10		

Data Deliverables: Standard / CLP-like / NJ-Reduced / NJ-Full / ____ other

EDDs Required? If yes, format type:

SDWA Forms? yes / yes / yes / yes

State Samples Collected In? NO / NJ / NY / PA

Other

DOD Criteria Required?

ALS FIELD SERVICES: Pickup / Labor / Composite Sampling / Rental Equipment / Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

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Thursday, July 09, 2015 11:20:19 AM
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Page 2 of 2

Courier:

Tracking #:

025

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Phone: 412-476-2000

Address: 385 E. WATERFRONT DR. HOMESTEAD, PA 15120

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PO#:

DOMINION POSSUM POINT

Project Name/#: C150132.00

ALS Quote #:

TAT: ✓ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? ✓ -Y E.SCIULLI@GAICONSULTANTS.COM

Fax? ☐ -Y No.:

***Container Type	C	C	C	C	C	C	A								
***Container Size	32 oz	40 mL	40 mL	4 oz	4 oz	8 oz	4 oz								
*** Preservative	NONE	NaOH	MeOH	NONE	NONE	NONE	NONE								

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	METALS (8.1) BVA (8.3 & 8.5) PEST/PCB'S (8.2) MISC (8.6) TCLP EXCEPT VOA (PART A)	VOC'S (PART 8.4)	VOC'S (PART 8.4)	TCLP WASTE VOA (PART A)	AS 3 (SUB TO KELSO)	TRIBUTYLIN (SUB TO KELSO)	VOC'S (8.4) EXTRA CONTAINER			
1 LOW VOLUME C GRAB		6/10/15	10:00	G	SO		2	1	1			1			
2 LOW VOLUME C COMP.		↓	10:05	C	↓	2				1	1				
3 LOW VOLUME D GRAB		↓	10:10	G	↓		2	1	1			1			
4 LOW VOLUME D COMP.		↓	10:15	C	↓	2				1	1				
5															
6															
7															
8															

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)

Performed by: [illegible]

Cooler Temp: 1

Therm. ID: 291

No. of Coolers:

Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 LOW VOLUME C GRAB	Y	Y	Y	Y	Y
2 LOW VOLUME C COMP.	Y	Y	Y	Y	Y
3 LOW VOLUME D GRAB	Y	Y	Y	Y	Y
4 LOW VOLUME D COMP.	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): EUGENE COONEY JR

Project Comments: Rmk 6/11 137

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] GAI CONSULTANTS	6/10/15	11:00	2 [signature] ALS	6/10/15	1100
3 [signature]	6/10/15	1700	4 [signature]	6/10	1705
5 [signature] ALS	6/10	1950	6 SFS	6/10	1950
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ (other)

EDDs Required? ☐ If yes, format type:

SDWA Forms? ⇨ yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐ Other

DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALSI Quote #:	

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic									
Container Type			C											
Container Size			4 oz											
Preservative			None											
2076025 002	6/9/15	1115	G	SO	1									
2076025 004	6/9/15	0915	G	SO	1									
2076025 006	6/9/15	1300	G	SO	1									
2076025 008	6/9/15	1005	G	SO	1									
2076025 010	6/9/15	1015	G	SO	1									

ANALYSES/METHOD REQUESTED
Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier Tracking #: _____

Sample/COC Comments
Subcontract: Brooks Rand Labs
3958 6th Avenue NW
Seattle, WA 98107

ALSI Field Services: ☐Pickup ☐Labor
☐Composite Sampling ☐Rental Equipment
☐Other: _____

Project Comments:
LOGGED BY (signature): DATE TIME
REVIEWED BY (signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/15/15	1545	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ]
PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type- _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 5/05

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Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALSI Quote #:	

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin									
Container Type			C											
Container Size			8 oz											
Preservative			None											
2076025 002	6/9/15	1115	G	SO	1									
2076025 004	6/9/15	0915	G	SO	1									
2076025 006	6/9/15	1300	G	SO	1									
2076025 008	6/9/15	1005	G	SO	1									
2076025 010	6/9/15	1015	G	SO	1									

ANALYSES/METHOD REQUESTED
Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments
Subcontract: ALS-Kelso

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/11/15	1141	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 5/05

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

July 05, 2015

Analytical Report for Service Request No: K1506480

Vicki Forney
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

RE: 2076025

Dear Vicki,

Enclosed are the results of the sample(s) submitted to our laboratory June 16, 2015
For your reference, these analyses have been assigned our service request number **K1506480.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

ALS Environmental
ALS Group USA, Corp
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Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
  DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: K1506480 — 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane, Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] Y: almdl_subcontract@ALSGlobal.com
Fax? [ ] Y: No

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin									
Container Type			C											
Container Size			8 oz											
Preservative			None											
2076025 002	6/9/15	1115	G	SO	1									
2076025 004	6/9/15	0915	G	SO	1									
2076025 006	6/9/15	1300	G	SO	1									
2076025 008	6/9/15	1005	G	SO	1									
2076025 010	6/9/15	1015	G	SO	1									

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. In Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier tracking #: _____

Sample/COC Comments: Subcontract: ALS-Kelso

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:
LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/16/15	1141	2 ALS	6/16/15	0915
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ USACE ☐
Special Processing: USACE ☐ Navy ☐ ☐
State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☐ NC ☐ other
Reportable to PADEP? Yes ☐ PWSID #
Sample Disposal: Lab ☐ Special ☐
EDDS: Format Type:

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY Rev 5/05

PC HH

Cooler Receipt and Preservation Form

Client / Project: ALS Middletown Service Request K15 6480

Received: 6/16/15 Opened: 6/16/15 By: UK Unloaded: 6/16/15 By: UK

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp.	Corrected Cooler Temp.	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
-0.4	-0.4	2.1	2.1	0	353		7738 3605 4133	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by

Sample ID	Bottle Count Bottle Types	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Environmental

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/9/15
Sample Matrix:	Soil	**Date Received:**	06/16/15
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	NA

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
2076025 002	K1506480-001	63.5	-	1	06/17/15 15:55	
2076025 004	K1506480-002	60.7	-	1	06/17/15 15:55	
2076025 006	K1506480-003	63.0	-	1	06/17/15 15:55	
2076025 008	K1506480-004	34.4	-	1	06/17/15 15:55	
2076025 010	K1506480-005	19.6	-	1	06/17/15 15:55	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US		**Service Request:**K1506480
Project	2076025		**Date Collected:**NA
Sample Matrix:	Soil		**Date Received:**NA
Analysis Method:	160.3 Modified		**Units:**Percent
Prep Method:	None		**Basis:**NA

Replicate Sample Summary
Solids, Total

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1505572-050DUP	-	60.6	60.7	60.7	<1	20	06/17/15
Batch QC	K1506492-001DUP	-	88.9	89.3	89.1	<1	20	06/17/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Printed 6/19/2015 4:11:56 PM

Superset Reference:15-0000336049 rev 00

ALS Environmental

Butyltins (as cation)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 002	**Units:**	ug/Kg
Lab Code:	K1506480-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.6	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	67	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 004	**Units:**	ug/Kg
Lab Code:	K1506480-002	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.7	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	76	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 006	**Units:**	ug/Kg
Lab Code:	K1506480-003	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.6	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	63	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 008	**Units:**	ug/Kg
Lab Code:	K1506480-004	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	2.9	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	88	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 010	**Units:**	ug/Kg
Lab Code:	K1506480-005	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	5.2	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	80	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Butyltins (as cation)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1505433-5	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	0.98	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	56	10-120	06/24/15	Acceptable

Comments:

Client: ALS Environmental - US
Project: 2076025
Sample Matrix: Sediment

Service Request: K1506480

Surrogate Recovery Summary
Butyltins (as cation)

Extraction Method: METHOD
Analysis Method: Krone

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
Batch QC	K1506354-001	75
2076025 002	K1506480-001	67
2076025 004	K1506480-002	76
2076025 006	K1506480-003	63
2076025 008	K1506480-004	88
2076025 010	K1506480-005	80
Batch QCDUP	KWG1505433-1	73
Method Blank	KWG1505433-5	56
Batch QCMS	KWG1505433-2	77
Batch QCDMS	KWG1505433-3	70
Lab Control Sample	KWG1505433-4	76

Surrogate Recovery Control Limits (%)

Sur1 = Tri-n-propyltin 10-120

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

		Batch QCMS KWG1505433-2 Matrix Spike			Batch QCDMS KWG1505433-3 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	ND	20.8	30.9	67	21.7	30.9	70	10-115	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Duplicate Sample Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

Analyte Name	MRL	Sample Result	Batch QCDUP KWG1505433-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Tri-n-butyltin Cation	1.4	ND	ND	ND	-	40

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Lab Control Spike Summary
Butyltins (as cation)

Extraction Method:	METHOD	**Units:**	ug/Kg
Analysis Method:	Krone	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1505433

	Lab Control Sample KWG1505433-4 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Tri-n-butyltin Cation	16.8	22.2	76	10-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BROOKS RAND LABS
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June 30, 2015

ALS - Middletown
ATTN: Vicki Forney
34 Dogwood Lane
Middletown PA 17057
vicki.forney@alsglobal.com

RE: Project ALS-MD1501 Client Project: 2076025

Dear Vicki Forney,

This report contains results for the 5 samples received by Brooks Rand Labs (BRL) on June 16, 2015. The samples were logged-in for the contracted analyses according to the chain-of-custody form(s). The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

The matrix spike/matrix spike duplicate (MS/MSD) set was spiked at a concentration much less than the native sample and were not analyzed. A post-preparation spike (PS) was analyzed and recovered within acceptance criteria.

The results were method blank corrected as described in the calculations section of the relevant BRL SOP(s) and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details. All additional data is reported without qualification and all other associated quality control sample results meet the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more details, please see the *Report Information* page in your report. Please feel free to contact me if you have any questions regarding this report.

Sincerely,

Lydia Greaves

Lydia Greaves
Project Manager
Lydia@brooksrand.com

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Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/about/accreditations-certifications/>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCB	continuing calibration blank	**N/C**	not calculated
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
D	dissolved fraction	**RPD**	relative percent difference
DUP	duplicate	**RSD**	relative standard deviation
IBL	instrument blank	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

B	Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E	An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H	Holding time and/or preservation requirements not met. Result is estimated.
J	Estimated value. A full explanation is presented in the narrative.
J-M	Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N	Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M	Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N	Spike recovery was not within acceptance criteria. Result is estimated.
R	Rejected, unusable value. A full explanation is presented in the narrative.
U	Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X	Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
2076025 002	1525011-01	Soil	Sample	06/09/2015	06/16/2015
2076025 004	1525011-02	Soil	Sample	06/09/2015	06/16/2015
2076025 006	1525011-03	Soil	Sample	06/09/2015	06/16/2015
2076025 008	1525011-04	Soil	Sample	06/09/2015	06/16/2015
2076025 010	1525011-05	Soil	Sample	06/09/2015	06/16/2015

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
%TS	Soil/Sediment	SM 2540G	06/24/2015	06/28/2015	B150975	N/A
As(III)	Soil/Sediment	EPA 1632	06/24/2015	06/24/2015	B150974	1500505

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
2076025 002										
1525011-01	%TS	Soil	NA	65.61		0.36	1.20	%	B150975	N/A
1525011-01	As(III)	Soil	dry	15.0		1.96	5.89	mg/kg	B150974	1500505
2076025 004										
1525011-02	%TS	Soil	NA	65.34		0.36	1.20	%	B150975	N/A
1525011-02	As(III)	Soil	dry	2.33		0.498	1.49	mg/kg	B150974	1500505
2076025 006										
1525011-03	%TS	Soil	NA	65.93		0.36	1.20	%	B150975	N/A
1525011-03	As(III)	Soil	dry	3.01		0.230	0.691	mg/kg	B150974	1500505
2076025 008										
1525011-04	%TS	Soil	NA	43.73		0.36	1.20	%	B150975	N/A
1525011-04	As(III)	Soil	dry	1.78		0.346	1.04	mg/kg	B150974	1500505
2076025 010										
1525011-05	%TS	Soil	NA	28.38		0.36	1.20	%	B150975	N/A
1525011-05	As(III)	Soil	dry	0.877		0.125	0.376	mg/kg	B150974	1500505

Accuracy & Precision Summary

Batch: B150974
Lab Matrix: Soil/Sediment
Method: EPA 1632

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150974-BS1	**Laboratory Fortified Blank (1523014)**						
	As(III)		1.204	1.171	mg/kg	97% 50-150	
B150974-BS2	**Laboratory Fortified Blank (1523029)**						
	As(III)		1.204	1.128	mg/kg	94% 50-150	
B150974-SRM1	**Certified Reference Material (1505010, PACS-3)**						
	As(III)		4.752	5.887	mg/kg	124% 50-150	
B150974-DUP1	**Duplicate (1525011-01)**						
	As(III)	14.95		13.00	mg/kg		14% 35
B150974-PS1	**Post Spike (1525011-01)**						
	As(III)	14.95	24.62	39.43	mg/kg	99% 65-135	

Accuracy & Precision Summary

Batch: B150975
Lab Matrix: Soil/Sediment
Method: SM 2540G

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150975-DUP1	**Duplicate (1525011-01)**						
	%TS	65.61		65.78	%		0.3% 15

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Method Blanks & Reporting Limits

Batch: B150974
Matrix: Soil/Sediment
Method: EPA 1632
Analyte: As(III)

Sample	Result	Units
B150974-BLK1	0.051	mg/kg wet
B150974-BLK2	0.046	mg/kg wet
B150974-BLK3	0.047	mg/kg wet
B150974-BLK4	0.049	mg/kg wet

Average: 0.048 **Standard Deviation:** 0.002 **MDL:** 0.040
Limit: 0.080 **Limit:** 0.027 **MRL:** 0.120

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Method Blanks & Reporting Limits

Batch: B150975
Matrix: Soil/Sediment
Method: SM 2540G
Analyte: %TS

Sample	Result	Units
B150975-BLK1	0.00	%
B150975-BLK2	0.00	%
Average:	0.00	
Limit:	1.20	

MDL: 0.36
MRL: 1.20

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Sample Containers

Lab ID: 1525011-01
Sample: 2076025 002
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-02
Sample: 2076025 004
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-03
Sample: 2076025 006
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-04
Sample: 2076025 008
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-05
Sample: 2076025 010
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

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Shipping Containers

cooler

Received: June 16, 2015 9:05
Tracking No: 773836255661 via FedEx
Coolant Type: Ice
Temperature: 0.1 °C

Description: cooler
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 1 of 1 — BRL Report 1525014
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.:

Container Type: C
Container Size: 4 oz
Preservative: None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic
2076025 002	6/9/15	1115	G	SO	1
2076025 004	6/9/15	0915	G	SO	1
2076025 006	6/9/15	1300	G	SO	1
2076025 008	6/9/15	1005	G	SO	1
2076025 010	6/9/15	1015	G	SO	1

Receipt Information (completed by Receiving Lab)
Cooler Temp: ____ Therm. ID: ____
No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments
Subcontract: Brooks Rand Labs
3958 6th Avenue NW
Seattle, WA 98107

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	6/15/15	1545	2 [signature] BRL	6/16/15	0915
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

July 28, 2015

Ms. Cathy C. Taylor
Director, Electric Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Dominion – Possum Point Power Station
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0002071

Dear Ms. Taylor:

We are in receipt of your correspondence dated July 14, 2015, providing notice of Dominion's intention to mechanically dredge material from Ash Ponds A, B, and C to Ash Pond D. This notice also included analytical results of six soil boring locations within Ash Ponds A, B, and C.

The Virginia Department of Environmental Quality has reviewed Dominion's submittal and does not consider the placement of materials from Ash Ponds A, B, and C into Ash Pond D to conflict with Part I.F.11.a of the facility's aforementioned VPDES permit. However, we caution that while the placement of materials does not conflict with the facility's VPDES permit Dominion should consider any possible implications of this placement as it relates to future planning for solid waste management purposes.

Should you have any questions about this correspondence, please contact Susan Mackert at (703) 583-3853 or by email at susan.mackert@deq.virginia.gov.

Respectfully,

Bryant Thomas
Water Permits and Planning Manager

cc: VA0002071 – File
Ken Roller (via email – kenneth.roller@dom.com)

Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

August 6, 2015

Ms. Susan Mackert
Department of Environmental Quality
Northern Regional Office
13901 Crown Court,
Woodbridge, VA 22193

Re: Dominion - Possum Point Power Station – VA0002071
Placement of Dredge Material Notification

Dear Ms. Mackert:

The following information is provided in accordance with Possum Point Power Station's VPDES permit VA0002071 Part I, Condition F.11. Dominion is providing this notice that we intend to begin mechanically dredging material from Low Volume Settling Ponds (LVSP) C and D to Ash Pond D. Placement of the material in Pond D will be completed prior to October 16, 2015. Dominion estimates that a maximum of 13,600 cubic yards of ash and soil materials will be dredged from LVSP C and D to Ash Pond Pond D.

Sampling and analysis of the material in LVSP C and D were conducted in accordance with Part I, Condition F.11(c). A sampling plan describing sample collection methods and analytical results using the forms provided in Attachment B of the permit are provided as attachments to this letter. All measured analytical results were below threshold levels listed in the permit.

Dominion would like to begin dredging operations as soon as possible in order to support the project schedule. To that end, we are requesting that DEQ waive the requirement to provide notice at least 30 days prior to the placement of material in Pond D and grant authorization to proceed upon review of this submission.

If you have any questions and/or comments regarding this information please contact Ken Roller, of Dominion Electric Environmental Services, at (804) 273-3494.

I certify under penalty of law that this document 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.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Attachments

File Name: **2015 8-6 PP Placement of Ash Notification**

Please send electronic renamed copy to:

David Craymer
Pam Faggert
Sidney Bragg
Cathy Taylor
Karen Canody
Ken Roller
Oula Shehab
Amelia Boschen
Jeff Heffelman
Jeff Marcell
Documentum: Possum Point P.S. / NPDES-Water / Compliance Reporting and Supporting Documentation

The work consisted of conducting in-situ dredge material sampling and analytical laboratory analysis at Low Volume Settling Ponds (LVSP) C and D in accordance with the requirements of Condition I.F.11 of Possum Point Power Station's VPDES Permit (Permit No. VA0002071).

Project Background

The LVSP are located southeast of the Possum Point Power Station near the inlet between Quantico Creek and the Potomac River. The LVSP consist of four separate ponds (A, B, C, and D) that slope to the southwest and eventually discharge into an outfall pipe (Outfall 004) into Quantico Creek. The ponds were previously used to collect runoff from the coal storage pile at the station, until coal combustion ceased in March 2003.

Based on initial evaluations of the ponds conducted by Dominion, only LVSP C and LVSP D require dredging as part of the closure activities. Materials to be dredged consist primarily of water backwash media and sand and coal pile runoff fines. Based on a review of available information concerning the pond dimensions, it is estimated that LVSP C contains approximately 4,100 cubic yards (CY) of material while LVSP D contains approximately 7,200 CY of material. The thickness of the dredge material is expected to vary at the bottom of each pond, but it is estimated that the average thickness is approximately two feet.

As part of potential clean closure construction activities for the LVSPs, material will be mechanically dredged from LVSP C and LVSP D and transported to Ash Pond D. In order to meet the requirements of Condition I.F.11 of the VPDES Permit, the dredge material was sampled and analyzed.

Scope of Work

The LVSP sampling and laboratory analysis were completed in accordance with applicable state and federal guidelines, regulations, and requirements as applicable to the subsurface conditions encountered. The sampling and laboratory analysis evaluated the dredge material for comparison to criteria established under Condition I.F.11 of the VPDES Permit.

In accordance with Condition I.F.11 of the VPDES Permit, for volumes between 1,000 CY and 50,000 CY, two representative samples of dredge material are required. The samples should be a composite of the proposed dredge material to the depth of the intended dredge. Based on evaluation of the material thickness and pond dimensions, the combined dredge volume from LVSP C and LVSP D has been estimated to be approximately 11,300 CY. Using a volume estimate factor of 20% to account for additional volumes due to estimation error and over excavation of pond bottom material, the final estimated combined volume of dredge material for LVSP C and LVSP D is approximately 13,600 CY.

Based on an estimated 13,600 CY of combined dredge material, and in accordance with the requirements of two samples per dredge volume between 1,000 CY and 50,000 CY, a total of two representative samples of the planned dredge material volume were collected.

Sample Location Determination

Sample locations were selected to provide a representative sample of the dredge materials that will be placed in Ash Pond D and based on available access to each pond with an extended arm backhoe. Approximate sample locations are depicted on the attached Figure 1 (Exhibit A) as dredged trenches excavated from each pond.

Sample Collection

An extended arm backhoe was used to dredge two locations in each pond and recover dredge material for sample collection. The dredge trenches were excavated to a depth which penetrated the full thickness of the material and extended into the pond bottom material. For each pond, the two dredge samples were examined by the GAI field environmental scientist immediately after removal from the bucket, visually characterized, and inspected for the presence of staining, discoloration, separate-phase hydrocarbon product, or other visible indicators of contamination. The dredge samples were scanned with a photoionization detector (PID), calibrated to isobutylene, for the presence and concentration of volatile organic vapors.

GAI collected one environmental sample from each pond (LV C and LV D) for laboratory analyses to evaluate the proposed dredge material. The sample collected for laboratory analysis of all parameters, excluding the volatile organic fraction, was collected as a single composite from the two dredge trenches. A composite sample was collected by retaining a portion of each dredge sample retrieved from the backhoe bucket in a clean disposable container. The retained sample was transferred to a stainless steel mixing bowl and thoroughly mixed. The thoroughly mixed sample was then transferred in equal portions to appropriate laboratory supplied sample jars.

For collection of the volatile organic fraction, each dredge sample was visually examined for the presence of suspected impacts and screened with a PID. Soil samples for volatile organic analyses were selected from a discrete portion exhibiting the highest PID readings or other indicators of possible impacts. If no indicators of potential impacts were observed, the sample was collected from a randomly selected portion of the dredge material. Samples collected for the volatile organic fraction analyses were transferred into the appropriate laboratory provided sample jars or pre-preserved sample vials depending on the analyses required.

Equipment used for sample collection was properly decontaminated before use to prevent cross-contamination from prior sampling locations. Field sampling equipment used to collect or hold non-aqueous samples were decontaminated prior to use as follows:

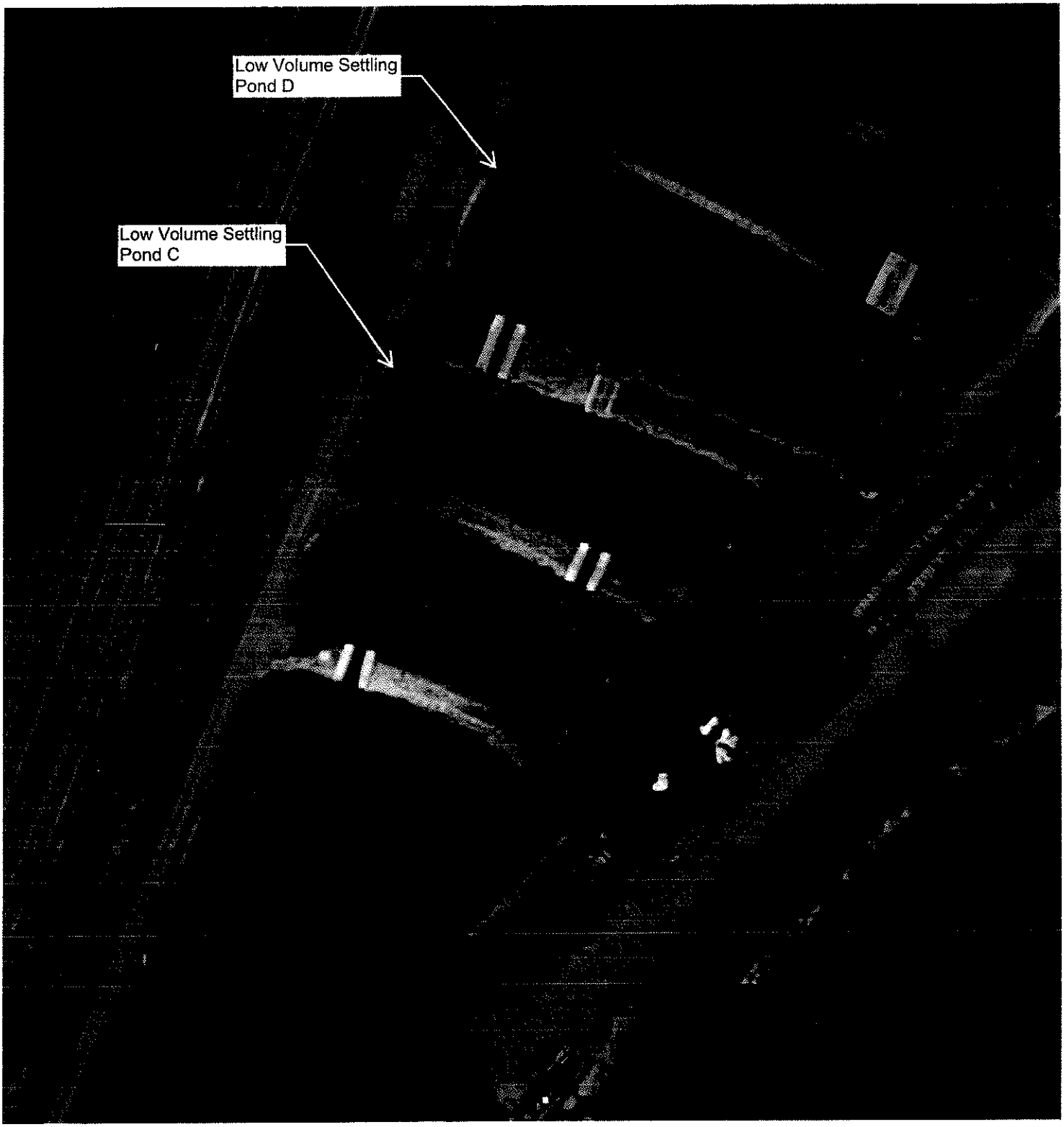
1. Remove visible contamination from the equipment using a brush and/or paper towel saturated with potable water and laboratory grade soap.
2. Rinse the equipment with potable water to remove residual soap and solids.
3. Rinse the equipment with distilled/deionized water meeting ASTM Type II specifications.

Laboratory Analysis

Samples collected for laboratory analysis were properly labeled with the sampling time, date, and sample identification, and were immediately placed into an iced chest and maintained at four degrees Celsius. Samples were submitted, under chain of custody procedures, to ALS Environmental, a VA certified analytical laboratory, under a standard turn-around for results. Samples were submitted for analysis of the required parameters and using appropriate laboratory test methods as specified in Condition 11 of VPDES Permit No. VA0002071.

Reporting

Results of the completed laboratory analysis are presented in the attached Exhibit B. Analytical results are presented on the appropriate VPDES Permit No. VA0002071, Dredge Spoils Monitoring, Attachment B forms. The ALS laboratory analytical data reports providing all results for the submitted samples are provided in Exhibit C. Analytical results indicate all constituent concentrations are below applicable threshold values provided in Attachment B of VPDES Permit No. VA0002071.



Approximate Dredge Sample Location

N

Not to Scale

Figure 1 - Sample Locations
Low Volume Settling Ponds C and D
Sampling and Analysis

EXHIBIT B

VPDES Permit No. VA0002071 Attachment B Forms

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DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond C - LV C

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/l)	Reporting Results [1] (mg/l)	Sample Type [2]	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	< 2.8	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond C - LV C

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	2.6	< 2.6	G
457		Arsenic III	1632	0.346	1.78	G
441	16055-83-1	Chromium III	Calculation	6.1	35.6	G
231	18540-29-9	Chromium VI	7196A	5.9	< 5.9	G
442	744-50-8	Copper	6020A	6.5	272	G
445	7440-02-0	Nickel	6020A	6.5	71.6	G
	7440-28-0	Thallium	6020A	1.3	< 1.3	G
448	7440-66-6	Zinc	6020A	6.5	296	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0254	< 0.0254	G
334		Chlorpyrifos Dursban	8141B	0.106	< 0.106	G
--	72-54-8	DDD	8081B	0.0494	< 0.0494	G
--	72-55-9	DDE	8081B	0.0494	< 0.0494	G
335	50-29-3	DDT	8081B	0.0494	< 0.0494	G
336	8065-48-3	Demeton	8141B	0.106	< 0.106	G
337	60-57-1	Dieldrin	8081B	0.0494	< 0.0494	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0254	< 0.0254	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0494	< 0.0494	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0494	< 0.0494	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0494	< 0.0494	G
340	86-50-0	Guthion	8141B	0.106	< 0.106	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0254	< 0.0254	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0254	< 0.0254	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0254	< 0.0254	G
--	143-50-0	Kepone	8270D	2.94	< 2.94	G
343	121-75-5	Malathion	8141B	0.106	< 0.106	G
345	2385-85-5	Mirex	8081B	0.0494	< 0.0494	G
346	56-38-2	Parathion	8141B	0.106	< 0.106	G
--	1336-36-3	Total PCB	8082A	0.099	<0.099	G
641	53469-21-9	PCB-1242	8082A	0.099	<0.099	G
642	11097-69-1	PCB-1254	8082A	0.099	<0.099	G
643	11104-28-2	PCB-1221	8082A	0.099	<0.099	G
644	11141-16-5	PCB-1232	8082A	0.099	<0.099	G
645	12672-29-6	PCB-1248	8082A	0.099	<0.099	G
618	11096-82-5	PCB-1260	8082A	0.099	<0.099	G
646	12674-11-2	PCB-1016	8082A	0.099	<0.099	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.294	< 0.294	G
275	120-12-7	Anthracene	8270D	0.294	< 0.294	G
--	92-87-5	Benzidine	8270D	2.35	< 2.35	G
276	56-55-3	Benzo(a) anthracene	8270D	0.294	< 0.294	G

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Dredge Spoils Monitoring
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FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond C - LV C

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.294	< 0.294	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.294	< 0.294	G
277	50-32-8	Benzo(a)pyrene	8270D	0.294	< 0.294	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.294	< 0.294	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.294	< 0.294	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.294	< 0.294	G
--	91-58-7	2-Chloronaphthalene	8270D	0.294	< 0.294	G
282	218-01-9	Chrysene	8270D	0.294	< 0.294	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.294	< 0.294	G
206	84-74-2	Dibutyl phthalate	8270D	0.294	< 0.294	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.294	< 0.294	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.294	< 0.294	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.440	< 0.440	G
285	84-66-2	Diethyl phthalate	8270D	0.294	< 0.294	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.294	< 0.294	G
286	131-11-3	Dimethyl Phthalate	8270D	0.294	< 0.294	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.294	< 0.294	G
287	206-44-0	Fluoranthene	8270D	0.294	< 0.294	G
288	86-73-7	Fluorene	8270D	0.294	< 0.294	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	0.793	< 0.793	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.294	< 0.294	G
650	78-59-1	Isophorone	8270D	0.294	< 0.294	G
293	91-20-3	Naphthalene	8270D	0.294	< 0.294	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.294	< 0.294	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.294	< 0.294	G
575	621-64-7	N-Nitrosodi-n-proplyamine	8270D	0.294	< 0.294	G
296	129-00-0	Pyrene	8270D	0.294	< 0.294	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.294	< 0.294	G
		Volatiles (Part B.4)				
171	107-02-8	Acrolein	8260B	0.131	< 0.131	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0262	< 0.0262	G
484	75-25-2	Bromoform	8260B	0.0052	< 0.0052	G
652	124-48-1	Chlorodibromomethane	8260B	0.0052	< 0.0052	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.0052	< 0.0052	G
244	75-27-4	Dichlorobromomethane	8260B	0.0052	< 0.0052	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.0052	< 0.0052	G
261	78-87-5	1,2-Dichloropropane	8260B	0.0052	< 0.0052	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0105	< 0.0105	G
172	100-41-4	Ethylbenzene	8260B	0.0052	< 0.0052	G
--	74-83-9	Methyl Bromide	8260B	0.0052	< 0.0052	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0262	< 0.0262	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.0052	< 0.0052	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond C - LV C

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.0052	< 0.0052	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.0052	< 0.0052	G
155	79-01-6	Trichloroethylene	8260B	0.0052	< 0.0052	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	0.793	< 0.793	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.587	< 0.587	G
269	105-67-9	2,4 Dimethylphenol	8270D	0.793	< 0.793	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	0.793	< 0.793	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.587	< 0.587	G
175	108-95-2	Phenol	8270D	0.793	< 0.793	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	0.73	< 0.73	G
350		Tributyltin	Krone	0.0029	< 0.0029	G
257		TPH (Total petroleum Hydrocarbons)	9071B	605	5770	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/28/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 1 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond D - LV D

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level (1) (mg/l)	Reporting Results (1) (mg/l)	Sample Type (2)	Threshold Levels (mg/l)
Toxicity Characteristics Leaching Procedure Parameters with Threshold Levels (Part A)							
033	7440-38-2	Arsenic	1311	0.14	< 0.14	G	5.0
151	7440-39-3	Barium	1311	2.8	< 2.8	G	100.0
216	71-43-2	Benzene	1311	0.0200	< 0.0200	G	3.0
096	7440-43-9	Cadmium	1311	0.011	< 0.011	G	1.0
236	56-23-5	Carbon Tetrachloride	1311	0.0200	< 0.020	G	0.5
333	57-74-9	Chlordane	1311	0.0100	< 0.0100	G	0.03
280	108-90-7	Chlorobenzene	1311	0.0200	< 0.0200	G	100.0
223	67-66-3	Chloroform	1311	0.0200	< 0.0200	G	6.0
016	7440-47-3	Chromium	1311	0.028	< 0.028	G	5.0
510	95-48-7	o-Cresol *	1311	0.16	< 0.16	G	200.0
509-511		mp-Cresol *	1311	0.16	< 0.16	G	200.0
512		Cresols, Total	1311	0.16	< 0.16	G	200.0
266	106-46-7	1,4-Dichlorobenzene	1311	0.0600	< 0.0600	G	7.5
260	107-06-2	1,2-Dichloroethane	1311	0.0200	< 0.0200	G	0.5
258	75-35-4	1,1-Dichloroethylene	1311	0.0200	< 0.0200	G	0.7
239	121-14-2	2,4-Dinitrotoluene	1311	0.0600	< 0.0600	G	0.13
339	72-20-8	Endrin	1311	0.00050	< 0.00050	G	0.02
341	76-44-8	Heptachlor	1311	0.00050	< 0.00050	G	0.008
289	118-74-1	Hexachlorobenzene	1311	0.0600	< 0.0600	G	0.13
290	87-68-3	Hexachlorobutadiene	1311	0.0600	< 0.0600	G	0.5
291	67-72-1	Hexachloroethane	1311	0.0600	< 0.0600	G	5.0
034	7439-92-1	Lead	1311	0.033	< 0.033	G	5.0
342	58-89-9	Hexachlorocyclohexane (Lindane)	1311	0.00050	< 0.00050	G	0.4
042	7439-97-6	Mercury	1311	0.0020	< 0.0020	G	0.2
344	72-43-5	Methoxychlor	1311	0.00050	< 0.00050	G	10.0
	78-93-3	Methyl Ethyl Ketone	1311	0.2	< 0.2	G	200.0
294	98-95-3	Nitrobenzene	1311	0.0600	< 0.0600	G	2.0
210	87-86-5	Pentachlorophenol	1311	0.32	< 0.32	G	100.0
	110-86-1	Pyridine	1311	0.16	< 0.16	G	5.0
152	7782-49-2	Selenium	1311	0.11	< 0.11	G	1.0
037	7440-22-4	Silver	1311	0.022	< 0.022	G	5.0
220	127-18-4	Tetrachloroethylene	1311	0.0200	< 0.0200	G	0.7
349	8001-35-2	Toxaphene	1311	0.020	< 0.020	G	0.5
602	79-01-6	Trichloroethylene	1311	0.0200	< 0.0200	G	0.5
601	95-95-4	2,4,5-Trichlorophenol	1311	0.16	< 0.16	G	400
602	88-06-2	2,4,6-Tricholorphenol	1311	0.16	< 0.16	G	2.0
173	75-01-4	Vinyl Chloride	1311	0.0200	< 0.0200	G	0.2

* If o-,m-,p-Cresol concentrations cannot be differentiated, the total cresol concentration is used.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 2 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond D - LV D

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
Metals (Part B.1)						
178	7429-90-5	Antimony	6020A	4.7	< 4.7	G
457		Arsenic III	1632	0.125	0.877	G
441	16055-83-1	Chromium III	Calculation	10	80.5	G
231	18540-29-9	Chromium VI	7196A	9.8	< 9.8	G
442	744-50-8	Copper	6020A	11.8	417	G
445	7440-02-0	Nickel	6020A	11.8	69.7	G
	7440-28-0	Thallium	6020A	2.4	< 2.4	G
448	7440-66-6	Zinc	6020A	11.8	440	G
Pesticides/PCB'S (Part B.2)						
332	309-00-2	Aldrin	8081B	0.0419	< 0.0419	G
334		Chlorpyirfos Dursban	8141B	0.172	< 0.172	G
--	72-54-8	DDD	8081B	0.0814	< 0.0814	G
--	72-55-9	DDE	8081B	0.0814	< 0.0814	G
335	50-29-3	DDT	8081B	0.0814	< 0.0814	G
336	8065-48-3	Demeton	8141B	0.172	< 0.172	G
337	60-57-1	Dieldrin	8081B	0.0814	< 0.0814	G
746	959-98-8	Alpha-Endosulfan	8081B	0.0419	< 0.0419	G
640	33213-65-9	Alpha-Endosulfan	8081B	0.0814	< 0.0814	G
617	1031-07-8	Endosulfan Sulfate	8081B	0.0814	< 0.0814	G
--	7421-93-4	Endrin Aldehyde	8081B	0.0814	< 0.0814	G
340	86-50-0	Guthion	8141B	0.172	< 0.172	G
--	1024-57-3	Heptachlor Epoxide	8081B	0.0419	< 0.0419	G
--	319-84-6	Hexachlorocyclohexane (Alpha-BHC)	8081B	0.0419	< 0.0419	G
--	319-85-7	Hexachlorocyclohexane (Beta-BHC)	8081B	0.0419	< 0.0419	G
--	143-50-0	Kepone	8270D	4.81	< 4.81	G
343	121-75-5	Malathion	8141B	0.172	< 0.172	G
345	2385-85-5	Mirex	8081B	0.0814	< 0.0814	G
346	56-38-2	Parathion	8141B	0.172	< 0.172	G
--	1336-36-3	Total PCB	8082A	0.16	< 0.16	G
641	53469-21-9	PCB-1242	8082A	0.16	< 0.16	G
642	11097-69-1	PCB-1254	8082A	0.16	< 0.16	G
643	11104-28-2	PCB-1221	8082A	0.16	< 0.16	G
644	11141-16-5	PCB-1232	8082A	0.16	< 0.16	G
645	12672-29-6	PCB-1248	8082A	0.16	< 0.16	G
618	11096-82-5	PCB-1260	8082A	0.16	< 0.16	G
646	12674-11-2	PCB-1016	8082A	0.16	< 0.16	G
Base Neutral Extractable (Part B.3)						
273	208-96-8	Acenaphthene	8270D	0.481	< 0.481	G
275	120-12-7	Anthracene	8270D	0.481	< 0.481	G
--	92-87-5	Benzidine	8270D	3.85	< 3.85	G
276	56-55-3	Benzo(a) anthracene	8270D	0.481	< 0.481	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 3 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond D - LV D

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
648	50-32-8	Benzo(b)fluoranthene (3,4-Bensofluoranthene)	8270D	0.481	< 0.481	G
278	207-08-9	Benzo(k) fluoranthene	8270D	0.481	< 0.481	G
277	50-32-8	Benzo(a)pyrene	8270D	0.481	< 0.481	G
--	111-44-4	Bis 2-Chloroethyl Ether	8270D	0.481	< 0.481	G
279	102-60-1	Bis 2-Chrloroiso-Propyl Ether	8270D	0.481	< 0.481	G
486	85-68-7	Butyl benzyl phthalate	8270D	0.481	< 0.481	G
--	91-58-7	2-Chloronaphthalene	8270D	0.481	< 0.481	G
282	218-01-9	Chrysene	8270D	0.481	< 0.481	G
654	53-70-3	Dibenz(a,h) anthracene	8270D	0.481	< 0.481	G
206	84-74-2	Dibutyl phthalate	8270D	0.481	< 0.481	G
259	95-50-1	1,2-Dichlorobenzene	8270D	0.481	< 0.481	G
264	541-73-1	1,3-Dichlorobenzene	8270D	0.481	< 0.481	G
527	91-94-1	3,3-Dichlorobenzidine	8270D	0.721	< 0.721	G
285	84-66-2	Diethyl phthalate	8270D	0.481	< 0.481	G
170	117-81-7	Di-2-Ethylhexyl Phthalate (Bis (2-Ethlhexyl) Phthalate)	8270D	0.481	< 0.481	G
286	131-11-3	Dimethyl Phthalate	8270D	0.481	< 0.481	G
535	122-66-7	1,2-Dihenylhydrazine	8270D	0.481	< 0.481	G
287	206-44-0	Fluoranthene	8270D	0.481	0.768	G
288	86-73-7	Fluorene	8270D	0.481	< 0.481	G
538	77-47-4	Hexachlorocyclopentadiene	8270D	1.30	< 01.30	G
651	193-39-5	Indeno (1,2,3-cd) pyrene	8270D	0.481	< 0.481	G
650	78-59-1	Isophorone	8270D	0.481	< 0.481	G
293	91-20-3	Naphthalene	8270D	0.481	< 0.481	G
573	62-75-9	N-Nitrosodimethylamine	8270D	0.481	< 0.481	G
574	86-30-6	N-Nitrosodiphenylamine	8270D	0.481	< 0.481	G
575	621-64-7	N-Nitrosodi-n-proplyamine	8270D	0.481	< 0.481	G
296	129-00-0	Pyrene	8270D	0.481	0.67	G
263	129-82-1	1,2,4 Trichlorobenzene	8270D	0.481	< 0.481	G
		Volatiles (Part B.4)				
171	107-02-8	Acrolein	8260B	0.201	< 0.201	G
204	107-13-1	Acrylonitrile (Vinyl Cyanide)	8260B	0.0402	< 0.0402	G
484	75-25-2	Bromoform	8260B	0.008	< 0.008	G
652	124-48-1	Chlorodibromomethane	8260B	0.008	< 0.008	G
649	75-09-2	Dichloromethane (Methylene chloride)	8260B	0.008	< 0.008	G
244	75-27-4	Dichlorobromomethane	8260B	0.008	< 0.008	G
262	156-60-5	Trans 1,2-Dichloroethylene	8260B	0.008	< 0.008	G
261	78-87-5	1,2-Dichloropropane	8260B	0.008	< 0.008	G
265	542-75-6	1,3-Dichloropropene (1,3-Dichlorpropylene)	8260B	0.0161	< 0.0161	G
172	100-41-4	Ethylbenzene	8260B	0.008	< 0.008	G
--	74-83-9	Methyl Bromide	8260B	0.008	< 0.008	G
--	78-93-3	2-Butanone (Methyl Ethyl Ketone (MEK))	8260B	0.0402	< 0.0402	G
596	79-34-5	1,1,2,2-Tetrachloroethane	8260B	0.008	< 0.008	G

DEPARTMENT OF ENVIRONMENTAL QUALITY
Dredge Spoils Monitoring
ATTACHMENT B, Page 4 of 4

FACILITY NAME: Virginia Power - Possum Point VPEDS PERMIT NO.: VA0002071

DATE: July 10, 2015 PROJECT: Low Volume Pond D - LV D

DEQ Parameter No.	EPA CAS Number	Parameter	EPA Analysis No.	Quantification Level [1] (mg/kg)	Reporting Results [1] (mg/kg)	Sample Type [2]
222	108-88-3	Toluene	8260B	0.008	< 0.008	G
373	79-00-5	1,1,2-Trichloroethane	8260B	0.008	< 0.008	G
155	79-01-6	Trichloroethylene	8260B	0.008	< 0.008	G
Acids Extratable (part B.5)						
267	95-57-8	2-Chlorophenol	8270D	1.3	< 1.3	G
268	120-83-2	2,4 Dichlorophenol	8270D	0.962	< 0.962	G
269	105-67-9	2,4 Dimethylphenol	8270D	1.3	< 1.3	G
--	534-52-1	2-Methyl-2,4-Dinitrophenol (4,6-Dinitro-O-Cresol)	8270D	1.3	< 1.3	G
270	51.28-5	2,4 Dinitrophenol	8270D	0.962	< 0.962	G
175	108-95-2	Phenol	8270D	1.3	< 1.3	G
Miscellaneous (Part B.6)						
018		Cyanide, Total	9012B	1.3	< 1.3	G
350		Tributyltin	Krone	0.0052	< 0.0052	G
257		TPH (Total petroleum Hydrocarbons)	9071B	980	6620	G

I certify under penalty of the law that this document 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 or imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statues may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

David A. Craymer
Name of Principal Executive Officer or Authorized Agent

VP Power Generation System Operations
Title

Signature of Principal Executive Officer or Authorized Agent

7/28/15
Date

Footnotes to Water Quality Monitoring Attachment B

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Units for the quantification level and the specific target value are micrograms/liter (mg/l) or micrograms/kilogram (mg/kg) unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained. Data reported by the lab as less than the test method QL shall be reported as "<(QL)" on the Attachment B form, where the actual test method QL shall be substituted for "(QL)".

(2) Sample Type:

G= Grab- An individual sample collected in less than fifteen (15) minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and repot the average results provided that the individual grab results are also reported

(3) Any approved method presented in 40 CFR Part 136

(4) The QL is at the discretion of the premittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

EXHIBIT C
Analytical Laboratory Reports

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ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

July 9, 2015

Mr. Ed Sciulli
GAI Consultants
385 E. Waterfront Dr.
Homestead, PA 15120

Certificate of Analysis

Revised Report - 7/9/2015 11:20:00 AM - See workorder comment section for explanation

Project Name:	**2015-VIRGINIA POWER-POSSUM**	Workorder:	**2076025**
Purchase Order:		Workorder ID:	**Dominion Possum Point**

Dear Mr. Sciulli:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, June 10, 2015.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Katie Tuite

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2076025 Dominion Possum Point

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2076025001	ABC 2 Grab	Solid	6/9/2015 11:00	6/10/2015 19:50	Collected by Client
2076025002	ABC 2 Comp	Solid	6/9/2015 11:15	6/10/2015 19:50	Collected by Client
2076025003	ABC 3 Grab	Solid	6/9/2015 09:00	6/10/2015 19:50	Collected by Client
2076025004	ABC 3 Comp	Solid	6/9/2015 09:15	6/10/2015 19:50	Collected by Client
2076025005	ABC 4 Grab	Solid	6/9/2015 12:45	6/10/2015 19:50	Collected by Client
2076025006	ABC 4 Comp	Solid	6/9/2015 13:00	6/10/2015 19:50	Collected by Client
2076025007	Low Volume C Grab	Solid	6/10/2015 10:00	6/10/2015 19:50	Collected by Client
2076025008	Low Volume C Comp	Solid	6/10/2015 10:05	6/10/2015 19:50	Collected by Client
2076025009	Low Volume D Grab	Solid	6/10/2015 10:10	6/10/2015 19:50	Collected by Client
2076025010	Low Volume D Comp	Solid	6/10/2015 10:15	6/10/2015 19:50	Collected by Client

(ALS) Environmental

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SAMPLE SUMMARY

Workorder: 2076025 Dominion Possum Point

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)

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PROJECT SUMMARY

Workorder: 2076025 Dominion Possum Point

Workorder Comments

See attached subcontracted tributylin results from ALS-Kelso. VLF 7/7/15

See attached subcontracted trivalent arsenic results from Brooks Rand. VLF 7/7/15

This report was modified on 7/7/15 to attach subcontracting and add PCB. VLF

Sample Comments

Lab ID: 2076025002 **Sample ID:** ABC 2 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025004 **Sample ID:** ABC 3 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025005 **Sample ID:** ABC 4 Grab **Sample Type:** SAMPLE

One or more of the method 8260 internal standards were recovered outside of the control limits. The sample was re-analyzed with similar results, indicating a significant matrix interference.

Lab ID: 2076025006 **Sample ID:** ABC 4 Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025008 **Sample ID:** Low Volume C Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

Lab ID: 2076025010 **Sample ID:** Low Volume D Comp **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025001** Date Collected: 6/9/2015 11:00 Matrix: Solid

Sample ID: **ABC 2 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:25	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:25	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.6		%	62 - 133	SW846 8260B			6/18/15 08:25	JPA	D
4-Bromofluorobenzene (S)	86.9		%	79 - 114	SW846 8260B			6/18/15 08:25	JPA	D
Dibromofluoromethane (S)	98.5		%	78 - 116	SW846 8260B			6/18/15 08:25	JPA	D
Toluene-d8 (S)	97.7		%	76 - 127	SW846 8260B			6/18/15 08:25	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	47.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Acrylonitrile	ND		ug/kg	9.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromodichloromethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromoform	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Bromomethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
2-Butanone	ND		ug/kg	9.5	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Chlorodibromomethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,2-Dichloropropane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	3.8	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Ethylbenzene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Methylene Chloride	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Toluene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Trichloroethene	ND		ug/kg	1.9	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101		%	56 - 124	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
4-Bromofluorobenzene (S)	116		%	51 - 128	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
Dibromofluoromethane (S)	114		%	62 - 123	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025001** Date Collected: 6/9/2015 11:00 Matrix: Solid
Sample ID: **ABC 2 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	108		%	59 - 131	SW846 8260B	6/9/15	JPA	6/11/15 13:06	JPA	A
WET CHEMISTRY										
Moisture	41.9		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	58.1		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler
Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzidine	ND		ug/kg	1310	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(a)anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(a)pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Butylbenzylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Chloronaphthalene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Chlorophenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Chrysene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Di-n-Butylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	246	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dichlorophenol	ND		ug/kg	328	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Diethylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dimethylphenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Dimethylphthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2,4-Dinitrophenol	ND		ug/kg	328	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Fluoranthene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Fluorene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Isophorone	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Kepone	ND		ug/kg	1640	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Naphthalene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Phenol	ND		ug/kg	442	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid
Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	164	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	85.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	70.6		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	72.2		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	65.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	65.4		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	72		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	69.9		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	70.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	67.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Terphenyl-d14 (S)	77.7		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	72.5		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 15:36	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1016	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1221	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1232	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1242	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1248	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1254	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Aroclor-1260	ND		mg/kg	0.057	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	187	1	%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
Tetrachloro-m-xylene (S)	112		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 14:59	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
alpha-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
beta-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
delta-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
gamma-BHC	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
alpha-Chlordane	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
gamma-Chlordane	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDD	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDE	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
4,4'-DDT	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Dieldrin	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan I	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan II	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endosulfan Sulfate	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin Aldehyde	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Endrin Ketone	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Heptachlor	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.6	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Methoxychlor	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Mirex	ND		ug/kg	28.3	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Toxaphene	ND		ug/kg	111	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	70.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
Tetrachloro-m-xylene (S)	54.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 18:55	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Alachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Atrazine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Azinphos Methyl	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Bolstar	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Bromacil	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Butachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Chlorpyrifos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Coumaphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Cyanizine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Demeton	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Diazinon	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Dichlorovos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Dimethoate	ND		ug/kg	77.6	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
EPN	ND		ug/kg	104	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Ethoprop	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Fensulfothion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Fenthion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Malathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Methyl Parathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Metolachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Metribuzin	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Mevinphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Molinate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Parathion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Phorate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Prometon	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Propachlor	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Ronnel	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Simazine	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Sulfotep	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Tetrachlorinphos	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Tokuthion	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Trichloronate	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Trifluralin	ND		ug/kg	60.4	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid

Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
IS_Triphenylphosphate (S)	38.5		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 20:15	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	56		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	40		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 04:29	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.44	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	819		mg/kg	349	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.4	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	42.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	349	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	58.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.5	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.16		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Arsenic, Total	2.9		mg/kg	0.16	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Chromium, Total	0.61		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Copper, Total	1.7		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Nickel, Total	0.73		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Thallium, Total	ND		mg/kg	0.053	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
Zinc, Total	1.1		mg/kg	0.27	SW846 6020A	6/14/15	JPS	6/15/15 06:09	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Barium, Total	3.8		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:55	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:07	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025002** Date Collected: 6/9/2015 11:15 Matrix: Solid
Sample ID: **ABC 2 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	68.1		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2-Fluorobiphenyl (S)	65.9		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
2-Fluorophenol (S)	44.8		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Nitrobenzene-d5 (S)	69.2		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Phenol-d5 (S)	28		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
Terphenyl-d14 (S)	78.5		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:08	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	56.4		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
Tetrachloro-m-xylene (S)	81.1		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:26	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	105		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 17:45	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025002**	Date Collected:	6/9/2015 11:15	Matrix:	Solid
Sample ID:	**ABC 2 Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025003** Date Collected: 6/9/2015 09:00 Matrix: Solid

Sample ID: **ABC 3 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:43	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
1,1 Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:43	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.4		%	62 - 133	SW846 8260B			6/18/15 08:43	JPA	D
4-Bromofluorobenzene (S)	85.5		%	79 - 114	SW846 8260B			6/18/15 08:43	JPA	D
Dibromofluoromethane (S)	95.6		%	78 - 116	SW846 8260B			6/18/15 08:43	JPA	D
Toluene-d8 (S)	96.8		%	76 - 127	SW846 8260B			6/18/15 08:43	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	52.9	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Acrylonitrile	ND		ug/kg	10.6	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromodichloromethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromoform	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Bromomethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
2-Butanone	ND		ug/kg	10.6	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Chlorodibromomethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,2-Dichloropropane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	4.2	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Ethylbenzene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Methylene Chloride	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Toluene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Trichloroethene	ND		ug/kg	2.1	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	110		%	56 - 124	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
4-Bromofluorobenzene (S)	122		%	51 - 128	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
Dibromofluoromethane (S)	122		%	62 - 123	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025003** Date Collected: 6/9/2015 09:00 Matrix: Solid
Sample ID: **ABC 3 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	117		%	59 - 131	SW846 8260B	6/9/15	JPA	6/11/15 13:29	JPA	A
WET CHEMISTRY										
Moisture	40.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	59.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler
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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzidine	ND		ug/kg	1440	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(a)anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(a)pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Butylbenzylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Chloronaphthalene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Chlorophenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Chrysene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Di-n-Butylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	269	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dichlorophenol	ND		ug/kg	359	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Diethylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dimethylphenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Dimethylphthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2,4-Dinitrophenol	ND		ug/kg	359	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Fluoranthene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Fluorene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Isophorone	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Kepone	ND		ug/kg	1790	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Naphthalene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Phenol	ND		ug/kg	484	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	179	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.3		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	70.8		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	72.4		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	64.3		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	63.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Nitrobenzene-d5 (S)	70.1		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	72.2		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	63.4		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	65.8		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Terphenyl-d14 (S)	65.3		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	70		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:00	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1016	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1221	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1232	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1242	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1248	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Aroclor-1254	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Aroclor-1260	ND		mg/kg	0.059	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	119		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
Tetrachloro-m-xylene (S)	82.4		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:11	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
alpha-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
beta-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
delta-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
gamma-BHC	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
alpha-Chlordane	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
gamma-Chlordane	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDD	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDE	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
4,4'-DDT	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Dieldrin	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan I	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan II	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endosulfan Sulfate	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin Aldehyde	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Endrin Ketone	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Heptachlor	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Heptachlor Epoxide	ND		ug/kg	15.3	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Methoxychlor	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Mirex	ND		ug/kg	29.6	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Toxaphene	ND		ug/kg	117	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	62.4		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
Tetrachloro-m-xylene (S)	43.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:10	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Alachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Atrazine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Azinphos Methyl	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Bolstar	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Bromacil	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Butachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Chlorpyrifos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Coumaphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Cyanizine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Demeton	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Diazinon	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Dichlorovos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Dimethoate	ND		ug/kg	80.2	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
EPN	ND		ug/kg	107	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Ethoprop	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Fensulfothion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Fenthion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Malathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Methyl Parathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Metolachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Metribuzin	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Mevinphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Molinate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Parathion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Phorate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Prometon	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Propachlor	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Ronnel	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Simazine	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Sulfotep	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Tetrachlorinphos	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Tokuthion	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Trichloronate	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Trifluralin	ND		ug/kg	62.4	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	38.3		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 19:12	EGO	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	65.5		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	55.7		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 03:52	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.46	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	805		mg/kg	366	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.5	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	45.4		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	366	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	54.6		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.7	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.13		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Arsenic, Total	3.1		mg/kg	0.17	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Chromium, Total	0.80		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Copper, Total	2.0		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Nickel, Total	0.70		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Thallium, Total	ND		mg/kg	0.057	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
Zinc, Total	1.6		mg/kg	0.28	SW846 6020A	6/14/15	JPS	6/15/15 06:13	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Barium, Total	3.9		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:56	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:10	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid

Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	68.6		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2-Fluorobiphenyl (S)	65.4		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
2-Fluorophenol (S)	47.9		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Nitrobenzene-d5 (S)	69.7		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Phenol-d5 (S)	30.6		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
Terphenyl-d14 (S)	78.1		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 13:44	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	61.2		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
Tetrachloro-m-xylene (S)	76.8		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:42	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	111		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 15:53	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025004** Date Collected: 6/9/2015 09:15 Matrix: Solid
Sample ID: **ABC 3 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

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Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025005** Date Collected: 6/9/2015 12:45 Matrix: Solid

Sample ID: **ABC 4 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 07:34	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:34	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.7		%	62 - 133	SW846 8260B			6/18/15 07:34	JPA	D
4-Bromofluorobenzene (S)	84.9		%	79 - 114	SW846 8260B			6/18/15 07:34	JPA	D
Dibromofluoromethane (S)	93.2		%	78 - 116	SW846 8260B			6/18/15 07:34	JPA	D
Toluene-d8 (S)	94.8		%	76 - 127	SW846 8260B			6/18/15 07:34	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	41.0	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Acrylonitrile	ND		ug/kg	8.2	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromodichloromethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromoform	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Bromomethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
2-Butanone	ND		ug/kg	8.2	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Chlorodibromomethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
trans-1,2-Dichloroethene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,2-Dichloropropane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,3-Dichloropropene, Total	ND		ug/kg	3.3	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Ethylbenzene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Methylene Chloride	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Toluene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
1,1,2-Trichloroethane	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Trichloroethene	ND		ug/kg	1.6	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	182	7	%	56 - 124	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
4-Bromofluorobenzene (S)	138	9	%	51 - 128	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
Dibromofluoromethane (S)	201	6	%	62 - 123	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025005** Date Collected: 6/9/2015 12:45 Matrix: Solid
Sample ID: **ABC 4 Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	202	8	%	59 - 131	SW846 8260B	6/9/15	TMP	6/12/15 18:02	TMP	C
WET CHEMISTRY										
Moisture	45.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	54.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzidine	ND		ug/kg	1330	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(a)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(a)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Butylbenzylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Chloronaphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Chlorophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Chrysene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Di-n-Butylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	250	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dichlorophenol	ND		ug/kg	333	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Diethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dimethylphenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Dimethylphthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2,4-Dinitrophenol	ND		ug/kg	333	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Fluoranthene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Fluorene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Isophorone	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Kepone	ND		ug/kg	1660	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Naphthalene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Phenol	ND		ug/kg	449	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid
Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	166	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.9		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Fluorobiphenyl (S)	76.2		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	74.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
2-Fluorophenol (S)	64.5		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	63.8		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Nitrobenzene-d5 (S)	74		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	76.2		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Phenol-d5 (S)	64.7		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	62.9		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Terphenyl-d14 (S)	80.6		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	75.2		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:24	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1016	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1221	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1232	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1242	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1248	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1254	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Aroclor-1260	ND		mg/kg	0.056	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	113		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	84.8		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:23	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
alpha-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
beta-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
delta-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
gamma-BHC	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
alpha-Chlordane	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
gamma-Chlordane	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDD	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDE	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
4,4'-DDT	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Dieldrin	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan I	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan II	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endosulfan Sulfate	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin Aldehyde	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Endrin Ketone	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Heptachlor	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Heptachlor Epoxide	ND		ug/kg	14.4	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Methoxychlor	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Mirex	ND		ug/kg	28.0	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Toxaphene	ND		ug/kg	110	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	53.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
Tetrachloro-m-xylene (S)	52		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:26	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Alachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Atrazine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Azinphos Methyl	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Bolstar	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Bromacil	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Butachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Chlorpyrifos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Coumaphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Cyanizine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Demeton	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Diazinon	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Dichlorovos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Dimethoate	ND		ug/kg	74.4	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
EPN	ND		ug/kg	99.2	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Ethoprop	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Fensulfothion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Fenthion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Malathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Methyl Parathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Metolachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Metribuzin	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Mevinphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Molinate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Parathion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Phorate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Prometon	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Propachlor	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Ronnel	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Simazine	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Sulfotep	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Tetrachlorinphos	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Tokuthion	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Trichloronate	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Trifluralin	ND		ug/kg	57.8	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	47.8		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 20:46	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	72.1		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	48		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:06	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.42	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	605		mg/kg	336	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	3.4	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	41.1		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	ND		mg/kg	336	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	58.9		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	ND		mg/kg	3.4	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	0.21		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Arsenic, Total	3.9		mg/kg	0.16	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Chromium, Total	0.69		mg/kg	0.11	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Copper, Total	2.1		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Nickel, Total	0.85		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Thallium, Total	0.059		mg/kg	0.053	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
Zinc, Total	0.87		mg/kg	0.26	SW846 6020A	6/14/15	JPS	6/15/15 06:28	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Barium, Total	3.7		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:57	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
Silver, Total	0.24		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:14	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025006** Date Collected: 6/9/2015 13:00 Matrix: Solid

Sample ID: **ABC 4 Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	62.2		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2-Fluorobiphenyl (S)	55		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
2-Fluorophenol (S)	36.6		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Nitrobenzene-d5 (S)	56.8		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Phenol-d5 (S)	23.3		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
Terphenyl-d14 (S)	76.2		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:32	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	52.8		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
Tetrachloro-m-xylene (S)	64.8		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 14:58	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	119		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 18:22	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

Shannon Butler

Ms. Shannon Butler
Project Coordinator

(ALS) Environmental

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025007** Date Collected: 6/10/2015 10:00 Matrix: Solid

Sample ID: **Low Volume C Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 07:51	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 07:51	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	96.8		%	62 - 133	SW846 8260B			6/18/15 07:51	JPA	D
4-Bromofluorobenzene (S)	84.8		%	79 - 114	SW846 8260B			6/18/15 07:51	JPA	D
Dibromofluoromethane (S)	94.7		%	78 - 116	SW846 8260B			6/18/15 07:51	JPA	D
Toluene-d8 (S)	96		%	76 - 127	SW846 8260B			6/18/15 07:51	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	131	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Acrylonitrile	ND		ug/kg	26.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromodichloromethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromoform	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Bromomethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
2-Butanone	ND		ug/kg	26.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Chlorodibromomethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,2-Dichloropropane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	10.5	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Ethylbenzene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Methylene Chloride	ND	1	ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Toluene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Trichloroethene	ND		ug/kg	5.2	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	56 - 124	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
4-Bromofluorobenzene (S)	110		%	51 - 128	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A
Dibromofluoromethane (S)	116		%	62 - 123	SW846 8260B	6/10/15	JPA	6/11/15 14:16	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025007** Date Collected: 6/10/2015 10:00 Matrix: Solid

Sample ID: **Low Volume C Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*
Toluene-d8 (S)	104		%	59 - 131	SW846 8260B	6/10/15 JPA	6/11/15 14:16	JPA	A
WET CHEMISTRY									
Moisture	70.9		%	0.1	S2540G-11		6/11/15 09:19	JP	A
Total Solids	29.1		%	0.1	S2540G-11		6/11/15 09:19	JP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzidine	ND		ug/kg	2350	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(a)anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(a)pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Butylbenzylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Chloronaphthalene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Chlorophenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Chrysene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Di-n-Butylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	440	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dichlorophenol	ND		ug/kg	587	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Diethylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dimethylphenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Dimethylphthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2,4-Dinitrophenol	ND		ug/kg	587	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Fluoranthene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Fluorene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Isophorone	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Kepone	ND		ug/kg	2940	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Naphthalene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Phenol	ND		ug/kg	793	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	294	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	82.1		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Fluorobiphenyl (S)	69.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	71.1		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
2-Fluorophenol (S)	71.6		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	71.7		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	73.5		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	75.7		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Phenol-d5 (S)	72		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	69.1		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	67.3		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	72.2		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 16:49	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1016	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1221	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1232	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1242	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1248	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1254	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Aroclor-1260	ND		mg/kg	0.099	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	101		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
Tetrachloro-m-xylene (S)	104		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:34	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
alpha-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
beta-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
delta-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
gamma-BHC	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
alpha-Chlordane	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
gamma-Chlordane	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDD	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDE	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
4,4'-DDT	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Dieldrin	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan I	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan II	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endosulfan Sulfate	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin Aldehyde	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Endrin Ketone	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Heptachlor	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Heptachlor Epoxide	ND		ug/kg	25.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Methoxychlor	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Mirex	ND		ug/kg	49.4	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Toxaphene	ND		ug/kg	195	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	63.4		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
Tetrachloro-m-xylene (S)	44.4		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:42	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Alachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Atrazine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Azinphos Methyl	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Bolstar	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Bromacil	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Butachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Chlorpyrifos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Coumaphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Cyanizine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Demeton	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Diazinon	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Dichlorovos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Dimethoate	ND		ug/kg	137	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
EPN	ND		ug/kg	182	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Ethoprop	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Fensulfothion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Fenthion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Malathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Methyl Parathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Metolachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Metribuzin	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Mevinphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Molinate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Parathion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Phorate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Prometon	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Propachlor	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Ronnel	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Simazine	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Sulfotep	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Tetrachlorinphos	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Tokuthion	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Trichloronate	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
Trifluralin	ND		ug/kg	106	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	71.2		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 21:18	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	79.6		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid
Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	111		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 05:43	KJH	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	0.73	SW846 9012B	6/12/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	5770		mg/kg	605	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	5.9	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	67.3		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	2990		mg/kg	605	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	32.7		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	35.6		mg/kg	6.1	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	ND		mg/kg	2.6	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Arsenic, Total	25.0		mg/kg	3.9	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Chromium, Total	35.6		mg/kg	2.6	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Copper, Total	272		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Nickel, Total	71.6		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Thallium, Total	ND		mg/kg	1.3	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
Zinc, Total	296		mg/kg	6.5	SW846 6020A	6/14/15	JPS	6/15/15 06:32	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Barium, Total	ND		mg/L	2.8	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:58	MNP	A3
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/16/15	JPS	6/17/15 11:35	SRT	A2
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025008** Date Collected: 6/10/2015 10:05 Matrix: Solid

Sample ID: **Low Volume C Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	70.7		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2-Fluorobiphenyl (S)	69.3		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
2-Fluorophenol (S)	47.5		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Nitrobenzene-d5 (S)	73.9		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Phenol-d5 (S)	29.4		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
Terphenyl-d14 (S)	82.9		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 14:57	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	75.8		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
Tetrachloro-m-xylene (S)	69.1		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 16:16	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	113		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 22:07	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025008**	Date Collected:	6/10/2015 10:05	Matrix:	Solid
Sample ID:	**Low Volume C Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025009** Date Collected: 6/10/2015 10:10 Matrix: Solid
Sample ID: **Low Volume D Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS										
Benzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
2-Butanone	ND		ug/L	200	SW846 8260B			6/18/15 08:08	JPA	D
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Chlorobenzene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Chloroform	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
1,1-Dichloroethene	ND		ug/l	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Tetrachloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Trichloroethene	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Vinyl Chloride	ND		ug/L	20.0	SW846 8260B			6/18/15 08:08	JPA	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95		%	62 - 133	SW846 8260B			6/18/15 08:08	JPA	D
4-Bromofluorobenzene (S)	82.6		%	79 - 114	SW846 8260B			6/18/15 08:08	JPA	D
Dibromofluoromethane (S)	94.7		%	78 - 116	SW846 8260B			6/18/15 08:08	JPA	D
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			6/18/15 08:08	JPA	D
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	201	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Acrylonitrile	ND		ug/kg	40.2	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromodichloromethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromoform	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Bromomethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
2-Butanone	ND		ug/kg	40.2	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Chlorodibromomethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
trans-1,2-Dichloroethene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,2-Dichloropropane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,3-Dichloropropene, Total	ND		ug/kg	16.1	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Ethylbenzene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Methylene Chloride	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,1,2,2-Tetrachloroethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Toluene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
1,1,2-Trichloroethane	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Trichloroethene	ND		ug/kg	8.0	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	109		%	56 - 124	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
4-Bromofluorobenzene (S)	120		%	51 - 128	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
Dibromofluoromethane (S)	116		%	62 - 123	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025009** Date Collected: 6/10/2015 10:10 Matrix: Solid
Sample ID: **Low Volume D Grab** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Toluene-d8 (S)	97.2		%	59 - 131	SW846 8260B	6/10/15	JPA	6/11/15 14:39	JPA	A
WET CHEMISTRY										
Moisture	79.2		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Total Solids	20.8		%	0.1	S2540G-11			6/11/15 09:19	JP	A

Shannon Butler
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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid
Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzidine	ND		ug/kg	3850	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(a)anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(a)pyrene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Butylbenzylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Chloronaphthalene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Chlorophenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Chrysene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Di-n-Butylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	721	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dichlorophenol	ND		ug/kg	962	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Diethylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dimethylphenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Dimethylphthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2,4-Dinitrophenol	ND		ug/kg	962	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
bis(2-Ethylhexyl)phthalate	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Fluoranthene	768		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Fluorene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Isophorone	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Kepone	ND		ug/kg	4810	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Naphthalene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Phenol	ND		ug/kg	1300	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pyrene	670		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	481	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	90.9		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	94.2		%	37 - 123	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Fluorobiphenyl (S)	78.5		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorobiphenyl (S)	76.7		%	45 - 105	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
2-Fluorophenol (S)	74		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2-Fluorophenol (S)	73.5		%	35 - 104	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Nitrobenzene-d5 (S)	75.5		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Nitrobenzene-d5 (S)	77.8		%	41 - 110	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	71.6		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Phenol-d5 (S)	74.2		%	40 - 100	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	90.6		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Terphenyl-d14 (S)	84.5		%	38 - 113	SW846 8270D	6/11/15	BS	6/11/15 17:13	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1016	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1221	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1232	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1242	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1248	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1254	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Aroclor-1260	ND		mg/kg	0.16	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	108		%	46 - 120	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
Tetrachloro-m-xylene (S)	107		%	52 - 115	SW846 8082A	6/11/15	KAC	7/8/15 15:45	EGO	
PESTICIDES										
Aldrin	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
alpha-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
beta-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
delta-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
gamma-BHC	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
alpha-Chlordane	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
gamma-Chlordane	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDD	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDE	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
4,4'-DDT	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Dieldrin	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan I	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan II	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endosulfan Sulfate	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin Aldehyde	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Endrin Ketone	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Heptachlor	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Heptachlor Epoxide	ND		ug/kg	41.9	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Methoxychlor	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Mirex	ND		ug/kg	81.4	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Toxaphene	ND		ug/kg	321	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	61.2		%	30 - 135	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
Tetrachloro-m-xylene (S)	46.8		%	30 - 111	SW846 8081B	6/11/15	KAC	6/13/15 19:57	RWS	A
ORGANOPHOSPHORUS COMPOUNDS										
Acetochlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Alachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Atrazine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Azinphos Methyl	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Bolstar	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Bromacil	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid
Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Butachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Chlorpyrifos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Coumaphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Cyanizine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Demeton	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Diazinon	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Dichlorovos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
O,O-Diethyl O-pyrazinylphoshor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Dimethoate	ND		ug/kg	221	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
EPN	ND		ug/kg	294	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Ethoprop	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Fensulfothion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Fenthion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Malathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Methyl Parathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Metolachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Metribuzin	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Mevinphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Molinate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Parathion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Pendimethalin(Prowl)	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Phorate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Prometon	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Propachlor	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Ronnel	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Simazine	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
Sulfotep	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Tetrachlorinphos	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Tokuthion	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Trichloronate	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A
Trifluralin	ND		ug/kg	172	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	77.1		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	83.6		%	16 - 169	SW846 8141B	6/12/15	KAC	6/15/15 06:20	KJH	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid

Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	60.4		%	16 - 169	SW846 8141B	6/12/15	KAC	6/13/15 21:49	EGO	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.3	SW846 9012B	6/13/15	SYB	6/13/15 19:44	LJF	A
Hexane Extractable Material	6620		mg/kg	980	SW846 9071B			6/21/15 12:30	AT	A
Hexavalent Chromium	ND		mg/kg	9.8	SW846 7196A	6/15/15	THB	6/15/15 18:00	THB	A
Moisture	80.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
Silica Gel Treated HEM	3380		mg/kg	980	SW846 9071B			6/21/15 12:30	AT	A
Total Solids	20.0		%	0.1	S2540G-11			6/11/15 09:19	JP	A
METALS										
Trivalent Chromium	80.5		mg/kg	10.0	Calculation			6/25/15 16:23	JWB	A
Antimony, Total	ND		mg/kg	4.7	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Arsenic, Total	19.2		mg/kg	7.1	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Chromium, Total	80.5		mg/kg	4.7	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Copper, Total	417		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Nickel, Total	69.7		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Thallium, Total	ND		mg/kg	2.4	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
Zinc, Total	440		mg/kg	11.8	SW846 6020A	6/14/15	JPS	6/15/15 06:35	ZMC	A1
TCLP METALS										
Arsenic, Total	ND		mg/L	0.14	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Barium, Total	ND		mg/L	2.8	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Cadmium, Total	ND		mg/L	0.011	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Chromium, Total	ND		mg/L	0.028	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Lead, Total	ND		mg/L	0.033	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Mercury, Total	ND		mg/L	0.0020	SW846 7470A	6/17/15	MNP	6/17/15 12:59	MNP	A2
Selenium, Total	ND		mg/L	0.11	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
Silver, Total	ND		mg/L	0.022	SW846 6010C	6/18/15	JPS	6/18/15 12:25	SRT	A3
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
o-Cresol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachlorobutadiene	ND	2	ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Hexachloroethane	ND	1	ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A

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State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID: **2076025010** Date Collected: 6/10/2015 10:15 Matrix: Solid
Sample ID: **Low Volume D Comp** Date Received: 6/10/2015 19:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Pentachlorophenol	ND		ug/L	320	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Pyridine	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4,5-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2,4,6-Trichlorophenol	ND		ug/L	160	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	66.7		%	40 - 125	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2-Fluorobiphenyl (S)	67.1		%	50 - 110	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
2-Fluorophenol (S)	45.4		%	20 - 75	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Nitrobenzene-d5 (S)	69.8		%	40 - 110	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Phenol-d5 (S)	27.6		%	13 - 49	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
Terphenyl-d14 (S)	79		%	50 - 122	SW846 8270D	6/19/15	PDK	6/20/15 15:21	GEC	A
TCLP PESTICIDES										
gamma-BHC	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Chlordane	ND		ug/L	10.0	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Endrin	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Heptachlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Heptachlor Epoxide	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Methoxychlor	ND		ug/L	0.50	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Toxaphene	ND		ug/L	20.0	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	62.1		%	30 - 140	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
Tetrachloro-m-xylene (S)	73.9		%	30 - 123	SW846 8081B	6/16/15	CAC	6/17/15 16:32	RWS	A
TCLP HERBICIDES										
2,4-D	ND		ug/L	4.0	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
2,4,5-TP	ND		ug/L	6.0	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	113		%	14 - 172	SW846 8151A	6/17/15	PDK	6/18/15 22:44	KJH	A
SUBCONTRACTED ANALYSIS										
Subcontracted Analysis	See attached				Subcontract			6/16/15 00:00	SUB	E

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ANALYTICAL RESULTS

Workorder: 2076025 Dominion Possum Point

Lab ID:	**2076025010**	Date Collected:	6/10/2015 10:15	Matrix:	Solid
Sample ID:	**Low Volume D Comp**	Date Received:	6/10/2015 19:50		

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	*Cntr*

Shannon Butler
Ms. Shannon Butler
Project Coordinator

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2076025002	1	ABC 2 Comp	SW846 8082A	Decachlorobiphenyls

The surrogate Decachlorobiphenyls for method SW846 8082A was outside of control limits. The % Recovery was reported as 187 and the control limits were 46 to 120. This result was reported at a dilution of 1.

2076025005	6	ABC 4 Grab	SW846 8260B	Dibromofluoromethane

The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 201 and the control limits were 62 to 123. This result was reported at a dilution of 1.

2076025005	7	ABC 4 Grab	SW846 8260B	1,2-Dichloroethane-d4

The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 182 and the control limits were 56 to 124. This result was reported at a dilution of 1.

2076025005	8	ABC 4 Grab	SW846 8260B	Toluene-d8

The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 202 and the control limits were 59 to 131. This result was reported at a dilution of 1.

2076025005	9	ABC 4 Grab	SW846 8260B	4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 138 and the control limits were 51 to 128. This result was reported at a dilution of 1.

2076025007	1	Low Volume C Grab	SW846 8260B	Methylene Chloride

The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 139 and the control limits were 68 to 133.

2076025010	1	Low Volume D Comp	SW846 8270D	Hexachloroethane

The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachloroethane. The RPD was reported as 30.1 and the upper control limit is 30.

2076025010	2	Low Volume D Comp	SW846 8270D	Hexachlorobutadiene

The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorobutadiene. The RPD was reported as 31.9 and the upper control limit is 30.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/ SAMPLER - INSTRUCTIONS ON THE BACK

Page 1 of 2

Courier:

Tracking #:

2076025

Co. Name: GAI CONSULTANTS, INC.

Contact (Report to): ED SCULLI, PG

Phone: 412-476-2000

Address: 385 E. WATERFRONT DRIVE
HOMESTEAD, PA 15120

Bill to (if different than Report to):

PO#:

DOMINION POSSUM POINT

Project Name/#: C150130.00

ALS Quote #:

TAT: ✓ Normal-Standard TAT is 10-12 business days. ✓ Rush-Subject to ALS approval and surcharges (WATER SAMPLE ONLY)

Date Required:

Approved By:

Email? ✓ -Y E.SCULLI@GAICONSULTANTS.COM

Fax? -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	*Matrix	***Container Type	***Container Size	Preservative	BVA (PART B.4) MISC (PART B.4)	MATRIX (PART B.1) PESTICIDES (PART B.3) TCLP (EXCEPT VOA) (PART A)	VOCS (PART B.4)	VOCS (PART B.4)	TCLP WASTE VOA (PART A)	AS 3 (SUB TO KEL-O)	TRIBUTYLTIN (SUB TO KEL-O)	VOCS (PART B.4) EXTRA CONTAINER				Headspace (completed by Sample Receiving)	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
						C	32 oz	NONE												Personal Initials: LMG					
						C	40 mL	NaOH												Cooler Temp: 1					
						C	40 mL	HCl												Therm. ID: 191					
						C	4 oz	NONE												No. of Coolers:					
						C	4 oz	NONE												Notes:					
						C	8 oz	NONE																	
						A	4 oz	NONE																	
1 ABC 2 GRAB		6/9/15	11:00	G	SO					2	1	1				1					Y	Y	Y	Y	Y
2 ABC 2 COMP			11:15	C					2					1	1						Y	Y	Y	Y	Y
3 ABC 3 GRAB			9:00	G						2	1	1				1					Y	Y	Y	Y	Y
4 ABC 3 COMP			9:15	C					2					1	1						Y	Y	Y	Y	Y
5 ABC 4 GRAB			12:45	G						2	1	1				1					Y	Y	Y	Y	Y
6 ABC 4 COMP			13:00	C					2					1	1						Y	Y	Y	Y	Y
7 ☆ SEE POSSUM POINT FULL LIST PARAMETERS FOR POND 0 #2												ON SEPARATE COC													
8 ~~[illegible]~~ SW - SURFACE WATER ☆ RUSH TAT		~~[illegible]~~	~~[illegible]~~	~~[illegible]~~						~~[illegible]~~															

Enter Number of Containers Per Analysis

SAMPLED BY (Please Print): EUGENE COONEY JR

Project Comments: RWL 6/11 137

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 GAI CONSULTANTS	6/9/15	18:00	2 [signature]	6/10/15	1103
3 [signature]	6/10/15	1700	4 [signature]	6/10	1905
5 [signature]	6/10	1950	6 SPS	6/10	1950
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ Other

EDDs required? ☐ If yes, format type:

SDWA Forms? yes ☐ yes ☐ yes ☐ yes ☐

State Samples Collected in? NJ ☐ NY ☐ PA ☐ Other

DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

*G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

SB

Page 2 of 2
Courier:
Tracking #:

025

Co. Name: GAI CONSULTANTS, INC.
Contact (Report to): ED SCIULLI, PG
Phone: 412-476-2000
Address: 385 E. WATERFRONT DR. HOMESTEAD, PA 15120

Bill to (if different than Report to): DOMINION POSSUM POINT
PO#:
Project Name/#: C150132.00
ALS Quote #:
TAT: ✓ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:
Email? ✓ Y E.SCIULLI@GAICONSULTANTS.COM
Fax? ☐ Y No.:

***Container Type	C	C	C	C	C	C	A								
***Container Size	32 oz	40 mL	40 mL	4 oz	4 oz	8 oz	4 oz								
*** Preservative	NONE	NaOH	MeOH	NONE	NONE	NONE	NONE								

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	METALS (8.1) BVA (8.3 & 8.5) AEST/PCB's (8.2) MISC (8.6) TCLP EXCEPT VOA (PART A)	VOC's (PART 8.4)	VOC's (PART 8.4)	TCLP WASTE VOA (PART A)	AS 3 (SUB TO KELSO)	TRIBUTYLIN (SUB TO KELSO)	VOC's (8.4) EXTRA CONTAINER			
1 LOW VOLUME C GRAB		6/10/15	10:00	G	SO		2	1	1			1			
2 LOW VOLUME C COMP.		↓	10:05	C	↓	2				1	1				
3 LOW VOLUME D GRAB		↓	10:10	G	↓		2	1	1			1			
4 LOW VOLUME D COMP.		↓	10:15	C	↓	2				1	1				
5															
6															
7															
8															

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Receiving)
Performed by: [illegible]
Cooler Temp: 1
Therm. ID: 291
No. of Coolers:
Notes:

Sample Description/Location	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
1 LOW VOLUME C GRAB	Y	Y	Y	Y	Y
2 LOW VOLUME C COMP.	Y	Y	Y	Y	Y
3 LOW VOLUME D GRAB	Y	Y	Y	Y	Y
4 LOW VOLUME D COMP.	Y	Y	Y	Y	Y

SAMPLED BY (Please Print): EUGENE COONEY JR
Project Comments: RMK 6/11 137

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] GAI CONSULTANTS	6/10/15	11:00	2 [signature]	6/10/15	1100
3 [signature]	6/10/15	1700	4 [signature]	6/10	1705
5 [signature]	6/10	1950	6 SFS	6/10	1950
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ (other)
EDDs Required? ☐ If yes, format type:
SDWA Forms? yes ☐ yes ☐ yes ☐ yes ☐
State Samples Collected In? MD ☐ NJ ☐ NY ☐ PA ☐ Other
DOD Criteria Required?

ALS FIELD SERVICES: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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Environmental • Industrial Hygiene • Field Services
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALSI Quote #:	

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y alrndt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic										
Container Type			C												
Container Size			4 oz												
Preservative			None												
2076025 002	6/9/15	1115	G	SO	1										
2076025 004	6/9/15	0915	G	SO	1										
2076025 006	6/9/15	1300	G	SO	1										
2076025 008	6/9/15	1005	G	SO	1										
2076025 010	6/9/15	1015	G	SO	1										

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments
Subcontract: Brooks Rand Labs
3958 6th Avenue NW
Seattle, WA 98107

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Project Comments:
LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/15/15	1545	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ] PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil, OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	1 of 1
ALSI Quote #:	

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin									
Container Type			C											
Container Size			8 oz											
Preservative			None											
2076025 002	6/9/15	1115	G	SO	1									
2076025 004	6/9/15	0915	G	SO	1									
2076025 006	6/9/15	1300	G	SO	1									
2076025 008	6/9/15	1005	G	SO	1									
2076025 010	6/9/15	1015	G	SO	1									

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)

Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments

Subcontract: ALS-Kelso

ALSI Field Services: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	6/10/15	1245	2		
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other

Reportable to PADEP? Yes [ ]
PWSID # _____

Sample Disposal: Lab [ ] Special [ ]

EDDs: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 5/05

ALS

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

July 05, 2015

Analytical Report for Service Request No: K1506480

Vicki Forney
ALS Environmental
34 Dogwood Lane
Middletown, PA 17057

RE: 2076025

Dear Vicki,

Enclosed are the results of the sample(s) submitted to our laboratory June 16, 2015
For your reference, these analyses have been assigned our service request number **K1506480.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

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Chain of Custody
General Chemistry
Butyltins (as cation)

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

Thursday, July 09, 2015 11:20:19 AM
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Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: K1506480 — 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane, Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill-To: ALS Environmental

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] Y: almdt.subcontract@ALSGlobal.com
Fax? [ ] Y: No.

Container Type: C
Container Size: 8 oz
Preservative: None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Tributyltin	Sample/COC Comments
2076025 002	6/9/15	1115	G	SO	1	Subcontract: ALS-Kelso
2076025 004	6/9/15	0915	G	SO	1	
2076025 006	6/9/15	1300	G	SO	1	
2076025 008	6/9/15	1005	G	SO	1	
2076025 010	6/9/15	1015	G	SO	1	

Project Comments:

LOGGED BY (signature): Date: Time:
REVIEWED BY (signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	6/17/15	1145	2 [signature] ALS	6/16/15	0915
3			4		
5			6		
7			8		
9			10		

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. In Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

ALSI Field Services: ☐Pickup ☐Labor ☐Composite Sampling ☐Rental Equipment ☐Other: _____

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USAGE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDs: Format Type:

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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PC HH

Cooler Receipt and Preservation Form

Client / Project: ALS Middletown Service Request K15 6480

Received: 6/16/15 Opened: 6/16/15 By: UK Unloaded: 6/16/15 By: UK

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corr. Cooler Temp	Raw Temp Blank	Corr. Temp Blank	Corr. Factor	Thermometer ID	Cooler COC ID (NA)	Tracking Number	NA	Filed
-0.4	-0.4	2.1	2.1	0	353		7738 3605 4133		

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Headspace	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Environmental

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Collected:	06/9/15
Sample Matrix:	Soil	Date Received:	06/16/15
Analysis Method:	160.3 Modified	Units:	Percent
Prep Method:	None	Basis:	NA

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
2076025 002	K1506480-001	63.5	-	1	06/17/15 15:55	
2076025 004	K1506480-002	60.7	-	1	06/17/15 15:55	
2076025 006	K1506480-003	63.0	-	1	06/17/15 15:55	
2076025 008	K1506480-004	34.4	-	1	06/17/15 15:55	
2076025 010	K1506480-005	19.6	-	1	06/17/15 15:55	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project	2076025	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	NA

Replicate Sample Summary
Solids, Total

Sample Name:	Lab Code:	MRL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	K1505572-050DUP	-	60.6	60.7	60.7	<1	20	06/17/15
Batch QC	K1506492-001DUP	-	88.9	89.3	89.1	<1	20	06/17/15

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Superset Reference:15-0000336049 rev 00

ALS Environmental

Butyltins (as cation)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Collected:	06/09/2015
Sample Matrix:	Soil	Date Received:	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 002	Units:	ug/Kg
Lab Code:	K1506480-001	Basis:	Dry
Extraction Method:	METHOD	Level:	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.6	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	67	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Collected:	06/09/2015
Sample Matrix:	Soil	Date Received:	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 004	Units:	ug/Kg
Lab Code:	K1506480-002	Basis:	Dry
Extraction Method:	METHOD	Level:	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.7	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	76	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 006	**Units:**	ug/Kg
Lab Code:	K1506480-003	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	1.6	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	63	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Collected:**	06/09/2015
Sample Matrix:	Soil	**Date Received:**	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 008	**Units:**	ug/Kg
Lab Code:	K1506480-004	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	2.9	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	88	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Collected:	06/09/2015
Sample Matrix:	Soil	Date Received:	06/16/2015

Butyltins (as cation)

Sample Name:	2076025 010	Units:	ug/Kg
Lab Code:	K1506480-005	Basis:	Dry
Extraction Method:	METHOD	Level:	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	5.2	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	80	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Collected:	NA
Sample Matrix:	Sediment	Date Received:	NA

Butyltins (as cation)

Sample Name:	Method Blank	Units:	ug/Kg
Lab Code:	KWG1505433-5	Basis:	Dry
Extraction Method:	METHOD	Level:	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	0.98	1	06/18/15	06/24/15	KWG1505433	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	56	10-120	06/24/15	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: ALS Environmental - US
Project: 2076025
Sample Matrix: Sediment

Service Request: K1506480

Surrogate Recovery Summary
Butyltins (as cation)

Extraction Method: METHOD
Analysis Method: Krone

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
Batch QC	K1506354-001	75
2076025 002	K1506480-001	67
2076025 004	K1506480-002	76
2076025 006	K1506480-003	63
2076025 008	K1506480-004	58
2076025 010	K1506480-005	80
Batch QCDUP	KWG1505433-1	73
Method Blank	KWG1505433-5	56
Batch QCMS	KWG1505433-2	77
Batch QCDMS	KWG1505433-3	70
Lab Control Sample	KWG1505433-4	76

Surrogate Recovery Control Limits (%)

Sur1 = Tri-n-propyltin 10-120

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

		Batch QCMS KWG1505433-2 Matrix Spike			Batch QCDMS KWG1505433-3 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	ND	20.8	30.9	67	21.7	30.9	70	10-115	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	**Service Request:**	K1506480
Project:	2076025	**Date Extracted:**	06/18/2015
Sample Matrix:	Sediment	**Date Analyzed:**	06/24/2015

Duplicate Sample Summary
Butyltins (as cation)

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K1506354-001	**Basis:**	Dry
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1505433

Analyte Name	MRL	Sample Result	Batch QCDUP KWG1505433-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Tri-n-butyltin Cation	1.4	ND	ND	ND	-	40

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - US	Service Request:	K1506480
Project:	2076025	Date Extracted:	06/18/2015
Sample Matrix:	Sediment	Date Analyzed:	06/24/2015

Lab Control Spike Summary
Butyltins (as cation)

Extraction Method:	METHOD	Units:	ug/Kg
Analysis Method:	Krone	Basis:	Dry
		Level:	Low
		Extraction Lot:	KWG1505433

	Lab Control Sample KWG1505433-4 Lab Control Spike			
Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Tri-n-butyltin Cation	16.8	22.2	76	10-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BROOKS RAND LABS
MEANINGFUL METALS DATA®

June 30, 2015

ALS - Middletown
ATTN: Vicki Forney
34 Dogwood Lane
Middletown PA 17057
vicki.forney@alsglobal.com

RE: Project ALS-MD1501 Client Project: 2076025

Dear Vicki Forney,

This report contains results for the 5 samples received by Brooks Rand Labs (BRL) on June 16, 2015. The samples were logged-in for the contracted analyses according to the chain-of-custody form(s). The samples were received, prepared, analyzed, and stored according to BRL SOPs and EPA methodology.

The matrix spike/matrix spike duplicate (MS/MSD) set was spiked at a concentration much less than the native sample and were not analyzed. A post-preparation spike (PS) was analyzed and recovered within acceptance criteria.

The results were method blank corrected as described in the calculations section of the relevant BRL SOP(s) and may have been evaluated using reporting limits that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details. All additional data is reported without qualification and all other associated quality control sample results meet the acceptance criteria.

BRL, an accredited laboratory, certifies that the reported results of all analyses for which BRL is NELAP accredited meet all NELAP requirements. For more details, please see the *Report Information* page in your report. Please feel free to contact me if you have any questions regarding this report.

Sincerely,

Lydia Greaves

Lydia Greaves
Project Manager
Lydia@brooksrand.com

Report Information

Laboratory Accreditation

BRL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BRL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksrand.com/about/accreditations-certifications/>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BLK	method blank	**MS**	matrix spike
BRL	Brooks Rand Labs	**MSD**	matrix spike duplicate
BS	laboratory fortified blank	**ND**	non-detect
CAL	calibration standard	**NR**	non-reportable
CCB	continuing calibration blank	**N/C**	not calculated
CCV	continuing calibration verification	**PS**	post preparation spike
COC	chain of custody record	**REC**	percent recovery
D	dissolved fraction	**RPD**	relative percent difference
DUP	duplicate	**RSD**	relative standard deviation
IBL	instrument blank	**SCV**	secondary calibration verification
ICV	initial calibration verification	**SOP**	standard operating procedure
MDL	method detection limit	**SRM**	standard reference material
MRL	method reporting limit	**T**	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

- **B** Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
- **E** An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
- **H** Holding time and/or preservation requirements not met. Result is estimated.
- **J** Estimated value. A full explanation is presented in the narrative.
- **J-M** Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
- **J-N** Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
- **M** Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
- **N** Spike recovery was not within acceptance criteria. Result is estimated.
- **R** Rejected, unusable value. A full explanation is presented in the narrative.
- **U** Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
- **X** Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Rand Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BRL.

3958 6th Avenue NW Seattle WA 98107 · P(206) 632-6206 · F(206) 632-6017 · brl@brooksrand.com · www.brooksrand.com

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
2076025 002	1525011-01	Soil	Sample	06/09/2015	06/16/2015
2076025 004	1525011-02	Soil	Sample	06/09/2015	06/16/2015
2076025 006	1525011-03	Soil	Sample	06/09/2015	06/16/2015
2076025 008	1525011-04	Soil	Sample	06/09/2015	06/16/2015
2076025 010	1525011-05	Soil	Sample	06/09/2015	06/16/2015

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
%TS	Soil/Sediment	SM 2540G	06/24/2015	06/28/2015	B150975	N/A
As(III)	Soil/Sediment	EPA 1632	06/24/2015	06/24/2015	B150974	1500505

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
2076025 002										
1525011-01	%TS	Soil	NA	65.61		0.36	1.20	%	B150975	N/A
1525011-01	As(III)	Soil	dry	15.0		1.96	5.89	mg/kg	B150974	1500505
2076025 004										
1525011-02	%TS	Soil	NA	65.34		0.36	1.20	%	B150975	N/A
1525011-02	As(III)	Soil	dry	2.33		0.498	1.49	mg/kg	B150974	1500505
2076025 006										
1525011-03	%TS	Soil	NA	65.93		0.36	1.20	%	B150975	N/A
1525011-03	As(III)	Soil	dry	3.01		0.230	0.691	mg/kg	B150974	1500505
2076025 008										
1525011-04	%TS	Soil	NA	43.73		0.36	1.20	%	B150975	N/A
1525011-04	As(III)	Soil	dry	1.78		0.346	1.04	mg/kg	B150974	1500505
2076025 010										
1525011-05	%TS	Soil	NA	28.38		0.36	1.20	%	B150975	N/A
1525011-05	As(III)	Soil	dry	0.877		0.125	0.376	mg/kg	B150974	1500505

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Accuracy & Precision Summary

Batch: B150974
Lab Matrix: Soil/Sediment
Method: EPA 1632

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150974-BS1	**Laboratory Fortified Blank (1523014)**						
	As(III)		1.204	1.171	mg/kg	97% 50-150	
B150974-BS2	**Laboratory Fortified Blank (1523029)**						
	As(III)		1.204	1.128	mg/kg	94% 50-150	
B150974-SRM1	**Certified Reference Material (1505010, PACS-3)**						
	As(III)		4.752	5.887	mg/kg	124% 50-150	
B150974-DUP1	**Duplicate (1525011-01)**						
	As(III)	14.95		13.00	mg/kg		14% 35
B150974-PS1	**Post Spike (1525011-01)**						
	As(III)	14.95	24.62	39.43	mg/kg	99% 65-135	

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Accuracy & Precision Summary

Batch: B150975
Lab Matrix: Soil/Sediment
Method: SM 2540G

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B150975-DUP1	**Duplicate (1525011-01)**						
	%TS	65.61		65.78	%		0.3% 15

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Method Blanks & Reporting Limits

Batch: B150974
Matrix: Soil/Sediment
Method: EPA 1632
Analyte: As(III)

Sample	Result	Units
B150974-BLK1	0.051	mg/kg wet
B150974-BLK2	0.046	mg/kg wet
B150974-BLK3	0.047	mg/kg wet
B150974-BLK4	0.049	mg/kg wet

Average: 0.048 **Standard Deviation:** 0.002 **MDL:** 0.040
Limit: 0.080 **Limit:** 0.027 **MRL:** 0.120

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Method Blanks & Reporting Limits

Batch: B150975
Matrix: Soil/Sediment
Method: SM 2540G
Analyte: %TS

Sample	Result	Units
B150975-BLK1	0.00	%
B150975-BLK2	0.00	%
Average:	0.00	
Limit:	1.20	

MDL: 0.36
MRL: 1.20

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Sample Containers

Lab ID: 1525011-01
Sample: 2076025 002
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-02
Sample: 2076025 004
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-03
Sample: 2076025 006
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-04
Sample: 2076025 008
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Lab ID: 1525011-05
Sample: 2076025 010
Report Matrix: Soil
Sample Type: Sample
Collected: 06/09/2015
Received: 06/16/2015

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Client-Provided	8oz jar	not provided	none	none		cooler

Shipping Containers

cooler

Received: June 16, 2015 9:05
Tracking No: 773836255661 via FedEx
Coolant Type: Ice
Temperature: 0.1 °C

Description: cooler
Damaged in transit? No
Returned to client? No

Custody seals present? No
Custody seals intact? No
COC present? Yes

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Thursday, July 09, 2015 11:20:19 AM
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Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: BRL Report 1626014 — 1 of 1
ALSI Quote #:

Client Name: ALS Environmental
Address: 34 Dogwood Lane
Middletown, PA 17057
Contact: Vicki Forney
Phone#: (717) 944-5541
Project Name/#:
Bill To: ALS Environmental

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] -Y almdt.subcontract@ALSGlobal.com
Fax? [ ] -Y No.:

Container Type	C
Container Size	4 oz
Preservative	None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Trivalent Arsenic
2076025 002	6/9/15	1115	G	SO	1
2076025 004	6/9/15	0915	G	SO	1
2076025 006	6/9/15	1300	G	SO	1
2076025 008	6/9/15	1005	G	SO	1
2076025 010	6/9/15	1015	G	SO	1

Project Comments:

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	6/15/15	1545	2 [signature] BRL	6/16/15	0905
3			4		
5			6		
7			8		
9			10		

Receipt Information (completed by Receiving Lab)
Cooler Temp: _____ Therm. ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. In Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: _____

Sample/COC Comments
Subcontract: Brooks Rand Labs
3958 6th Avenue NW
Seattle, WA 98107

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* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE

Molly Joseph Ward
Secretary of Natural Resources

13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

David K. Paylor
Director

Thomas A. Faha
Regional Director

September 10, 2015

Ms. Cathy C. Taylor
Director, Electric Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Dominion – Possum Point Power Station
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0002071

Dear Ms. Taylor:

We are in receipt of your correspondence dated August 6, 2015, providing notice of Dominion's intention to mechanically dredge material from Low Volume Settling Ponds C and D to Ash Pond D. This notice also included analytical results of two representative locations within each of the settling ponds.

The Virginia Department of Environmental Quality has reviewed Dominion's submittal and does not consider the placement of materials from Low Volume Settling Ponds C and D into Ash Pond D to conflict with Part I.F.11.a of the facility's aforementioned VPDES permit.

Should you have any questions about this correspondence, please contact Susan Mackert at (703) 583-3853 or by email at susan.mackert@deq.virginia.gov.

Respectfully,

Bryant Thomas
Water Permits and Planning Manager

cc: VA0002071 – File
Ken Roller (via email – kenneth.roller@dom.com)

Mackert, Susan (DEQ)

From: Mackert, Susan (DEQ)
Sent: Friday, April 01, 2016 3:44 PM
To: 'Cathy C Taylor (Services - 6)'
Cc: 'Jason E Williams (Services - 6)'; 'Kenneth Roller (Services - 6)'; Brockenbrough, Allan (DEQ); Cunningham, Frederick (DEQ); Faha, Thomas (DEQ); Thomas, Bryant (DEQ)
Subject: VA0002071 - CER Approval Letter
Attachments: VA0002071 CER Approval Letter_April 2016.pdf; VA0002071 CER Approval Memo March 2016.pdf

Ms. Taylor,

Please find attached the CER approval letter and CER approval memo for the Dominion – Possum Point Power Station. Should you have any questions please don't hesitate to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water and MS4 Lead
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
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COMMONWEALTH of VIRGINIA

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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

April 1, 2016

By Email (cathy.c.taylor@dom.com)

Ms. Cathy C. Taylor
Director, Electric Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Concept Engineering Report – Internal Outfall 503 Wastewater Treatment System
Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0002071
Dominion – Possum Point Power Station

Dear Ms. Taylor:

The Concept Engineering Report (CER) received under cover letter dated March 30, 2016, for the above referenced project is approved. This action is in accordance with a memorandum dated March 31, 2016, a copy of which is enclosed for your information. As stipulated in Part I.F.22 of the facility's VPDES permit, noncompliance with the CER shall be deemed a violation of the permit.

The Department of Environmental Quality (DEQ) approval does not relieve you of your responsibility to:

1. Construct the treatment system in accordance with the approved CER;
2. Operate the treatment system in a manner to consistently meet the facility's performance requirements;
3. Correct design and/or operation deficiencies; or
4. Comply with all other applicable laws and regulations.

Part I.F.22 of the facility's VPDES permit requires that no later than14 days following completion of construction of any project for which a CER has been approved, written notification shall be submitted to the DEQ – Northern Regional Office certifying, that based on an inspection of the project, construction was completed in accordance with the approved CER.

Nothing in this CER approval preempts, modifies, or otherwise alters any effluent limitations or monitoring requirements in VPDES Permit No. VA0002071.

DEQ is aware of the separate settlement agreement entered into by Dominion Virginia Power and the Prince William Board of County Supervisors on March 8, 2016, to which DEQ is not a party. However, DEQ recognizes that this agreement is enforceable by the parties who entered it. Although this agreement requires

Dominion to treat all coal ash wastewaters to a guaranteed minimum treatment, and to enhanced treatment when pollutant-specific trigger levels are exceeded, it also imposes monitoring, reporting and other requirements between the parties beyond the requirements contained in the approved CER and VPDES permit.

If you have any questions, please contact Susan Mackert at (703) 583-3853 or by E-mail at susan.mackert@deq.virginia.gov

Respectfully,

Bryant Thomas
Water Permits & Planning Manager

Enc.: Concept Engineering Report Memo

Ec: Ken Roller (kenneth.roller@dom.com)
Jason Williams (Jason.E.Williams@dom.com)

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court Woodbridge, VA 22193

SUBJECT: Concept Engineering Report
Internal Outfall 503 Wastewater Treatment System
VA0002071 - Dominion – Possum Point Power Station

TO: Bryant Thomas

FROM: Susan Mackert

DATE: March 31, 2016

COPIES: Cathy Taylor – Dominion
Jason Williams - Dominion
Ken Roller – Dominion

Project Name: Concept Engineering Report – Internal Outfall 503 Wastewater Treatment System

Project Owner: Virginia Electric and Power Company d/b/a Dominion Virginia Power

Project Scope: During the interim configuration phase, stormwater, filtered contact water and dewatering water associated with the closure of Ash Ponds A, B, C and E will be routed to Ash Pond D for temporary storage. A wastewater treatment system will be utilized to treat the comingled water in Ash Pond D allowing for the eventual closure of this pond. The wastewater treatment system, identified as Internal Outfall 503, will discharge to Quantico Creek via Outfall 001/002. The wastewater treatment system has been designed to treat a maximum design flow of 2000 gallons per minute (2.88 MGD) to ensure compliance with the applicable effluent limits in Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0002071. Treatment system components and additional details are included within the Concept Engineering Report.

The Concept Engineering Report submitted under cover letter dated March 30, 2016, supersedes Concept Engineering Reports previously submitted on February 11, 2016, March 11, 2016, and March 24, 2016.

Staff Comments: Staff has no objections to the wastewater treatment system as proposed in Dominion's submittal dated March 30, 2016.

A separate Concept Engineering Report for the treatment system designed and operated to treat final configuration (post-construction) wastewaters shall be required.

Staff Recommendation: Staff recommends that the Concept Engineering Report be approved.

Mackert, Susan (DEQ)

From: Oula K Shehab-Dandan (Services - 6) <oula.k.shehab-dandan@dom.com>
Sent: Thursday, March 31, 2016 8:42 AM
To: Mackert, Susan (DEQ)
Cc: Thomas, Bryant (DEQ); Jason E Williams (Services - 6); Kenneth Roller (Services - 6)
Subject: RE: Possum Point Power Station Revised CER
Attachments: Possum Poinrt CER Rev 30 March 2016.pdf

Susan
Here you go. Let me know if you need anything else.

Oula

From: Oula K Shehab-Dandan (Services - 6)
Sent: Thursday, March 31, 2016 8:23 AM
To: 'Mackert, Susan (DEQ)'
Cc: 'BRYANT.THOMAS@DEQ.VIRGINIA.GOV'; Jason E Williams (Services - 6)
Subject: FW: Possum Point Power Station Revised CER

Susan,
Here is the CER with a revised transmittal letter.

Oula

From: Oula K Shehab-Dandan (Services - 6)
Sent: Wednesday, March 30, 2016 5:17 PM
To: Mackert, Susan (DEQ); 'BRYANT.THOMAS@DEQ.VIRGINIA.GOV'
Cc: Pamela Faggert (Services - 6); Cathy C Taylor (Services - 6); Jason E Williams (Services - 6); Kenneth Roller (Services - 6)
Subject: Possum Point Power Station Revised CER

Hi Susan,
Here is the revised CER. Please let us know if you have any questions.

Thanks!

Oula Shehab-Dandan
Environmental Consultant
Electric Environmental Services

Dominion Resources Inc.
5000 Dominion Boulevard
Glen Allen VA 23060
Phone: 804-273-2697
Tie line 8-730-2697
Cell Phone 804-310-4881 ***(New number)***
oula.k.shehab-dandan@dom.com

CONFIDENTIALITY NOTICE: This electronic message contains information which may be legally confidential and or privileged and does not in any case represent a firm ENERGY COMMODITY bid or offer relating thereto which binds the sender without an additional express written confirmation to that effect. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this electronic transmission in error, please reply immediately to the sender that you have received the message in error, and delete it. Thank you.

Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

dom.com

OVERNIGHT

March 30, 2016

Ms. Susan Mackert
Senior Water Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court, Woodbridge, VA 22193

RE: Dominion Possum Point Power Station VPDES Permit No. VA0002071
Revised CER for Internal Outfall 503 Wastewater Treatment System

Dear: Ms. Mackert:

Enclosed is a revised copy of the Concept Engineering Report (CER) for the Internal Outfall 503 Wastewater Treatment System that Dominion is planning to utilize to treat wastewaters generated during the ash pond closure project at the Possum Point Power Station. This revision should supersede the CER submitted March 24, 2016. This document incorporates the following revisions:

1. Section 1.3.4, Revised to remove the use of the metals pond for temporary storage.
2. Section 4.0, Paragraph 5 revised to clarify the in line process sampling frequency.
3. Section 5.1.2, Revised to clarify the target pH prior to the settling basin/geotubes. This pH adjustment is to change the solubility state of target metals and increase their precipitation for remove
4. Section 5.1.8, Added word "Final" to the title of this section.
5. Section 5.2, Revised to remove the use of the metals pond for temporary storage prior to discharge through internal outfall 503 and to confirm the use of tanks for this temporary storage.

6. Figure 3, Revised to clarify location of the inline sampling and compliance sampling locations.
7. Figure 4, Removed piping and footnote associated with the use of the metals pond for temporary storage

Please contact Ken Roller of my staff at (804) 273-3494 or by email at kenneth.roller@dom.com should you have any questions or require additional information about this transmittal.

I certify under penalty of law that this document 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.

Sincerely,

Jason Williams
Manager, Electric Environmental Services

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Concept Engineering Report Internal Outfall 503 Wastewater Treatment System

Virginia Electric and Power Company
Possum Point Power Station
Coal Combustion Residual Surface Impoundment Closures
Dumfries, Virginia

GAI Project Number: C150132.00
March 2016

Prepared by: GAI Consultants, Inc.
Richmond Office
4198 Cox Road, Suite 114
Glen Allen, Virginia 23060-3328

Prepared for: Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060-3308

Concept Engineering Report
Internal Outfall 503 Wastewater Treatment System

Virginia Electric and Power Company
Possum Point Power Station
Coal Combustion Residual Surface Impoundment Closures
Dumfries, Virginia

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Virginia Electric and Power Company
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Glen Allen, Virginia 23060-3308

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Engineering Manager

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Senior Engineering Manager

COMMONWEALTH OF VIRGINIA
JOHN R. KLAMUT
Lic. No. 048859
3-30-2016
PROFESSIONAL ENGINEER

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1.0 Project Overview

1.1 Introduction

Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) is in the process of implementing a long-term strategy for closure of its existing coal combustion residual (CCR) ash ponds at the Possum Point Power Station (Station), an 1,845 megawatt natural gas and oil fired (previously coal-fired) steam electric generating station near Dumfries, Prince William County, Virginia (VA).

1.2 Project Description

Dominion is currently working to close five existing ash ponds at the Station: Ash Ponds A, B, C, D, and E. All five ponds are scheduled for closure by April 2018 in accordance with the relevant provisions of the United States Environmental Protection Agency's CCR rule, which was published on April 17, 2015, and codified in 40 Code of Federal Regulations (CFR) Part 257, Subpart D. A drawing showing the site location is shown in Figure 1.

Ash Ponds A, B, and C were originally three contiguous ponds that have been inactive since the 1960s. Ash Ponds A, B, C, and E have been decanted and are being dewatered until all ash material has been removed, in accordance with applicable state and local requirements. Dredged ash material from the ponds was initially transported to Ash Pond D for storage. Diversion of dredged ash to Ash Pond D ceased in October 2015; all remaining ash will be hauled to a permitted landfill for disposal.

Ash Pond D is scheduled to be decanted, dewatered, regraded, capped, and closed in the coming months; although for this project Pond D has not been discharged to date. During the decanting and dewatering process, water from Ash Pond D will be treated and discharged to Outfall 001/002 via Internal Outfall 503. Following dewatering, Ash Pond D will be converted to a single regulated solid waste facility subject to all applicable state and federal closure and post-closure care requirements.

The purpose of this document is to identify conceptual treatment and handling/discharge options for wastewater produced during the Interim Configuration Phase during construction of the ash pond closure project. The proposed conceptual treatment system has been designed to achieve substantial pollutant reductions and is expected to outperform the limits at Internal Outfall 503 set forth in the recently modified VA Pollutant Discharge Elimination System (VPDES) Permit No. VA0002071. Development of the proposed conceptual treatment system was based on best engineering judgement using water quality data presented in this report. The installed treatment system will be reviewed by a Professional Engineer for conformance to the conceptual design of this Concept Report and a certification will be provided to the VA Department of Quality (VDEQ).

The closure of Ash Ponds A, B, C, D, and E and handling of the remaining wastewaters as a result of the closures will be performed in two phases as described below:

1.2.1 Interim Configuration Phase (During Construction)

The Interim Configuration Phase during construction comprises the activities associated with closure of the Ash Ponds. During this phase, wastewaters are temporarily stored in Ash Pond A, B, C, D, or E, (as later discussed), treated to meet effluent limitations, and discharged in accordance with the permit conditions. Wastewaters include Pond D Comingled Water (i.e., surface waters to be decanted from Pond D to allow for closure) as well as Dewatering and Contact Waters from Ponds A, B, C, D, and E. These wastewater sources are described in more detail in Section 2.1 of this report.

Treatment of wastewaters will be conducted in two stages during the Interim Configuration Phase: 1) decanting of Pond D Comingled Water and 2) dewatering ash in Ponds A, B, C, D, and E. The Decanting Stage refers to the drawdown, treatment, and discharge of surface waters presently stored in Ash Pond D above the ash material. The Dewatering Stage refers to the removal of ash pore water (i.e., Ash Dewatering Water) and stormwater in contact with ash (i.e., Contact Water) from Ash Ponds A, B, C, D, and E and the treatment and discharge of these wastewaters in accordance with the permit conditions.

During the Decanting Stage, treatment will include the following processes: aeration, chemical addition/flocculation, settling with geotubes, and filtration with sand and bag filters. It is anticipated that pollutant concentrations will increase as Pond D surface waters (i.e., Comingled Waters) are drawn down during the Decanting Stage. Dominion has established very stringent pollutant concentration triggers for determining when to route water through Enhanced Treatment, as defined and described in Section 4.0 below. Treatment processes required during the Decanting and Dewatering Stages are summarized in Table 1.

1.2.2 Final Configuration Phase (Post-Construction)

The Final Configuration Phase post-construction comprises collection and treatment of final wastewaters as a result of the closed Ash Ponds from the Interim Configuration Phase during construction. The Final Configuration Phase will include treatment of capped Ash Pond D Underdrainage, existing metals cleaning wastewater (i.e., Outfall 501 Water), and Ash Pond Toe Drainage. The treatment system that will be employed during the Final Configuration Phase will be similar in design and operation to the system used during the Interim Configuration Phase but will be sized for a smaller flowrate. As such, the treatment system for these discharges will be addressed in a separate Concept Engineering Report for the Final Configuration Phase for approval.

1.3 Location and Description of Selected Project Facilities

Descriptions and locations of facilities associated with the Interim Configuration Phase during construction are provided in the following sections. All facility locations and descriptions are based on pre-construction conditions, except where noted.

1.3.1 Ash Ponds A, B, and C

Ash Ponds A, B, and C are located approximately 2,100 feet south of Ash Pond D, on the eastern bank of Quantico Creek. These ponds were actively used from the period between 1955 and the early 1960s.

Dominion plans to close Ash Ponds A, B, and C by removing all ash in the impoundments. Initially, dredged ash material from Ash Ponds A, B, and C was moved to Ash Pond D for storage. Transport of dredged ash materials from Ash Ponds A, B, and C to Ash Pond D for storage ceased in October 2015. Remaining ash material will be hauled to a permitted landfill for disposal. During closure construction activities, all Contact and Dewatering Water generated from Ash Ponds A, B, and C will be filtered and then diverted to Ash Pond D for temporary storage. Contact and Dewatering Water conveyed from Ash Ponds A, B, and C to Ash Pond D for storage was filtered for removal of CCR material beginning in October 2015.

1.3.2 Ash Pond D

Ash Pond D is the largest ash pond on the facility grounds and was constructed to provide storage for ash produced during coal-fired generation of electricity. Ash Pond D presently receives stormwater runoff from the surrounding watershed and filtered Contact and Dewatering Water from Ash Ponds A, B, C and E. Ash Pond D was previously authorized under the VPDES permit to discharge to Ash Pond E. There is currently no discharge from Ash Pond D.

Wastewaters from several sources are being, or have been, diverted to Ash Pond D for temporary storage. Wastewater sources include Decant Water, Dewatering and Contact Waters from Ash Ponds A, B, C, and E, as well as wastewater from the Station's Metals Cleaning Waste Treatment Facility (Outfall 501 Water) and Oily Waste Treatment Basin (Outfall 502 Water). All wastewaters that have been collected in Ash Pond D are referred to as "Pond D Comingled Water." Beginning in October 2015, Dewatering and Contact Water from Ash Ponds A, B, C, and E were filtered for removal of CCR material prior to being conveyed to Ash Pond D for storage.

1.3.3 Ash Pond E

Ash Pond E is located approximately 1,400 feet west of Ash Pond D. This pond was historically used as a day-to-day onsite ash pond. Following cessation of ash generating operations, the pond served as a final treatment system for various stormwater and process wastewaters generated by the Station. When active, Ash Pond E discharged via a riser structure to Outfall 005 in accordance with the VPDES permit.

Ash Pond E was decanted beginning in March 2015, prior to the initiation of the Ash Pond E dredging activities. A portion of the initial Decant Water was discharged via Outfall 005 in accordance with the VPDES permit. In April 2015, the riser structure was sealed and the remainder of the Decant Water was pumped to Ash Pond D. No discharges from Ash Pond E have occurred since the sealing of the riser structure in April 2015. Ash material was mechanically dredged from Ash Pond E to Ash Pond D from June 2015 to October 2015. All remaining ash material in Ash Pond E will be hauled to a permitted landfill for disposal.

1.3.4 Metals Cleaning Waste Treatment Facility

The Metals Cleaning Waste Treatment Facility consists of two lined ponds in series that accept and treat wastewater generated by the cleaning of the Station's boilers and other equipment. Treated effluent from the Metals Cleaning Waste Treatment Facility has historically been discharged to Ash Pond E via Internal Outfall 501 in accordance with the VPDES permit. The pond is currently permitted to receive stormwater and batch wastewater streams from cleaning/flushing activities at the following facilities:

- Boiler;
- Preheater;
- Economizer;
- Precipitator; and
- Associated piping.

The source for all cleaning/flush waters is raw, untreated water from the Potomac River. Outfall 501 was last discharged to Ash Pond E for storage in mid-April 2015. The Station does not anticipate metals cleaning waste will be conveyed to the Metals Cleaning Waste Treatment Facility in the immediate future.

2.0 Internal Outfall 503 Wastewater Sources

2.1 Interim Configuration Phase (During Construction)

Several wastewater sources will be conveyed to Ash Pond D for storage during the Interim Configuration Phase and these are described in the following sections. Although, beginning in October 2015, Dewatering and Contact Waters from Ash Ponds A, B, C, & E have been, and will continue to be, filtered to remove CCR material prior to being conveyed to Ash Pond D. For the purposes of this report,

it has been assumed that all wastewaters will be stored in Ash Pond D prior to treatment. However, use of Ash Pond D as a temporary storage pond may cease during the Interim Configuration Phase to allow for the construction of a cap and liner system. In this scenario a temporary pond in Ash Pond E may be required. Any wastewater that is conveyed from one pond to another will continue to be filtered to remove CCRs prior to conveyance.

All wastewater sources (from Ponds A, B, C, D, & E) will be treated as described in Section 5.0 and subject to the triggers for Enhanced Treatment identified in Section 4.0. Treatment system effluent will then pass through temporary storage and be ultimately discharged to Outfall 001/002 via Internal Outfall 503.

2.1.1 Pond D Comingled Water

Ash Pond D has received and stored ash, Dewatering Water and Contact Water from Ponds A, B, C, and E, as well as discharges from the Metals Cleaning Waste Treatment Facility (i.e., Internal Outfall 501 Water) and Oil Water Treatment Basin (i.e., Internal Outfall 502 Water). The combined wastewaters stored in Ash Pond D are referred to as Pond D Comingled Water. Due to the large storage capacity of Ash Pond D, Pond D Comingled Waters has been given time for blending and settling of larger suspended solids.

Ash Dewatering and Contact Waters from Ash Pond E were conveyed to Ash Pond D beginning in April 2015. Dredged ash material from Ash Ponds A, B, C, and E to Ash Pond D ceased in October 2015. Remaining ash from these ponds will be hauled to a permitted landfill for disposal. Discharge of treated metals cleaning waste from Internal Outfall 501 was stopped in mid-April 2015 and is not planned in the immediate future. Discharge from Internal Outfall 502 was initially conveyed to Ash Pond D for storage but was rerouted on November 8, 2015, to permanently discharge via Outfall 004 in accordance with the VPDES permit. No ash from any pond has been placed in Ash Pond D since October 2015.

Pond D Comingled Water samples were collected on November 6 and November 13, 2015 to identify the water quality. Water quality data for Pond D Comingled Water (prior to treatment) compared with VDEQ permit limits for Internal Outfall 503 during the Interim Configuration Phase are shown in Table 2.

2.1.2 Dewatering and Contact Waters (Ponds A, B, C, D and E)

Dewatering Water refers to ash pore water that is collected from the dewatering of the ash in order to stabilize it and allow for its removal by mechanical dredging (i.e., for Ash Ponds A, B, C, and E) or its grading for the construction of a cap system (i.e., for Ash Pond D). During the Interim Configuration Phase, Dewatering Water from Ash Ponds A, B, C, D, and E is collected in temporary ponds from the installation of wells that pump water out of the ash and the excavation of trenches to drain the ash. Contact Water refers to all stormwater that comes in contact with ash. Contact Water must be removed from the working areas to close the ponds. As of October 15, 2015 all Dewatering and Contact Waters from Ash Ponds A, B, C, and E are filtered to remove CCR material prior to being conveyed to Ash Pond D for storage.

Dewatering Water samples from Ash Pond E were collected from several locations for analysis in May 2015. Sampling locations included Ash Pond E Rim Ditches and Well Point Discharges. Additionally, a sample of Well Point Discharges from Ash Pond E was collected by the Prince William County Service Authority (PWCSA) for separate analysis in July 2015. These samples were collected to evaluate anticipated water quality of Dewatering Waters. Water quality data for Dewatering Water (prior to any treatment or filtration) compared with VPDES permit limits for Internal Outfall 503 are shown in Table 3. It should be noted that all water from Ponds A, B, C and E has been subsequently (as of October 2015), and will continue to be, filtered prior to conveying to Ash Pond D. Consequently, the water quality data in Table 3 likely overestimates actual concentrations that will be present after filtration.

A Contact Water sample was collected from Ash Pond E on May 5, 2015 for analysis. This sample was collected to evaluate anticipated water quality of Contact Waters. Water quality data for Contact Water compared with VPDES permit limits for Internal Outfall 503 Phase are shown in Table 4. Again it should be noted that all Contact Water from Ponds A, B, C and E has been subsequently (as of October 2015), and will continue to be, filtered prior to conveying to Ash Pond D. Consequently, the water quality data in Table 4 likely overestimates actual concentrations that will be present after filtration.

3.0 Wastewater Characteristics

Dewatering and Contact Water samples were collected prior to implementing filtration of CCRs and analyzed, as previously discussed. Pond D Comingled Water samples were also collected and analyzed, as previously discussed. Samples were analyzed by a Virginia Environmental Laboratory Accreditation Program (VELAP)-certified laboratory for metals, total suspended solids, and other constituents that are parameters required for monitoring per the VPDES Permit. As previously discussed, results from these analyses are included in Tables 2 through 4. Each of these tables includes VPDES Permit effluent limitations for Internal Outfall 503 (when routed to Outfall 001/002) as a basis of comparison. Based on the water quality data presented in Tables 2 through 4, the following constituents have at least one sample with a concentration close to or exceeding the said VPDES Permit effluent limitation:

- Total Selenium;
- Total Suspended Solids;
- Total Nickel;
- Total Thallium;
- Total Arsenic;
- Total Copper; and
- Total Lead.

A summary of observed concentrations of these constituents and the related sampling locations are shown in Table 5. These samples are representative of raw, untreated wastewater from sources that include Ash Pond D Comingled Water as well as Dewatering and Contact Water samples from Ash Pond E that have not been filtered for CCR material. Dewatering and Contact Water samples from Ash Pond E were evaluated in order to assess expected constituent concentrations once Pond D Comingled Water has been removed from Ash Pond D and intake to the treatment system is entirely composed of Contact Water and Dewatering Water during the Dewatering Stage.

4.0 Treatability of Wastewater

Unit processes that have been incorporated into the conceptual treatment system include aeration, chemical addition/flocculation, settling with geotubes, filtration with sand and bag filters, alumina adsorption, and weak acid cation (WAC) exchange. An aeration step has been incorporated to facilitate the oxidation of metals prior to injecting with a flocculant. The additional chemical addition and flocculation step includes pH adjustment as needed, as well as injection of ferric chloride and a polymer to enhance coagulation. Flocculant and coagulant dosing will be determined based upon ongoing jar tests. Addition of sodium hypochlorite is also provided, as required, in the event chemical oxidation of arsenic is needed should addition of ferric chloride flocculant not be sufficient. The formed flocs are collected in the sediment tanks equipped with geotubes to dispose of collected solids. A filtration step allows for pretreatment and removal of fines prior to the additional metals polishing step. Alumina adsorption and WAC exchange will be used for additional metals polishing, as necessary, as described below (for purposes of this CER, the alumina adsorption and WAC exchange steps will be referred to as "Enhanced Treatment").

Adsorption using activated alumina has been incorporated into the conceptual treatment system to further polish dissolved arsenic and selenium concentrations. According to the American Water Works Association's "Water Quality and Treatment: A Handbook of Community Water Supplies," activated alumina can be used for removal of both arsenic and selenium, with suggested removal efficiencies ranging from 60 to 100 percent. Additionally, the Environmental Protection Agency has identified activated alumina as a best available technology for thallium removal and as a suitable treatment technology for arsenic removal.

Treatment with a WAC exchange resin was selected for additional removal of heavy metals as needed following flocculation/oxidation/settling, filtration, and activated alumina adsorption. At low metals concentrations similar to those observed in the Decanting, Contact and Dewatering Water samples, both weak and strong acid cation (SAC) exchange resins are capable of removing heavy metals. WAC exchange resins are recommended for applications where a variety of different heavy metals must be removed. WAC exchange resins offer an advantage over SAC exchange resins in terms of lower anticipated regeneration frequency while providing removals of targeted trace metals.

Treatment design parameters obtained from published literature from United States Environmental Protection Agency, American Water Works Association, Interstate Technology & Regulatory Council, as well as additional supporting documentation from third parties substantiates and qualifies the above unit processes for removal of constituents regulated by the VPDES Permit (Refer to Appendix A). Furthermore, a Treatability Study was performed to pre-select polymers to aid in metals removals for the chemical addition/flocculation and settling unit processes (Refer to Appendix B). This study for Possum Point evaluated solids removal efficiencies of a number of pre-selected cationic and anionic polymer applications suitable for representative samples of Dewatering Waters anticipated during the Pond Closure project. Thus, polymers that worked most effectively given the ash pond water quality characteristics were recommended for implementation. Conceptual polymer dosage ranges were characterized to allow for operational flexibility. The conclusion suggests that a large majority of metals and solids removals will be efficiently managed with the aeration, chemical addition/flocculation and settling unit processes.

While the treatment system is discharging, inline process samples will be collected to evaluate the implementation of Enhanced Treatment for improved metals removal. For purposes of the inline process sampling, samples will be collected every one-hour at an in-process point immediately prior to the enhanced treatment module(s), and analytical results will be returned within approximately one-hour after collection. This sampling is in addition to the effluent compliance sampling required by the VPDES permit.

If waters immediately prior to the enhanced treatment module(s) exceed any of the pollutant concentration triggers presented below, as determined by inline process sampling, then the waters will be routed through Enhanced Treatment prior to being discharged:

- Arsenic – 100 ug/L
- Antimony – 640 ug/L
- Selenium – 5.0 ug/L
- Thallium – 0.47 ug/L
- Lead – 7.4 ug/L
- Copper – 6 ug/L

The Enhanced Treatment can likewise be turned off should inline process sampling determine that pollutant concentrations prior to Enhanced Treatment are below the trigger limits. Dominion reserves the right to operate the Enhanced Treatment system at any time, even if trigger limits have not been exceeded.

A monthly report will be submitted to the DEQ which will provide dates when Enhanced Treatment was turned on or off. Process samples will be grab samples and will be analyzed using methods that will achieve the Quantification Levels (QLs) specified in the VPDES permit.

5.0 Wastewater Treatment System Design Approach and Methods

5.1 Treatment System Description

All accumulated water in Ash Pond D (Decant, Contact Water, and Dewatering Water) will be treated for removal of total suspended solids, metals, and other constituents prior to discharge to Outfall 001/002 via Internal Outfall 503. All Ash Pond D Decant/Contact/Dewatering Water and contributing wastewater sources will be conveyed to a multiple-stage treatment system, as previously discussed. Enhanced Treatment will be used, as necessary, based on the trigger conditions set forth in Section 4.0. Treated effluent will be directed to temporary storage. A process flow diagram showing the routing of all wastewater for treatment and discharge to Outfall 001/002 is shown in Figure 2.

The proposed conceptual treatment system is designed for compliance with the effluent limitations established in the VPDES Permit and is based on water quality analyses of representative samples of wastewaters that will be generated during the pond closure project. A treatment process block flow diagram illustrating the conceptual treatment during the Interim Configuration Phase is shown in Figure 3. The conceptual treatment system design basis and Equipment General Arrangement are included in Appendix C.

During the Decanting Stage, Pond D Comingled Water will be decanted from Ash Pond D at a maximum flow rate of 2.88 MGD (2,000 gpm) with a drawdown per day in accordance with the VPDES permit. During the Dewatering Stage, wastewaters generated will likely be less than those produced during the Decanting Stage, and therefore, the discharges may be intermittent. However, the system will be capable of operating 24 hours a day, seven days a week at the maximum permitted flow rate of 2.88 MGD until the Interim Configuration Phase is completed.

Influent will be directed to aeration tanks equipped with blowers. Aeration will be applied to the influent wastewater to enhance oxidation of dissolved metals. The water will then be conveyed to two automated chemical addition/injection trailers for injection of ferric chloride to produce iron flocs for the removal of metals, polymeric flocculation aid to enlarge the iron flocs for increased metal removal, and hydrochloric acid or caustic soda for pH adjustment to maintain pH and metals effluent limitations, as needed. Sodium hypochlorite may also be injected as an oxidizing agent in case desired arsenic removals are not achieved through application of ferric chloride flocculant. Final product selection of polymeric flocculation aid shall be identified from jar testing. After chemical addition/flocculation, the water will be pumped into a settling basin that includes geotubes. Two transfer pumps will direct the water from the settling tanks to backwashing sand filter skids and bag filters in order to remove coarse and fine suspended sediment that passes through the settling basins/geotubes.

After filtration, Enhanced Treatment will be used, as necessary, based the trigger conditions set forth in Section 4.0. The first stage of additional metals treatment is activated alumina adsorption for removal of dissolved selenium and arsenic. After passing through the activated alumina adsorption vessels, additional metals treatment with WAC exchange resins will provide final polishing of other targeted metals.

The pH of the treated water may be adjusted with hydrochloric acid or caustic soda and dechlorinated with sodium sulfite, as needed, should sodium hypochlorite be added, as previously discussed. The treated water will be directed to temporary storage and then to Outfall 001/002 via Internal Outfall 503. Collected sludge from the settling basins/geotubes and spent bag filters and media will be hauled offsite for disposal in a permitted landfill.

Upon initial startup of the treatment system, treated effluent will be recycled back to Ash Pond D until the treatment system's efficacy has been established. After establishing efficacy, if effluent from the treatment system exceeds any of the pollutant concentration triggers presented in Section 4.0, as determined by inline process sampling, then the effluent will be routed through Enhanced Treatment. Once treatment system effluent concentrations have reached levels that are compliant with the VPDES Permit, treated effluent will be diverted to temporary storage and Internal Outfall 503 for discharge.

Specific unit processes are further described as follows.

5.1.1 Aeration Tanks

Aeration is provided via four 21,000-gallon tanks equipped with 40-horsepower blowers for mixing and initial pre-treatment/oxidation of metals.

5.1.2 Chemical Addition

The chemical addition/injection trailers will have automatic injection capabilities for coagulation, flocculation, oxidation, and pH adjustment. There will be two 10 gph injection pumps to provide ferric chloride and polymeric flocculation aid. It is estimated that ferric chloride will be injected at an initial dosage of 10 ppm, and that this dosage will be adjusted as necessary based on jar testing and/or actual performance. Required injection rates of the 20 percent by weight solution are estimated to be 4.2 and 3.7 gph at 2,000 and 1,750 gpm, respectively. Injection dosage and exact polymer to be injected for flocculation are still to be determined from jar testing. Injection for pH adjustment will be either hydrochloric acid, for lowering pH, or caustic soda, for raising pH levels, as needed. The pH adjustment will be incorporated prior to the settling basin/geotubes, as necessary. Small pH adjustment will be performed, as required, to maintain effluent limitations (i.e., pH within the range of 6 – 9 SU). During periods when elevated turbidity is observed at the influent to the treatment system, pH adjustment may be implemented to achieve a target of approximately 9.5 SU prior to settling basin/geotubes. This is to change the solubility state of target metals and increase their precipitation for removal. Dosage of the sodium hypochlorite oxidizing agent may be recommended should arsenic not be removed with ferric chloride flocculation, or if ferrous iron overwhelms the ion exchange resins. The trailers will also include an inline static mixer after chemical injection. Flocculation will also be provided in the chemical addition/injection trailers.

5.1.3 Settling Tank with Geotubes

A modular tank equipped with geotubes provides removal of flocs. Geotubes are engineered geotextile bags that retain particulate solids for disposal. The flocs/sludge collected in the settling tank and geotubes is to be hauled offsite for disposal in a permitted landfill.

5.1.4 Backwashing Sand Filters

The proposed sand filter system consists of six Carbonair Model 4-54 sand filters in parallel. Each model contains four 54-inch-diameter filters. Each sand filter unit will be backwashed with treated water for 10 minutes at a backwashing rate of approximately 250 gpm. During this backwashing period the total flow rate through all six of the sand filter units should be reduced to approximately 1,500 gpm. The sand filters are equipped with automated backwashing capabilities, and backwashing will be triggered when a differential pressure setpoint is exceeded. Backwash water can then be recycled to Ash Pond D for settling.

5.1.5 Bag Filters

The proposed bag filter system consists of four Krystil Klear Multi-Round Model 3636 bag filter housings in parallel. The bag filters have initially been selected with 0.5-micron nominal openings. Alternate opening sizes may be selected depending on treatment needs. Spent bag filters will be hauled offsite for disposal in a permitted landfill.

5.1.6 Activated Alumina

The proposed activated alumina system includes four Carbonair PC78 vessels in parallel. Each vessel includes 500 cu. ft. (20,000 lbs.) of granular activated alumina. Assuming all dissolved arsenic is removed from pre-treatment upstream, the four vessels are expected to last through approximately 598.4 million gallons of water or 208 days of continuous operation at 2,000 gpm. Granular activated alumina will be replaced as needed. Enhanced Treatment will be used, as necessary, based on the trigger conditions set forth in Section 4.0.

5.1.7 WAC Exchange

Based on process water quality analyses, water may be conveyed to additional adsorption and/or ion exchange treatment processes to provide additional selective constituent removals (e.g., aluminum, barium, trivalent chromium, copper, iron, lead, nickel, thallium, zinc, etc.). The proposed WAC exchange system consists of four vessels in parallel. These vessels will be filled with 600 cu. ft. (28,000 lbs.) of cation exchange resin specific to the desired metals removals. The resin usage rate is predicted to be approximately 40 cu. ft. per million gallons of water. All four vessels are predicted to require change-out every 60 million gallons of water or after 20 days of continuous operation at 2,000 gpm.

5.1.8 Final pH Adjustment/Dechlorinating

Following removal of metals through ion exchange and/or adsorption, treated water will be adjusted for pH again using hydrochloric acid or caustic soda, as needed. Sodium sulfite may be added for dechlorinating the water if sodium hypochlorite is used as an oxidizing agent. Dosage for sodium sulfite is to be determined based on sodium hypochlorite dosages.

5.1.9 Post Ion Exchange Bag Filters

Following removal of metals through WAC exchange and/or activated alumina adsorption, treated water will pass through one-micron nominal high efficiency bag filters as a preventative measure to catch sloughed-off particulates from the ion exchange unit processes. Spent bag filters will be hauled offsite for disposal in a permitted landfill.

5.2 Treated Wastewater Discharge

Treated wastewater will be routed to Internal Outfall 503 and ultimately Outfall 001/002 for discharge into Quantico Creek. This will require construction of a pipeline to divert water from the conceptual treatment system and temporary storage to Internal Outfall 503 and to Outfall 001/002. Internal Outfall 503 will be sampled for compliance with the VPDES permit after the required treatment and the temporary storage. The temporary storage of treated discharges will allow Dominion to sample and analyze the waters to identify VPDES Permit compliance prior to discharging to Internal Outfall 503. Storage Tanks will be used for temporary storage prior to discharge to Internal Outfall 503. Locations for the treatment system and temporary storage are shown on Figure 4.

TABLES

Table 1
Unit Processes Required

Process	Decanting Stage	Dewatering Stage
Aeration	X	X
Chemical Injection / Flocculation	X	X
Settling with Geotubes	X	X
Sand Filtration	X	X
Bag Filtration	X	X
Activated Alumina Adsorption	A	A
WAC Exchange	A	A

Footnotes:

X: Process to be used during treatment.

A: Enhanced Treatment will be used, as necessary, based on the trigger conditions set forth in Section 4.0.

Table 2
Possum Point Pond D Comingled Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits				Pond D Comingled Water									
		Internal Outfall 503 - When Routed to 001/002 or 004				Pond D 6A	Pond D 6B	Pond D 6C	Pond D 7A	Pond D 7A	Pond D 7B	Pond D 7C	Pond D 8A	Pond D 8B	Pond D 8C
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	11/6/15	11/6/15	11/6/15	11/6/15	11/13/15	11/13/15	11/13/15	11/13/15	11/13/15	11/13/15
pH (1)	**S.U.**	N/A	N/A	**6.0**	**9.0**	7.97	7.93	7.86	7.94	NA	7.74	7.85	7.79	7.74	7.78
Total Suspended Solids (TSS)	**mg/L**	**30**	**100**	N/A	N/A	< 5	< 5	< 5	< 5	NA	< 5	< 5	< 5	< 5	5
Oil and Grease (O&G)	**mg/L**	**15**	**20**	N/A	N/A	4.0	4.6	5.0	6.9	NA	0.51±	< 2.1	< 2.0	< 2.0	< 2.0
Aluminum, Total	**ug/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony, Total	**ug/L**	**1,300**	**1,300**	N/A	N/A	4.1	4.1	3.8	3.9	NA	3.8	3.8	3.7	4.0	3.7
Antimony, Dissolved	ug/L	N/A	N/A	N/A	N/A	4.1	3.9	4.0	3.7	4.1	3.8	3.8	3.7	3.8	3.7
Arsenic, Total	**ug/L**	**240**	**440**	N/A	N/A	17	17	15	17	NA	16	15	16	16	15
Arsenic, Dissolved	ug/L	N/A	N/A	N/A	N/A	16	15	15	15	15	15	14	14	15	15
Barium, Total	**ug/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium, Total	**ug/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron, Total	**ug/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium, Total	**ug/L**	**1.4**	**2.6**	N/A	N/A	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cadmium, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloride	**µg/L**	**370,000**	**670,000**	N/A	N/A	73,600	73,700	74,100	73,400	NA	75,500	75,800	76,200	76,100	76,300
Chromium III, Total	**ug/L**	**88**	**160**	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chromium III, Dissolved (2)	ug/L	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chromium VI, Total (3)	**µg/L**	**17**	**32**	N/A	N/A	0.14±	0.14±	0.14±	0.13±	0.086±	0.089±	0.086±	0.098±	0.086±	0.084±
Chromium VI, Dissolved	µg/L	N/A	N/A	N/A	N/A	0.12±	0.11±	0.12±	0.11±	< 0.25	< 0.25	< 0.25	0.072±	< 0.25	< 0.25
Cobalt, Total	**µg/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper, Total	**µg/L**	**9.6**	**18**	N/A	N/A	1.9±	1.8±	1.6±	1.7±	NA	0.97±	0.90±	0.87±	0.87±	< 2.5
Copper, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron, Total	**ug/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead, Total	**µg/L**	**14**	**26**	N/A	N/A	< 1.0	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Mercury, Total	**µg/L**	**1.2**	**2.2**	N/A	N/A	< 0.20	< 0.20	< 0.20	< 0.20	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Mercury, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 0.20	0.35	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Table 2 (continued)
Possum Point Pond D Comingled Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits				Pond D Comingled Water									
		Internal Outfall 503 - When Routed to 001/002 or 004				Pond D 6A	Pond D 6B	Pond D 6C	Pond D 7A	Pond D 7A	Pond D 7B	Pond D 7C	Pond D 8A	Pond D 8B	Pond D 8C
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	11/6/15	11/6/15	11/6/15	11/6/15	11/13/15	11/13/15	11/13/15	11/13/15	11/13/15	11/13/15
Molybdenum, Total	**µg/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum, Dissolved	µg/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel, Total	**µg/L**	**24**	**44**	N/A	N/A	5.5	5.3	4.9	5.5	NA	4.9	4.8	4.5	4.6	4.4
Nickel, Dissolved	µg/L	N/A	N/A	N/A	N/A	4.6±	5.3	4.5±	4.6±	4.6±	4.5±	4.5±	4.2±	4.7±	4.3±
Selenium, Total	**µg/L**	**8.0**	**15**	N/A	N/A	7.4	6.7	6.3	6.7	NA	5.6	5.4	5.6	5.7	5.4
Selenium, Dissolved	µg/L	N/A	N/A	N/A	N/A	6.3	5.2	6.3	5.4	6.4	5.8	5.9	6.1	5.8	6.3
Silver, Total	**µg/L**	**2.2**	**4.0**	N/A	N/A	< 1.0	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Silver, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Thallium, Total	**µg/L**	**0.94**	**0.94**	N/A	N/A	0.38±	0.39±	0.35±	0.38±	NA	0.40±	0.39±	0.39±	0.40±	0.37±
Thallium, Dissolved	µg/L	N/A	N/A	N/A	N/A	0.48±	0.40±	0.39±	0.39±	0.42±	0.39±	0.37±	0.36±	0.37±	0.39±
Vanadium, Total	**µg/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium, Dissolved	µg/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc, Total	**µg/L**	**98**	**180**	N/A	N/A	< 2.5	0.91±	< 2.5	< 2.5	NA	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Zinc, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 5.0	6.8	< 5.0	3.9±	< 5.0	< 5.0	< 5.0	< 5.0	5.3	< 5.0
Hardness, Total (as $CaCO_3$)	**mg/L**	**NL**	**NL**	N/A	N/A	150	150	159	158	NA	155	155	154	157	144
Total Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Kjeldahl Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite (NO_3+NO_2), as N	**mg/L**	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia, as N	**mg/L**	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acute Toxicity – *C. dubia* [4]	**% NOEC**	N/A	N/A	**100%**	N/A	NA	NA	100%	NA	NA	NA	NA	NA	NA	NA
Acute Toxicity – *P. promelas* [4]	**% NOEC**	N/A	N/A	**100%**	N/A	NA	NA	100%	NA	NA	NA	NA	NA	NA	NA
Chronic Toxicity – *C. dubia* [5]	**TU_c**	N/A	N/A	N/A	**2.85**	NA	NA	1.0	NA	NA	NA	NA	NA	NA	NA
Chronic Toxicity – *P. promelas* [5]	**TU_c**	N/A	N/A	N/A	**2.85**	NA	NA	1.0	NA	NA	NA	NA	NA	NA	NA

Footnotes:

1. Values preceded by "<" represent results not detected at the Reporting Detection Limit (RDL) and listed as < RDL.
2. Values with suffix "±" represent results with an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
3. NA- Not analyzed.
4. mg/L - milligrams per liter.
5. µg/L- micrograms per liter.
6. NL = No Limit.
7. Reported as No Observed Effect Concentration (NOEC); 100 percent NOEC is required for Acute Toxicity tests.
8. Reported as Chronic Toxicity Units; A maximum of 2.85 Chronic Toxicity Units allowed for Chronic Toxicity Results.
9. VPDES Permit limits for comparison are for the discharge of Outfall 503 to Outfall 001/002.
10. Where Reporting Detection Limit (RDL) of dissolved metals exceeds total metals, the lab diluted the sample to obtain a result thus increasing the Limit of Quantitation (LOQ) and RDL by the factor of dilution.

Table 3
Possum Point Dewatering Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits				Pond E Rim Ditch			Pond E Well Points					
		Internal Outfall 503 - When Routed to 001/002 or 004				RMD-1	RMD-2	RMD-3	Well Discharge 1	Well Discharge 2	Well Discharge 3	Well Discharge 3 dup	PWCSA Sample	GAI Duplicate Sample
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	5/5/2015	5/6/2015	5/11/2015	5/11/2015	5/12/2015	5/13/2015	5/13/2015	7/30/2015	7/30/2015
pH [1]	S.U.	N/A	N/A	6.0	9.0	7.85	8.00	8.08	7.77	7.88	7.76	7.81	8.15	7.32
Total Suspended Solids (TSS)	mg/L	30	100	N/A	N/A	26	150	44	34	19	20	26	42	27
Oil and Grease (O&G)	mg/L	15	20	N/A	N/A	< 2.0	1.7±	1.1±	1.4±	< 2.0	< 2.0	< 2.0	NA	NA
Aluminum, Total	ug/L	NL	NL	N/A	N/A	NA	17,800	NA	NA	59	NA	NA	NA	NA
Aluminum, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	260	NA	NA	< 80	NA	NA	NA	NA
Antimony, Total	ug/L	1,300	1,300	N/A	N/A	4.3	14	2.7	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA
Antimony, Dissolved	ug/L	N/A	N/A	N/A	N/A	3.9	16	2.5	< 2.0	< 2.0	< 2.0	< 2.0	NA	NA
Arsenic, Total	ug/L	240	440	N/A	N/A	51	370	260	1,100	920	1,200	1,200	390	330
Arsenic, Dissolved	ug/L	N/A	N/A	N/A	N/A	24	240	180	880	810	900	840	< 50	51
Barium, Total	ug/L	NL	NL	N/A	N/A	220	830	290	400	330	420	410	NA	NA
Barium, Dissolved	ug/L	N/A	N/A	N/A	N/A	180	250	240	370	360	380	360	NA	NA
Beryllium, Total	ug/L	NL	NL	N/A	N/A	NA	7.2	NA	NA	< 0.50	NA	NA	< 4.0	0.30±
Beryllium, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	0.11±	NA	NA	< 1.0	NA	NA	< 50	0.18±
Boron, Total	ug/L	NL	NL	N/A	N/A	NA	1,000	NA	NA	1,300	NA	NA	NA	NA
Boron, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	1,000	NA	NA	1,400	NA	NA	NA	NA
Cadmium, Total	ug/L	1.4	2.6	N/A	N/A	< 0.5	0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 50	0.27±
Cadmium, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 1.0
Chloride	µg/L	370,000	670,000	N/A	N/A	176,000	191,000	173,000	234,000	251,000	247,000	240,000	NA	NA
Chromium III, Total	ug/L	88	160	N/A	N/A	NA	NA	0.90±	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 1.0
Chromium III, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 10	NA	0.95±	2.6	2.4	2.5	2.5	< 50	2.0±
Chromium VI, Total	µg/L	17	32	N/A	N/A	0.096±	0.069±	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	NA	NA
Chromium VI, Dissolved	µg/L	N/A	N/A	N/A	N/A	0.095±	0.072±	NA	NA	< 0.25	< 0.25	< 0.25	NA	NA
Cobalt, Total	µg/L	NL	NL	N/A	N/A	NA	16	NA	NA	1.8±	NA	NA	NA	NA
Cobalt, Dissolved	ug/L	N/A	N/A	N/A	N/A	NA	< 5.0	NA	NA	2.2±	NA	NA	NA	NA
Copper, Total	µg/L	9.6	18	N/A	N/A	3.6	24	4.7	1.0±	< 2.5	0.85±	0.84±	< 50	2.1±
Copper, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 5.0	< 5.0	1.9±	< 5.0	< 5.0	1.6±	< 5.0	< 50	1.9±
Iron, Total	ug/L	NL	NL	N/A	N/A	1,700	8,600	980	11,200	10,300	11,800	11,600	NA	NA
Iron, Dissolved	ug/L	N/A	N/A	N/A	N/A	48±	< 60	< 60	5,600	4,900	7,100	6,900	NA	NA
Lead, Total	µg/L	14	26	N/A	N/A	0.95±	38	1.7	< 1.0	< 1.0	< 1.0	< 1.0	< 50	< 1.0
Lead, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 50	< 2.0
Mercury, Total	µg/L	1.2	2.2	N/A	N/A	< 0.2	0.51	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Mercury, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum, Total	µg/L	NL	NL	N/A	N/A	NA	50	NA	NA	97	NA	NA	430	400

Table 3 (continued)
Possum Point Dewatering Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits				Pond E Rim Ditch			Pond E Well Points					
		Internal Outfall 503 - When Routed to 001/002 or 004				RMD-1	RMD-2	RMD-3	Well Discharge 1	Well Discharge 2	Well Discharge 3	Well Discharge 3 dup	PWCSA Sample	GAI Duplicate Sample
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	5/5/2015	5/6/2015	5/11/2015	5/11/2015	5/12/2015	5/13/2015	5/13/2015	7/30/2015	7/30/2015
Molybdenum, Dissolved	µg/L	N/A	N/A	N/A	N/A	NA	46	NA	NA	80	NA	NA	370	430
Nickel, Total	**µg/L**	**24**	**48**	N/A	N/A	9.1	28	13	8.1	6.4	8.2	8.0	< 50	7.2
Nickel, Dissolved	µg/L	N/A	N/A	N/A	N/A	6.7	6.5	11	8.0	7.6	7.6	7.5	< 50	7.9
Selenium, Total	**µg/L**	**8.0**	**15**	N/A	N/A	9.3	**40**	8.8	0.84±	0.81±	1.3±	1.1±	< 50	9.2
Selenium, Dissolved	µg/L	N/A	N/A	N/A	N/A	8.5	25	10	1.8±	1.9±	< 5.0	1.7±	< 50	12
Silver, Total	**µg/L**	**2.2**	**4.0**	N/A	N/A	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA
Silver, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NA	NA
Thallium, Total	**µg/L**	**0.94**	**1.94**	N/A	N/A	0.61	**1.5**	0.68	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA
Thallium, Dissolved	µg/L	N/A	N/A	N/A	N/A	0.50±	0.65±	0.61±	< 1.0	< 1.0	< 1.0	< 1.0	NA	NA
Vanadium, Total	**µg/L**	**NL**	**NL**	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	< 50	7.2
Vanadium, Dissolved	µg/L	N/A	N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	< 50	< 2.0
Zinc, Total	**µg/L**	**98**	**180**	N/A	N/A	7.3	66	13	26	16	16	16	< 50	6.9
Zinc, Dissolved	µg/L	N/A	N/A	N/A	N/A	8.4	5.4	8.5	12	190	11	12	< 50	36
Hardness, Total (as $CaCO_3$)	**mg/L**	**NL**	**NL**	N/A	N/A	193	246	231	463	401	417	415	NA	NA
Total Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	NA	< 1.0	NA	NA	< 1.00	NA	NA	NA	NA
Total Kjeldahl Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	NA	< 1.0	NA	NA	< 1.0	NA	NA	NA	NA
Nitrate+Nitrite (NO_3+NO_2), as N	**mg/L**	N/A	N/A	N/A	N/A	< 0.20 [4]	< 0.40	< 0.20 [4]	< 0.50 [4]	< 1.00	< 0.50 [4]	< 0.50 [4]	NA	NA
Ammonia, as N	**mg/L**	N/A	N/A	N/A	N/A	0.058±	0.062±	0.043±	0.306	0.322	0.287	0.282	NA	NA
Acute Toxicity – *C. dubia* [2]	**% NOEC**	N/A	N/A	**100%**	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acute Toxicity – *P. promelas* [2]	**% NOEC**	N/A	N/A	**100%**	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chronic Toxicity – *C. dubia* [3]	**TU_c**	N/A	N/A	N/A	**2.85**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chronic Toxicity – *P. promelas* [3]	**TU_c**	N/A	N/A	N/A	**2.85**	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:

1. pH values measured in laboratory.
2. Reported as percent No Observed Effect Concentration (NOEC).
3. Reported as Chronic Toxicity Units (TU_c)
4. Value indicates nitrate (NO_3) only; nitrite was not measured.
5. Values preceded by "<" represent results not detected at the Reporting Detection Limit (RDL) and listed as < RDL.
6. Values with suffix "±" represent results with an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
7. NA = Not Analyzed
8. NL = No Limit
9. N/A = Not Applicable
10. VPDES Permit limits for comparison are for the discharge of Outfall 503 to Outfall 001/002.
11. Where Reporting Detection Limit (RDL) of dissolved metals exceeds total metals, the lab diluted the sample to obtain a result thus increasing the Limit of Quantitation (LOQ) and RDL by the factor of dilution.

Table 4
Possum Point Contact Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits Internal Outfall 503 - When Routed to 001/002 or 004				Pond E Contact Water Pond E
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	5/5/2015
pH (1)	**S.U.**	N/A	N/A	**6.0**	**9.0**	7.89
Total Suspended Solids (TSS)	**mg/L**	**30**	**100**	N/A	N/A	39
Oil and Grease (O&G)	**mg/L**	**15**	**20**	N/A	N/A	< 2.0
Aluminum, Total	**ug/L**	**NL**	**NL**	N/A	N/A	1400
Aluminum, Dissolved	ug/L	N/A	N/A	N/A	N/A	110
Antimony, Total	**ug/L**	**1,300**	**1,300**	N/A	N/A	14
Antimony, Dissolved	ug/L	N/A	N/A	N/A	N/A	13
Arsenic, Total	**ug/L**	**240**	**440**	N/A	N/A	90
Arsenic, Dissolved	ug/L	N/A	N/A	N/A	N/A	80
Barium, Total	**ug/L**	**NL**	**NL**	N/A	N/A	210
Barium, Dissolved	ug/L	N/A	N/A	N/A	N/A	160
Beryllium, Total	**ug/L**	**NL**	**NL**	N/A	N/A	< 0.50
Beryllium, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 1.0
Boron, Total	**ug/L**	**NL**	**NL**	N/A	N/A	400
Boron, Dissolved	ug/L	N/A	N/A	N/A	N/A	400
Cadmium, Total	**ug/L**	**1.4**	**2.6**	N/A	N/A	< 0.50
Cadmium, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 1.0
Chloride	**µg/L**	**370,000**	**670,000**	N/A	N/A	72,000
Chromium III, Total	**ug/L**	**88**	**160**	N/A	N/A	< 10
Chromium III, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 10
Chromium VI, Total	**µg/L**	**17**	**32**	N/A	N/A	0.39
Chromium VI, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 0.25
Cobalt, Total	**µg/L**	**NL**	**NL**	N/A	N/A	< 2.5
Cobalt, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 5.0
Copper, Total	**µg/L**	**9.6**	**18**	N/A	N/A	< 6.2
Copper, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 5.0
Iron, Total	**ug/L**	**NL**	**NL**	N/A	N/A	660
Iron, Dissolved	ug/L	N/A	N/A	N/A	N/A	< 60
Lead, Total	**µg/L**	**14**	**26**	N/A	N/A	3.0
Lead, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0
Mercury, Total	**µg/L**	**1.2**	**2.2**	N/A	N/A	< 0.20

Table 4 (continued)
Possum Point Contact Water Compared with VPDES Permit Limits for Internal Outfall 503

		VPDES Permit Limits				Pond E Contact Water
		Internal Outfall 503 - When Routed to 001/002 or 004				Pond E
Parameters	Units	Monthly Average	Daily Maximum	Minimum	Maximum	5/5/2015
Mercury, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 0.20
Molybdenum, Total	**µg/L**	**NL**	**NL**	N/A	N/A	83
Molybdenum, Dissolved	µg/L	N/A	N/A	N/A	N/A	67
Nickel, Total	**µg/L**	**24**	**44**	N/A	N/A	14
Nickel, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 5.0
Selenium, Total	**µg/L**	**8.0**	**15**	N/A	N/A	17
Selenium, Dissolved	µg/L	N/A	N/A	N/A	N/A	19
Silver, Total	**µg/L**	**2.2**	**4.0**	N/A	N/A	< 1.0
Silver, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 2.0
Thallium, Total	**µg/L**	**0.94**	**0.94**	N/A	N/A	0.56
Thallium, Dissolved	µg/L	N/A	N/A	N/A	N/A	< 1.0
Vanadium, Total	**µg/L**	**NL**	**NL**	N/A	N/A	N/A
Vanadium, Dissolved	µg/L	N/A	N/A	N/A	N/A	N/A
Zinc, Total	**µg/L**	**98**	**180**	N/A	N/A	9.1
Zinc, Dissolved	µg/L	N/A	N/A	N/A	N/A	7.8
Hardness, Total (as $CaCO_3$)	**mg/L**	**NL**	**NL**	N/A	N/A	193
Total Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	< 1.00
Total Kjeldahl Nitrogen	**mg/L**	N/A	N/A	N/A	N/A	< 1.0
Nitrate+Nitrite (NO_3+NO_2), as N	**mg/L**	N/A	N/A	N/A	N/A	< 0.40
Ammonia, as N	**mg/L**	N/A	N/A	N/A	N/A	0.189
Acute Toxicity – *C. dubia* [2]	**% NOEC**	N/A	N/A	**100%**	N/A	N/A
Acute Toxicity – *P. promelas* [2]	**% NOEC**	N/A	N/A	**100%**	N/A	N/A
Chronic Toxicity – *C. dubia* [3]	**TU_c**	N/A	N/A	N/A	**2.85**	N/A
Chronic Toxicity – *P. promelas* [3]	**TU_c**	N/A	N/A	N/A	**2.85**	N/A

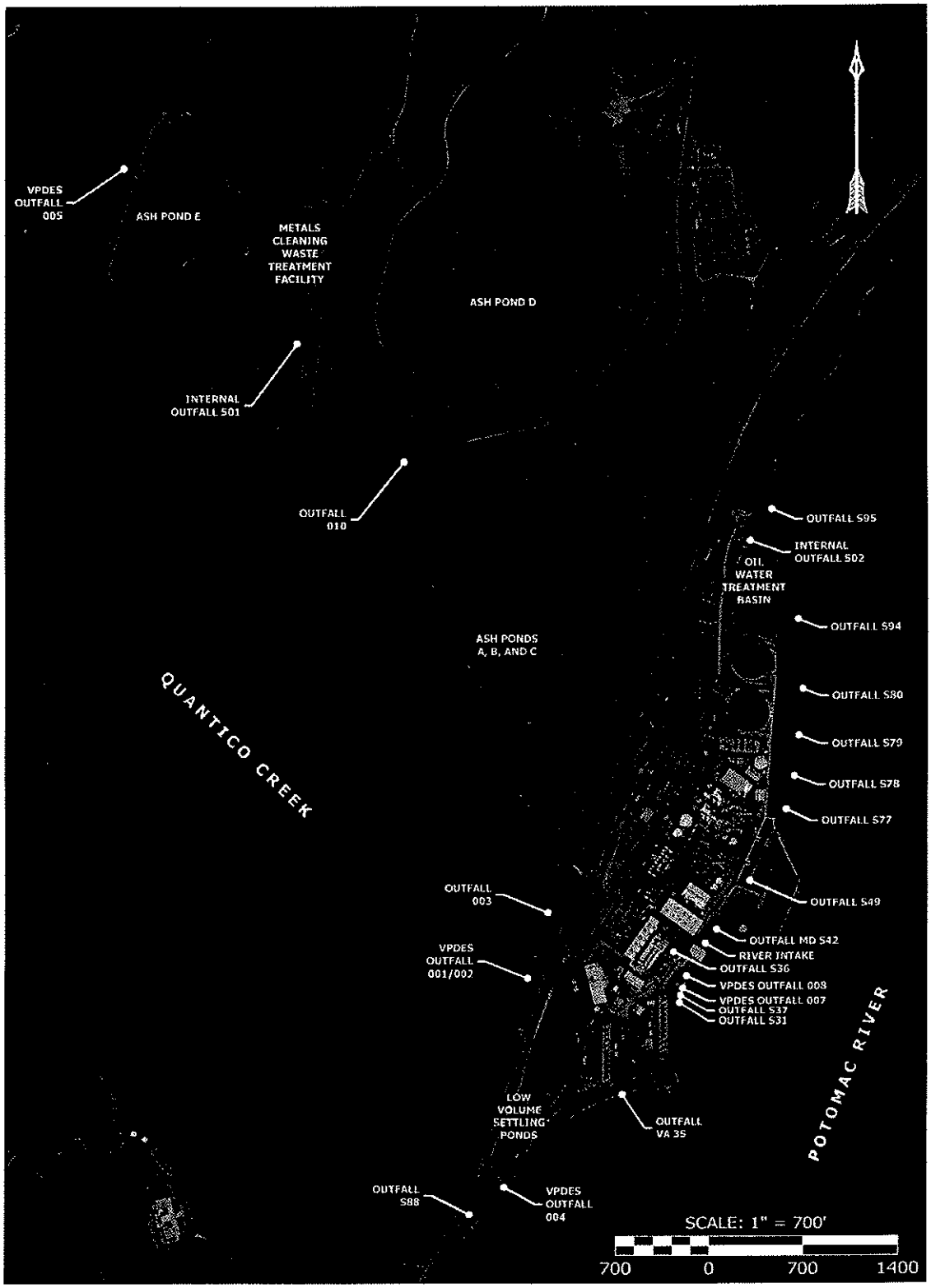
Footnotes:

1. pH values measured in the field.
2. Reported as percent No Observed Effect Concentration (NOEC).
3. Reported as Chronic Toxicity Units (TU_c)
4. Values preceded by "<" represent results not detected at the Reporting Detection Limit (RDL) and listed as < RDL.
5. Values with suffix "±" represent results with an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
6. NA = Not Analyzed
7. NL = No Limit
8. N/A = Not Applicable
9. VPDES Permit limits for comparison are for the discharge of Outfall 503 to Outfall 001/002.
10. Where Reporting Detection Limit (RDL) of dissolved metals exceeds total metals, the lab diluted the sample to obtain a result thus increasing the Limit of Quantitation (LOQ) and RDL by the factor of dilution.

Table 5
Identified Constituents for Which Treatment May Be Necessary in Order to Comply with VPDES Permit Limits

	VPDES Permit Limits for Discharge to Internal Outfall 503 When Routed to Outfall 001/002			
Parameter	**Monthly Average**	**Daily Maximum**	**Sampling Location**	**Observed Values**
Total Selenium (µg/L)	8.0	15	Ash Pond E Dewatering Water	8.8 - 40
			Ash Pond E Contact Water	17
Total Suspended Solids (mg/L)	30	100	Ash Pond E Dewatering Water	27 - 159
			Ash Pond E Contact Water	39
Total Nickel (µg/L)	24	44	Ash Pond E Dewatering Water	28
Total Thallium (µg/L)	0.94	0.94	Ash Pond E Dewatering Water	< 0.50 – 1.4
Total Arsenic (µg/L)	240	440	Ash Pond E Dewatering Water	51 – 1,200
Total Copper (µg/L)	9.6	18	Ash Pond E Dewatering Water	< 2.5 - 84
Total Lead (µg/L)	14	26	Ash Pond E Dewatering Water	< 1.0 - 38

FIGURES



DRAWING TITLE			DRAWN BY:	CHECKED BY:	APPROVED BY:
STATION OUTFALLS & TREATMENT FACILITIES			VASKOAJ	DEBARJD	QUINLSC
PROJECT		CLIENT	DWG TYPE:	SCALE:	ISSUE DATE:
POSSUM POINT POWER STATION 19000 POSSUM POINT ROAD DUMFRIES, PRINCE WILLIAM COUNTY VIRGINIA 22026	gai consultants	VIRGINIA ELECTRIC AND POWER COMPANY 5000 DOMINION BOULEVARD GLEN ALLEN, VA 23060		1" = 700'	03/01/2016
			SHEET NO.:	1 OF 1	
			GAI FILE NUMBER:		
			C150132.00 - AERIAL Outfall Exhibit		
			GAI DRAWING NUMBER:		
			FIGURE 1		

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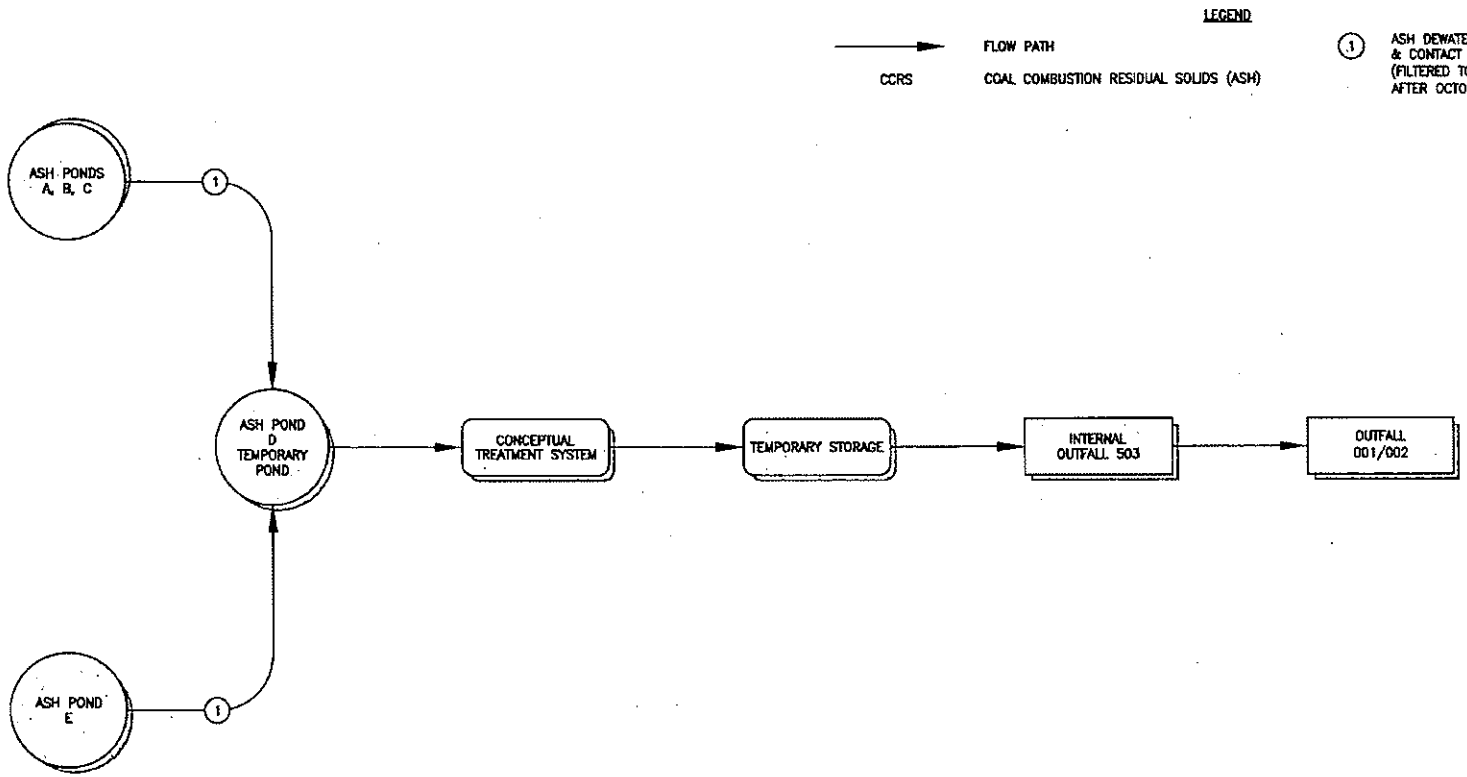

NO.:	DATE:	DWN:	CHK:	APV:	DESCRIPTION:

REVISION RECORD

DRAWING TITLE

PROCESS FLOW DIAGRAM FOR INTERIM CONFIGURATION PHASE DURING CONSTRUCTION

PROJECT

POSSUM POINT POWER STATION
19000 POSSUM POINT ROAD
DUMFRIES, PRINCE WILLIAM COUNTY
VIRGINIA 22026

gai consultants

CLIENT

VIRGINIA ELECTRIC AND POWER COMPANY
5000 DOMINION BOULEVARD
GLEN ALLEN, VIRGINIA 23060

DRAWN BY:	CHECKED BY:	APPROVED BY:
VASKOAJ	DEBARJD	QUINLSC
REVISION A/0	SCALE: AS SHOWN	ISSUE DATE: 03/01/2016
	SHEET NO.: 1 OF 1	

GAI FILE NUMBER: C150132-00-047-00-P-B2-002B

GAI DRAWING NUMBER: FIGURE 2

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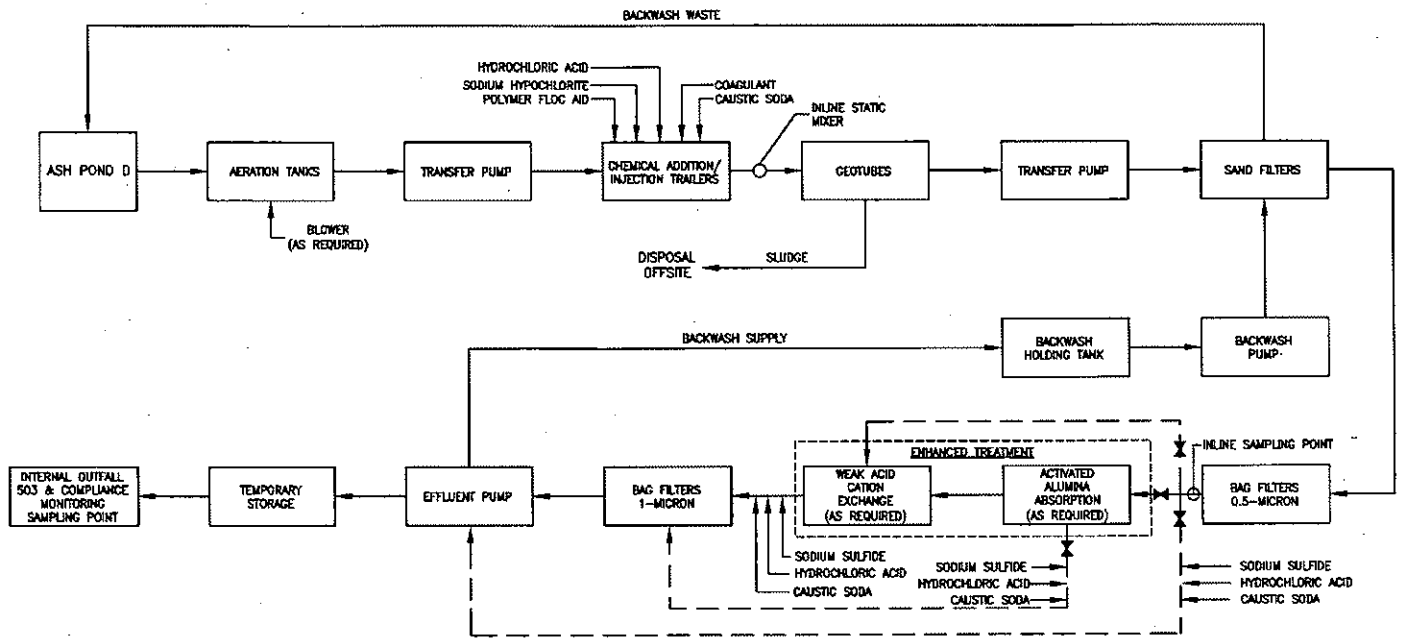

NOTES:

1. TREATMENT SYSTEM CONFIGURATION AS DESIGNED BY CARBONAIR.
2. BAG FILTER OPENING SIZES MAY BE CHANGED TO MEET TREATMENT NEEDS, AS REQUIRED.
3. SPENT GEOTUBES, FILTER BAGS, AND MEDIA SHALL BE DISPOSED IN A PERMITTED LANDFILL AND REPLACED, AS NEEDED.
4. PH ADJUSTMENT WITH HYDROCHLORIC ACID OR CAUSTIC SODA IS TO BE APPLIED, AS REQUIRED.
5. AN INLINE SAMPLING POINT WILL BE ADDED TO THE EFFLUENT PUMP DISCHARGE UPON IMPLEMENTATION OF ENHANCED TREATMENT.

LEGEND

FLOW PATH

ALTERNATE FLOW PATH

VALVE

NO.:	DATE:	DWN:	CHK:	APV:	DESCRIPTION:

REVISION RECORD

DRAWING TITLE: TREATMENT PROCESS FOR INTERIM CONFIGURATION PHASE DURING CONSTRUCTION

PROJECT: POSSUM POINT POWER STATION, 19000 POSSUM POINT ROAD, DUMFRIES, PRINCE WILLIAM COUNTY, VIRGINIA 22026

gai consultants

CLIENT: VIRGINIA ELECTRIC AND POWER COMPANY, 5000 DOMINION BOULEVARD, GLEN ALLEN, VIRGINIA 23060

DRAWN BY:	CHECKED BY:	APPROVED BY:
VASKOAJ	DEBARJD	QUINLSC
REVISION: A/0	SCALE: AS SHOWN	ISSUE DATE: 03/30/2016
	SHEET NO.: 1 OF 1	

GAI FILE NUMBER: C150132-00-047-00-P-B2-002C

GAI DRAWING NUMBER: FIGURE 3

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GAI CAD FILE PATH: Z:\Energy\2015\C150132.00 - DOM - Possum Point PS CCB\Working Docs\Task 47 - Treatment Alternative_Concept Treatment Report\Drawings\C150132-00-047-00-P-B2-002C.dwg

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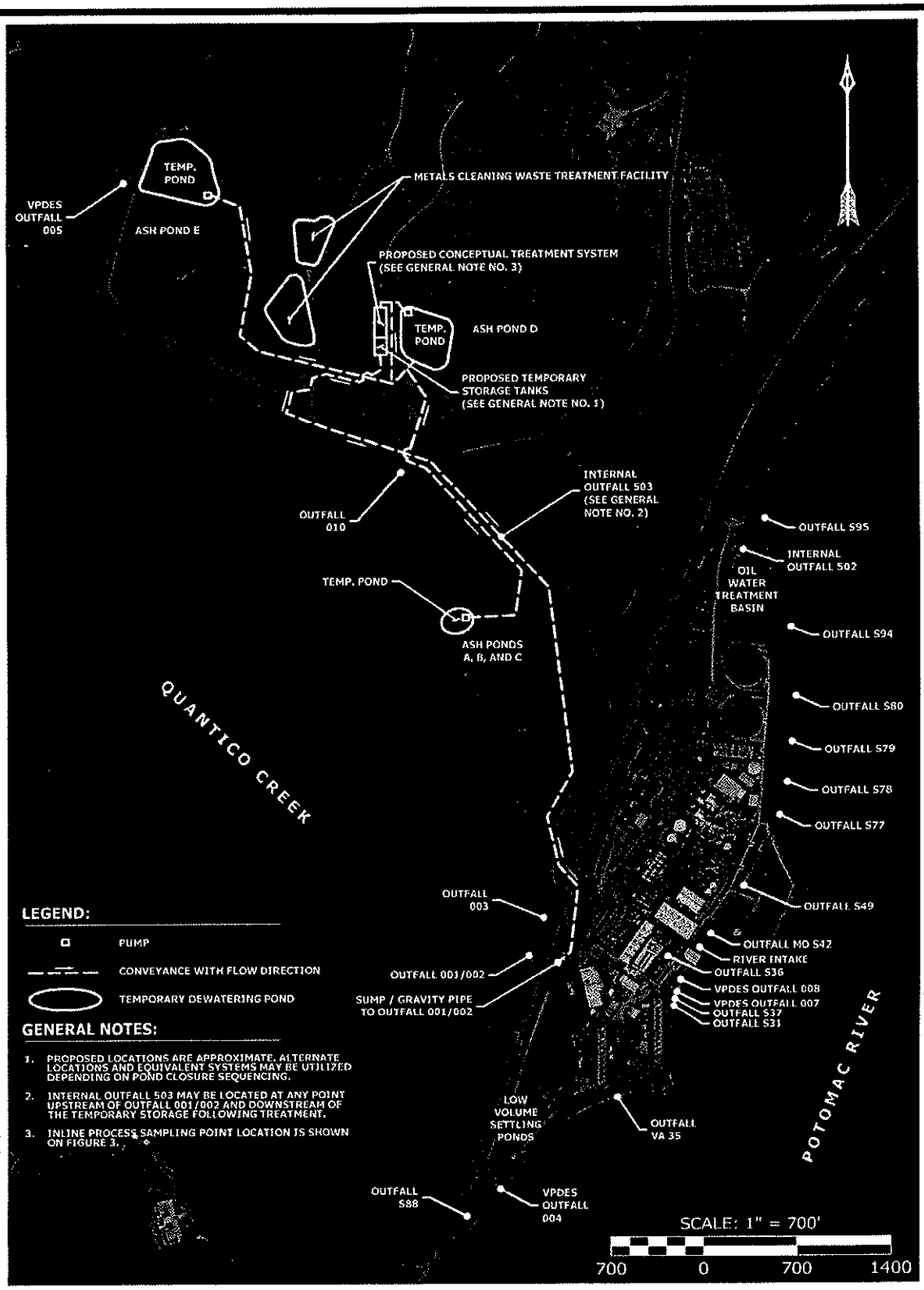

DRAWING TITLE			DRAWN BY:	CHECKED BY:	APPROVED BY:
SITE PLAN FOR INTERIM CONFIGURATION PHASE DURING CONSTRUCTION			VASKOAJ	DEBARJD	QUINLSC
PROJECT		CLIENT	DWG TYPE:	SCALE:	ISSUE DATE:
POSSUM POINT POWER STATION 19000 POSSUM POINT ROAD DUMFRIES, PRINCE WILLIAM COUNTY VIRGINIA 22026	gai consultants	VIRGINIA ELECTRIC AND POWER COMPANY 5000 DOMINION BOULEVARD GLEN ALLEN, VIRGINIA 23060		1" = 700'	03/30/2016
			SHEET NO.:	1 OF 1	
			GAI FILE NUMBER:		
			C150132.00-Site Plan		
			GAI DRAWING NUMBER:		
			FIGURE 4		

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APPENDIX A
Published Literature

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Technology Overview as part of a Web-based Technical and Regulatory Guidance

Aeration Treatment Systems

1. Introduction

Click Here to view case study table at the end of this document.

The reduction of dissolved metals concentrations in mining-influenced water (MIW) is typically a key component in cleanup and management strategies at current and former mine sites. Aeration is an active water treatment process component used to enhance reduction of certain dissolved metals concentrations in MIW under specific geochemical conditions. Aeration is often applied in conjunction with acid-neutralizing agents (lime, limestone, caustic soda, soda ash), chemical oxidants (ozone, sodium hypochlorite, hydrogen peroxide, potassium permanganate), flocculants, filtration, and settling basins.

Aeration involves the mechanical introduction of oxygen into the MIW stream through a variety of techniques with the goal of oxidizing dissolved metals species into less soluble forms. Aeration uses gravity and/or mechanical devices to increase the concentration of dissolved oxygen in MIW, promoting oxidation of iron, manganese, arsenic, and other problematic metals species, increasing treatment effectiveness and efficiency, and decreasing remediation costs.

A variety of aeration technologies exist, ranging from simple gravity-driven cascading flumes to in-line systems that use Venturi-based jet pumps to inject oxygen into the MIW (INAP 2009). Aeration is commonly applied simultaneously with addition of lime and flocculant to increase pH, oxidize metals species, and precipitate metal hydroxides that are then treated through settlement, filtering, or other processes.

2. Applicability

Aeration is applicable to the following situations:

- MIW discharge containing elevated dissolved metals concentrations, with low natural dissolved oxygen
- wide variety of sites suitable for active treatment technologies
- wide range of flow conditions
- used in conjunction with other metals and neutralization treatment technologies

Aeration is most commonly used for the treatment of MIW containing levels of dissolved metals that exceed regulatory or risk-based water quality standards. MIW often has low pH and low dissolved oxygen content and may contain elevated carbon dioxide (CO_2). In addition MIW commonly contains elevated levels of iron (Fe^{2+}), manganese (Mn^{2+}), and other metals that are mobile as dissolved constituents. The introduction of dissolved oxygen through aeration results in oxidation of the metals species into less soluble forms. Where elevated levels of CO_2 are present in MIW, aeration reduces the dissolved CO_2 content, thereby increasing the pH.

Aeration techniques can be engineered to treat a wide range of flow conditions, including sites with very high flow rates and sites with highly variable flow rates. The website at www.gardguide.com/index.php/Aeration_systems_for_treating_CMD (INAP 2009) provides examples of various techniques for application of aeration with and without other treatment.

3. Advantages

The advantages of aeration include the following:

- simplicity and effectiveness of the fundamental geochemical process
- application flexibility
- the use of air as the treatment reagent
- wide range of site conditions
- wide range of flow conditions

Oxidation reactions are straightforward and readily occur when oxygen is introduced into low-oxygen MIW containing reduced metals species. Mechanical aeration is an effective and relatively inexpensive method for introducing oxygen. Depending on the contaminants being addressed, pH adjustment may be necessary in addition to aeration to achieve the desired oxidation reaction.

Aeration technologies can be adapted to a wide range of site conditions, making them suitable for remote sites as well as active and/or easily accessible mine sites. Aeration most commonly uses atmospheric air as the treatment reagent, avoiding the permitting, management, handling, and disposal issues that may apply to other chemical reagents.

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4. Limitations

Aeration introduces oxygen into MIW and is, therefore, applicable to sites with MIW discharge containing elevated, dissolved, reduced metals species concentrations with low natural dissolved oxygen. Sites where MIW has relatively high oxygen content will not benefit appreciably from aeration technologies. Aeration has use as a sole remediation technology in limited situations, but is much more commonly applied in conjunction with other technologies.

5. Performance

No performance data specific to aeration technologies were identified for this technology overview. Aeration is sometimes applied alone but is most commonly applied in conjunction with other treatment technologies to achieve regulatory or risk-based water quality standards. An example system described by EPA (2004) is the In-Line Aeration and Neutralization System, which uses a jet pump or eductor to entrain the air and alkaline chemical by Venturi action and a static mixer. Sodium hydroxide or sodium carbonate is added to the MIW with aeration to create flocculation. The flocculant is directed through a static mixer, to a clarifier, and then to settling ponds.

At the Leviathan Mine Case Study in California, a proprietary technology, Rotating Cylinder Treatment System (RCTS), was used to treat MIW drainage overflows from containment ponds on site during high spring runoff conditions at a rate of 30–300 gallons per minute. The MIW was acidic and contained high concentrations of sulfate and metals, including aluminum, arsenic, cadmium, copper, iron, manganese, nickel, selenium, and zinc. The process involved the use of aeration and lime neutralization to oxidize and precipitate the metals and treat 3 million to 20 million gallons of MIW annually.

The report for the RCTS indicated results for delivery of 9 pounds of oxygen per horsepower-hour and that mechanical surface aeration and submerged turbine aeration deliver 2–3.5 pounds of oxygen per horsepower-hour. The system treated 28 million liters over 85 days at average rates of several hundred liters per minute and a maximum rate of 2800 liters per minute (Tsukamoto n.d.).

As an active treatment method, aeration requires some level of ongoing operations, maintenance, and monitoring and a source of energy (gravity or electrical power) using infrastructure and engineered systems (INAP 2009). However, the level of operations and maintenance and power consumption covers a wide range. Simple gravity-driven flume systems may require infrequent maintenance and no electrical power. In-line systems can be designed to operate using excess systemic water pressure from an existing treatment plant. Otherwise, they can be designed to require little additional electrical power. As such, aeration systems are applicable to a wide range of mine site locations, ranging from remote sites with limited or no power, to active mining operations with comprehensive power infrastructure and labor resources.

6. Costs

No cost information specific to aeration technologies was identified for this technology overview. Aeration costs are primarily associated with capital costs for system design and construction and energy costs and sludge management during operation. Gusek and Figueroa (2009) noted that costs for acid-neutralization technologies, which may be applied in conjunction with aeration, are on the order of several dollars per thousand gallons of treated water. Treatment chemicals can account for one- to two-thirds of the treatment costs. The use of aeration may reduce treatment costs, since the quantity of treatment chemicals is reduced due to the technology using atmospheric air.

7. Regulatory Considerations

Aeration technologies do not add unique additional regulatory considerations than would be otherwise applicable to other MIW technologies. Because aeration typically uses atmospheric air as the reagent, there are no reagent permitting, management, handling, and disposal issues that may apply to other chemical reagents.

8. Stakeholder Considerations

Aeration technologies are not expected to add unique additional stakeholder considerations that would not be otherwise applicable to the other MIW technologies being applied at the site.

9. Lessons Learned

Aeration technologies can be a cost-effective addition to MIW treatment to enhance oxidation and solubility reduction for metals species in MIW. The addition of aeration to other MIW technologies can reduce chemical reagent use and costs. Developments in aeration technology, such as the RCTS, can improve oxygenating efficiency, thus reducing energy costs.

10. Case Studies

Table 10-1. Case study including aeration technology

Leviathan Mine, CA

11. References

EPA (U.S. Environmental Protection Agency). 2004. "Appendix C. Current Information on Mine Waste Treatment Technologies," in *Abandoned Mine Lands Team Reference Notebook*. www.epa.gov/aml/tech/appenc.pdf.

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Technical Bulletin

Drinking Water Treatment with Ferric Chloride

Before the 1800's finding sanitary drinking water in the cities of the world was a risky enterprise. The separation of drinking water and human waste was not assured and illness and death due to water borne diseases was very common. In the mid-1800's the connection was made between water purity and public health. Once that connection was made, a concerted effort began to develop water treatment processes that would guaranty the safety of the populace. Over the next century, progress in water treatment methods in the United States, Canada and Northern Europe, came to produce drinking water unequalled in quality and it was reasonable that these largely successful methods should become standardized.

In 1974, the Safe Drinking Water Act was passed by the United States Congress. In 1986 amendments to this act were passed that have radically changed the face of drinking water standards and the processes used to produce potable water in the United States. Water producers soon discovered that the old "tried and true" treatment processes were now inadequate to meet today's requirements. These new requirements made it necessary to re-evaluate the total water plant operation. One of the outcomes of this re-evaluation has been a focus on determining the correct coagulant to meet these new requirements. Ferric chloride has often been central to this discussion.

Ferric chloride is not new to the drinking water treatment industry and has been commercially available in the United States since the1930's. However, it has only been in the past 15 years that a trend towards increased acceptance of ferric chloride for drinking water treatment has evolved. This is due in large part to significant improvements in product economics, quality and availability. Since 1986 there has been a ground swell in interest in ferric chloride not only for the treatment of turbidity but additionally for the removal of color, natural organic materials and arsenic from raw waters. California Water Technologies has been instrumental in helping Water Treatment Plants understand the extensive capabilities of this coagulant.

Ferric chloride is an interesting compound. It is produced as a solution from the oxidation of ferrous chloride with chlorine and it has the unusual distinction of being one of the purest and most concentrated forms of iron commercially available for water treatment. However, what is truly unusual is its chemistry is that ferric chloride not only functions as a reactant to remove water impurities but it also functions as both a coagulant and a flocculant. Its versatility is enormous.

The reactions of ferric chloride in water include an ability to form precipitates with hydrogen sulfide (H_2S), phosphate (PO_4), arsenic as arsenate (AsO_4) and hydroxide alkalinity (OH).

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In drinking water treatment, however, understanding ferric chloride's reaction with hydroxide alkalinity is the primary key to understanding its effectiveness as a coagulant/ flocculant.

Ferric chloride reacts in water with hydroxide alkalinity to form various hydrolysis products that incorporate $Fe(OH)_3$. These compounds possess high cationic charge which allows them to neutralize the electrostatic charges found on colloidal compounds and also to bind to negatively charged particles, including the ferric hydroxide itself. This ability to bind to itself is the mechanism for the formation of floc aggregates and the basis for ferric chloride's flocculation abilities.

The hydrolysis products from ferric chloride, nominally ferric hydroxide, are different from those of sulfate based ferric sulfate and aluminum sulfate (alum). The aggregates or floc particles of ferric hydroxide are physically more discrete and dense and have a higher cationic charge density. In contrast, the floc aggregates of ferric sulfate and aluminum sulfate tend to be less discrete and "fluffy" or cloud like, this apparently due to differences in the types of bonding of the hydrolysis products. These differences translate into characteristics and abilities for ferric chloride that set it far apart from the sulfate based coagulants. In typical plant situations one can expect to use about 30% less ferric chloride than aluminum sulfate (on a dry weight basis) to achieve similar results.

Ferric Chloride forms a more discrete and dense floc that promotes faster sedimentation in general and specifically, better sedimentation in cold water. This dense floc has more available cationic charge that allows higher reactivity with colloidal solids. The high ratio of cationic charge to total mass also makes the ferric chloride hydrolysis products more reactive and adsorptive with emulsified and semi-emulsified organic matter; such as oils, fats, and other natural and synthetic organic matter. This would explain the ability of ferric chloride to remove TOC and other disinfection by product precursors (DBP's).

The high density of the ferric hydroxide floc leads to another important benefit for the treatment plant. The settled sludge volume of the ferric (chloride) hydroxide ranges typically from 1/3 to 2/3 that of sulfate based coagulants. Additionally, the sludge developed through the use of ferric chloride is generally much more dewaterable. So, although the ferric hydroxide molecule itself is heavier than the aluminum hydroxide molecule, this does not translate into more sludge to be disposed of. Instead, because sludge is disposed of on a wet basis rather than on a dry basis, the use of ferric chloride produces fewer wet tons of sludge and yields significant solids handling and disposal savings.

One of the other characteristics of ferric chloride is its ability to form floc over a very wide pH range as is demonstrated in the accompanying charts. The charts also show the very low solubility of ferric hydroxide compared to aluminum hydroxide. The combination of these properties allow ferric chloride to function over a very wide pH range with little fear of carry over into down stream processes due to post precipitation. This ends up being very important for operations looking to flocculate at higher pH's and alkalinity's while controlling

corrosivity factors in the water. Additionally, the low end of the pH range becomes especially important to enhanced coagulation processes.
Although there is little formal data regarding the use of ferric chloride as a filtration aid there is much operational data that speaks to its ability to greatly enhance turbidity removal with both slow and rapid sand filter filtration. Additionally there are more recent reports that speak to the use of iron coated sand in the removal of manganese.

Potable Water Treatment Applications

- Turbidity removal
- Enhanced Coagulation
- NOM, DBP precursor removal
- Color removal
- Arsenic reduction
- Softening Solids Sedimentation Aid
- Filtration Aid

Summary of benefits

- Very effective in the removal of high and low turbidity
- Extremely effective in removal of color, NOM and DBP precursors
- Works over a wide pH range
- Lower dosage requirements than other sulfate based coagulants
- Low cost
- Makes a heavier floc that settles faster and works better in cold water
- Produces higher sludge concentrations = Lower sludge disposal costs
- High iron content sludge is not considered hazardous to the environment and is compatible and beneficial with many land application residuals programs

Handling Ferric Chloride- **Read and understand the Ferric Chloride Material Safety Data Sheet**

It is extremely important that we handle Ferric Chloride and all chemicals with respect and in a safe manner. Always wear personal protective safety equipment and practice good housekeeping. For more information contact your PVS Technologies representative or resource the material safety data sheet.

Treatment Methods

Our experience has taught us that each water treatment facility must be approached individually. Differences in raw quality, treatment requirements, facility capabilities and staff expertise require solutions to treatment that are custom designed for the facility. Contact your California Water Technologies representative for knowledgeable assistance in developing solid solutions to your treatment needs.

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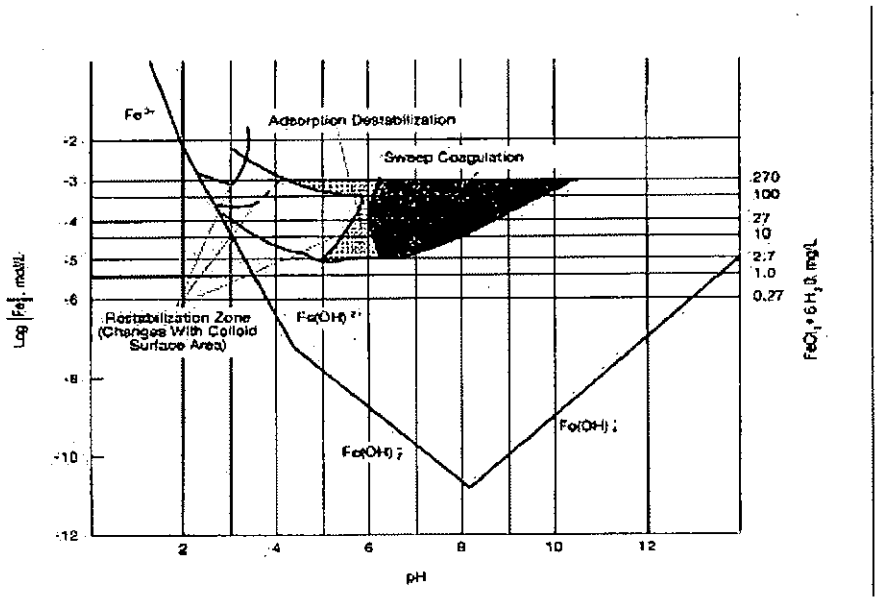
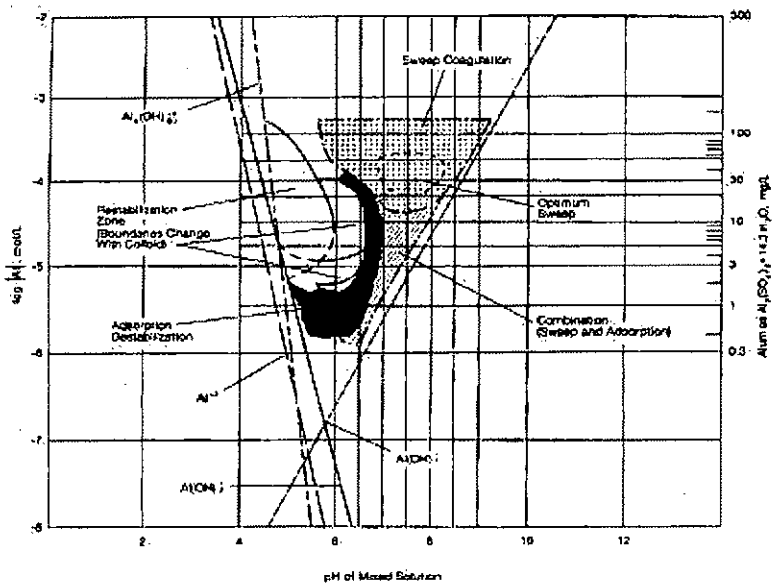
Ferric Chloride Solubility Chart

Source: Johnson P.N. & Amirtharajah A. 1983. *Ferric Chloride and Alum as Single and Dual Coagulants* Jour. AWWA, 75:5:232.



Aluminum Sulfate Solubility Chart

Source: Amirtharajah A. & Mills, K.M. 1992 *Rapid-Mix Design for Mechanisms of Alum Coagulation* Jour. AWWA, 74:4:210.



FLOCCULATION, FILTRATION, ACTIVATED ALUMINA, AND ION EXCHANGE UNIT PROCESSES

Water Treatment Technology Feasibility Support Document for Chemical Contaminants; In Support of EPA Six-Year Review of National Primary Drinking Water Regulations

FLOCCULATION, FILTRATION, ACTIVATED ALUMINA, ION EXCHANGE UNIT PROCESSES

A. Beryllium

Recent EPA occurrence analyses estimated beryllium occurrence in public water systems based on a sampling of 16 States (USEPA, 2003b). Based on these analyses, EPA estimates indicate a total of 15 water systems (credible interval of 7 to 24)[1] within these States may have a system mean concentration exceeding the threshold of 0.004 milligrams per liter (mg/L), (*i.e.*, the current MCL for beryllium). Additional occurrence estimates may be found in the above-cited 2003 EPA report.

The current BATs for beryllium removal include activated alumina, ion exchange, lime softening, coagulation/filtration, and reverse osmosis (USEPA, 1990b; USEPA, 1990c; 57 FR 31776 at 31809, July 17, 1992 (USEPA,1992)). Compliance technologies for small systems include these same five BATs, plus point-of-use (POU)-reverse osmosis, POU-ion exchange for small systems (USEPA, 1998b). Removal efficiencies for the above-cited BATs range from 80 to 99 percent. Treatment technologies were discussed by EPA in its technical support documentation on beryllium (USEPA, 1990c). If a treatment plant were to require upgrading, additional ion exchange contact units may be added, POU treatment installed, or a modification to precipitative processes added, as appropriate. The Agency's current assessment is that treatment technology would not pose a limitation, should EPA pursue a revision to this standard.

The current BATs and small system compliance technology for beryllium also apply to other contaminants. These treatment technologies have other beneficial effects (e.g., reduction of hardness or other common impurities) in addition to beryllium removal. If EPA were to consider a higher MCL, the Agency does not know how many of these public water systems currently treating to comply with the current MCL of 0.004 mg/L would be likely to discontinue any treatment that is already in place.

B. Chromium (Total)

1. Treatment technology

Recent EPA occurrence analyses indicate chromium occurrence in public water systems based on a sampling of 16 States (USEPA, 2003b). Based on these analyses, EPA estimates indicate that one water system (credible interval of 0 to 3) within these States may have a system mean concentration exceeding the threshold of 0.1 mg/L, the current MCL for total chromium. In addition, EPA estimates indicate a total of seven systems (credible interval of 3 to13) within these States may exceed the threshold of 0.05 mg/L. Additional occurrence estimates may be found in the above-cited 2003 EPA report.

In publishing the 1989 proposed and 1991 final chromium standard (54 FR 22062 at 22105, May 22, 1989 (USEPA, 1989); 56 FR 3526 at 3552, January 30, 1991 (USEPA, 1991a)) the Agency discussed BATs which include:

- Ion exchange: 80 to 96 percent efficiency;

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[1] "Credible intervals" are generated to quantify the uncertainty around each estimated probability in the Bayesian analysis of the occurrence data. For further explanation of credible intervals and the Bayesian analysis, please see *Occurrence Estimation Methodology and Occurrence Findings Report for the Six-Year Review of Existing National Primary Drinking Water Regulations* (USEPA, 2003b).

- Lime softening for chromium III only: 72 to 99 percent efficiency;
- Coagulation/filtration: 90 to 99 percent efficiency; and
- Reverse osmosis: 82 to 97 percent efficiency.

Due to the ionic properties of the two chromium species in water, chromium III and chromium VI, there is a differentiation in BAT specification which may affect treatment selection. Chromium III and chromium VI exist in water in cationic and anionic valence states, respectively. Lime softening treatment is excluded as a BAT for anionic chromium VI. Regarding the coagulation/filtration option, the choice of coagulant will impact chromium III and chromium VI removal. Ferric sulfate and alum are effective for removal of chromium III, while ferrous sulfate is effective for removal of chromium VI. Regarding ion exchange, a cation exchange resin is required for chromium III, while an anionic resin is required for chromium VI. Therefore, prior to use (or modification) of lime softening, ion exchange, or coagulation/filtration treatment, a public water system should determine concentrations and proportions of species of chromium to select proper media or chemical aid.

The 1996 SDWA Amendments require EPA to determine small system technologies for compliance purposes, (*i.e.*, technology designated as suitable for systems serving 25 to 10,000 persons). In 1998, EPA listed the following compliance technologies for small systems: ion exchange, lime softening (chromium III only), coagulation/filtration, reverse osmosis, POU-reverse osmosis, and POU-ion exchange (USEPA, 1998b).

Due to the high efficiencies of chromium removal by the above technologies, EPA believes that existing BATs would be adequate in meeting a revised standard (if the standard were lowered). Thus, the Agency's current assessment is that treatment technology would not pose a limitation should EPA pursue a revision to the chromium standard.

Due to recent interest by the State of California in setting a drinking water standard for chromium VI (the more toxic form of chromium), that State and others have initiated treatment studies to determine the efficacy of treatment technologies in removal of chromium VI to levels that are lower than the federal standard for total chromium. Newer treatments of interest include an iron-based absorptive filter medium, granular ferric hydroxide (GFH), a technology that has been piloted for arsenic removal at California water systems, and in the United Kingdom. Also, a treatment to reduce low levels of chromium VI to chromium III in drinking water by addition of the chemical stannous chlorine ($SnCl_2$) is currently under investigation at a water system in Glendale, California. EPA will monitor treatment studies to determine acceptability for use in removal of chromium from drinking water.

2. Additional information

Of additional interest to EPA is the likelihood that disinfection treatment, including chlorination, plays a role in transforming, by oxidation, chromium III to chromium VI in water. The EPA *Manual of Treatment Techniques for Meeting the Interim Primary Drinking Water Regulations* (USEPA, 1977) and the EPA *Occurrence and Exposure Assessment for Chromium in Public Drinking Water Supplies* (USEPA, 1990a) discussed effects of chlorination on chromium III in raw water (spiked) and in finished water. EPA found that time of contact, pH and other factors influence oxidation of the species. In addition, a Health Canada criteria summary on chromium in drinking water also indicated uncertainty with respect to whether post-treatment with chlorine, affecting conversion of residual chromium III to chromium VI, may

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The 1986 final fluoride regulation set "best technologies generally available" (BTGAs) as activated alumina and reverse osmosis. BTGA was defined prior to the SDWA Amendments of 1986, based upon measures of technological efficiency and economic accessibility (*i.e.*, "reasonably affordable by regional and large metropolitan public water systems"). The following factors were considered in determination of BTGA: high removal rate; wide applicability; compatibility with other treatments; and ability to achieve compliance for all water in the public water system (51 FR 11396 at 11398, April 2, 1986 (USEPA, 1986)). These requirements are comparable with current SDWA requirements for BAT determination.

In addition, the 1996 SDWA amendments require EPA to determine small system technologies for compliance purposes, (*i.e.*, technology designated as suitable for systems serving 25 to 10,000 persons). In 1998, EPA listed small system compliance technologies, including both centralized activated alumina and reverse osmosis treatment, as well as POU-reverse osmosis, for removal of fluoride in drinking water (USEPA, 1998b).

The Agency does not believe that the "BTGA" or small systems compliance technologies pose a problem. In addition, should a revision to the designation of "BATs" for this contaminant be considered by EPA, in lieu of the originally specified "BTGA" designation, this would represent a minor revision to the NPDWR (see 40 CFR 141.62 for MCLs for Inorganic Contaminants; and 40 CFR 142.61, which specifies variance technologies for fluoride).

Previously published research and EPA technologies and costs documents (USEPA, 1985b) on these technologies indicate that, due to high efficiencies of removal, the above-cited treatment technologies would not be a limiting factor in setting a lower fluoride MCL. Efficiencies of removal range from 85 to 95 percent, depending upon treatment system design. Thus, the Agency's current assessment is that treatment technology would not pose a limitation should EPA pursue a revision to the fluoride standard.

Both activated alumina and reverse osmosis treatment remove arsenic *and* fluoride among other impurities. Using activated alumina treatment, optimum removals for both contaminants may occur in a similar range of pH 5.5 to pH 6 (USEPA, 1985b; USEPA, 2000b). However, because arsenic V and silica are preferentially adsorbed by activated alumina media, effectiveness of activated alumina where arsenic and fluoride co-occur may require some investigation. Another activated alumina treatment shortcoming, discussed further below, is the operational difficulty of adding pH adjustment for optimizing removal efficiency (*i.e.*, adjusting pH prior to and after treatment). For some small systems, treatment may be limited to using "*natural*" pH levels (*i.e.*, unadjusted) thus sacrificing some removal efficiency. However, this application for fluoride removal is not documented.

The Agency discussed technical issues related to activated alumina technology in the above-cited fluoride final rule, including waste generation and disposal. More recent EPA publications have also examined the operation of activated alumina technology and perceived difficulties posed by chemical handling by small systems, (*i.e.*, for pH adjustment and for regeneration of the media), as well as the alternatives to regeneration of activated alumina media. In the case of arsenic treatment, the Agency recommended against the regeneration of activated alumina media at both small centralized treatment and POU applications, due in part to the difficulty of disposing of brine wastes. EPA instead assumed that spent activated alumina media would be disposed of directly at a landfill on a "throw-away" basis and that, based upon arsenic toxicity characteristic leaching procedure (TCLP) testing, this waste would not be deemed

Heptachlor is a moderately adsorbed organic contaminant (54 FR 22062 at 22105, May 22, 1989 (USEPA, 1989); 56 FR 3526 at 3552, January 30, 1991 (USEPA, 1991a)). EPA's preliminary assessment is that treatment technology is not anticipated to pose a limitation should the Agency consider revising the current MCL.

3. Heptachlor Epoxide

The BAT for heptachlor epoxide is GAC (56 FR 3526 at 3552, January 30, 1991 (USEPA, 1991a)), and compliance technologies for small systems include GAC, PAC, and POU-GAC (USEPA, 1998b). Since the results of the analytical methods feasibility review indicate that it may be possible to recalculate the PQL for heptachlor epoxide, EPA has reviewed treatment feasibility to determine if it is likely to become an issue if EPA were to revise the MCL. Treatment is not known to be a limiting concern for the current MCL.

Heptachlor epoxide is a strongly adsorbed organic contaminant, generally attributed to a low carbon usage rate (54 FR 22062 at 22105, May 22, 1989 (USEPA, 1989); 56 FR 3526 at 3552, January 30, 1991 (USEPA, 1991a)). Based on this information, EPA's current assessment is that treatment technology is not anticipated to pose a limitation should the Agency consider revising the current MCL.

4. Hexachlorobenzene

The BAT for hexachlorobenzene is GAC (57 FR 31776 at 31809, July 17, 1992 (USEPA, 1992)), and compliance technologies for small systems include GAC, PAC, and POU-GAC (USEPA, 1998b). Since the results of the analytical methods feasibility review indicate that it may be possible to recalculate the PQL for hexachlorobenzene, EPA has reviewed treatment feasibility to determine if it is likely to become an issue if EPA were to revise the MCL. Treatment is not known to be a limiting concern for the current MCL.

Since hexachlorobenzene is a moderately adsorbed contaminant, EPA's current assessment is that treatment technology is not anticipated to pose a limitation should the Agency consider revising the current MCL.

5. Thallium

BATs for thallium include activated alumina and ion exchange (57 FR 31776 at 31809, July 17, 1992 (USEPA, 1992)). EPA also listed small systems compliance technologies for this contaminant as activated alumina, ion exchange, POU-ion exchange (USEPA, 1998b). Since the results of the analytical methods feasibility review indicate that it may be possible to recalculate the PQL for thallium, EPA has reviewed treatment feasibility to determine if it is likely to become an issue if EPA were to revise the MCL. Treatment is not known to be a limiting concern for the current MCL.

According to technical information provided previously by EPA for thallium, competing ions in water may affect treatment run lengths (USEPA, 1998b). Assuming reasonable engineering practices, high removals of this contaminant are feasible. Removals may be expected to be greater than 90 percent using cation exchange systems, and greater than 95 percent using activated alumina treatment (55 FR 30370 at 30416, July 25, 1990 (USEPA, 1990d)). Based on this information, EPA's current assessment is that treatment technology is not anticipated to pose a limitation should the Agency consider revising the current MCL.

Other McGraw-Hill Reference Books of Interest

AMERICAN WATER WORKS ASSOCIATION • *Water Treatment Plant Design*
AVALLONE AND BAUMEISTER • *Marks' Standard Handbook for Mechanical Engineers*
BRATER • *Handbook of Hydraulics*
CONSIDINE • *Process Instruments and Controls Handbook*
CORBITT • *Standard Handbook of Environmental Engineering*
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HARRIS • *Handbook of Noise Control*
HICKS • *Standard Handbook of Engineering Calculations*
KARASSIK ET AL. • *Pump Handbook*
MERRITT • *Standard Handbook for Civil Engineers*
MILLER • *Flow Measurement Engineering Handbook*
NALCO • *The Nalco Water Handbook*
PERRY AND GREEN • *Perry's Chemical Engineers' Handbook*
ROSA • *Water Treatment Specification Manual*
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ACTIVATED ALUMINA ADSORPTION UNIT PROCESS

TABLE 3.1 General Effectiveness of Water Treatment Processes for Contaminant Removal[1–45]

Contaminant categories	Aeration and stripping (Chap. 5)	Coagulation processes, sedimentation, filtration (Chaps. 6,7,8)	Lime softening (Chap. 10)	Ion exchange: Anion (Chap. 9)	Ion exchange: Cation (Chap. 9)	Membrane processes: Reverse osmosis (Chap. 11)	Membrane processes: Ultra filtration (Chap. 11)	Membrane processes: Electrodialysis (Chap. 11)	Chemical oxidation, disinfection (Chaps. 12,14)	Adsorption: GAC (Chap. 13)	Adsorption: PAC (Chap. 13)	Adsorption: Activated alumina (Chap. 9)
A. Primary contaminants												
1. Microbial and turbidity												
Total coliforms	P	G–E	G–E	P	P	E	E	—	E	F	P	P–F
Giardia lamblia	P	G–E	G–E	P	P	E	E	—	E	F	P	P–F
Viruses	P	G–E	G–E	P	P	E	E	—	E	F	P	P–F
Legionella	P	G–E	G–E	P	P	E	E	—	E	P	P	P–F
Turbidity	P	E	G	F	F	E	E	—	P	F	P	P–F
2. Inorganics												
Arsenic (+ 3)	P	F–G	F–G	G–E	P	F–G	—	F–G	P	F–G	P–F	G–E
Arsenic (+ 5)	P	G–E	G–E	G–E	P	G–E	—	G–E	P	F–G	P–F	E
Asbestos	P	G–E	—	—	—	—	—	—	P	—	—	—
Barium	P	P–F	G–E	P	E	E	—	G–E	P	P	P	P
Cadmium	P	G–E	E	P	E	E	—	E	P	P–F	P	P
Chromium (+ 3)	P	G–E	G–E	P	E	E	—	E	F	F–G	F	P
Chromium (+ 6)	P	P	P	E	P	G–E	—	G–E	P	F–G	F	P
Cyanide	P	—	—	—	—	G	—	G	E	—	—	—
Fluoride	P	F–G	P–F	P–F	P	E	—	E	P	G–E	P	E
Lead	P	E	E	P	F–G	E	—	E	P	F–G	P–F	P
Mercury (inorganic)	P	F–G	F–G	P	F–G	F–G	—	F–G	P	F–G	F	P
Nickel	P	F–G	E	P	E	E	—	E	P	F–G	P–F	P
Nitrate	P	P	P	G–E	P	G	—	G	P	P	P	P
Nitrite	F	P	P	G–E	P	G	—	G	G–E	P	P	P
Radium (226 and 228)	P	P–F	G–E	P	E	E	—	G–E	P	P–F	P	P–F
Selenium (+ 6)	P	P	P	G–E	P	E	—	E	P	P	P	G–E
Selenium (+ 4)	P	F–G	F	G–E	P	E	—	E	P	P	P	G–E
3. Organics												
VOCs	G–E	P	P–F	P	P	F–E	F–E	F–E	P–G	F–E	P–G	P
SOCs	P–F	P–G	P–F	P	P	F–E	F–E	F–E	P–G	F–E	P–E	P–G
Pesticides	P–F	P–G	P–F	P	P	F–E	F–E	F–E	P–G	G–E	G–E	P–G
THMs	G–E	P	P	P	P	F–G	F–G	F–G	P–G	F–E	P–F	P
THM precursors	P	F–G	P–F	F–G	—	G–E	F–E	G–E	F–G	F–E	P–F	P–F
B. Secondary contaminants												
Hardness	P	P	E	P	E	E	G–E	E	P	P	P	P
Iron	F–G	F–E	E	P	G–E	G–E	G	G–E	G–E	P	P	P
Manganese	P–F	F–E	E	P	G–E	G–E	G	G–E	F–E	P	P	P
Color	P	F–G	F–G	P–G	—	—	—	—	F–E	E	G–E	G
Taste and odor	F–E	P–F	P–F	P–G	—	—	—	—	F–E	G–E	G–E	P–F
Total dissolved solids	P	P	P–F	P	P	G–E	P–F	G–E	P	P	P	P
Chloride	P	P	P	F–G	P	G–E	P	G–E	P	P	P	—
Copper	P	G	G–E	P	F–G	E	—	E	P–F	F–G	P	—
Sulfate	P	P	P	G–E	P	E	P	E	P	P	P	G–E
Zinc	P	F–G	G–E	P	G–E	E	—	E	P	—	—	—
TOC	F	P–F	G	—	G–E	G	G–E	P–G	G–E	F	F–G	—
Carbon dioxide	G–E	P–F	E	P	P	P	P	P	P	P	P	P
Hydrogen sulfide	F–E	P	F–G	P	P	P	P	P	F–E	F–G	P	P
Methane	G–E	P–E	P	P	P	P	P	P	P	P	P	P
C. Proposed contaminants												
VOCs	G–E	P	P–F	P	P	F–E	F–E	F–E	P–G	F–E	P–G	P
SOCs	P–F	P–G	P–F	P	P	F–E	F–E	F–E	P–G	F–E	P–E	P–G
Disinfection by-products	—	P–E	P–F	P–F	—	P	F–G	F–G	F–G	F–E	P–G	—
Radon	G–E	P	P	P	P	P	P	P	P	E	P–F	P
Uranium	P	G–E	G–E	E	G–E	E	—	E	P	F	P–F	G–E
Aluminum	P	F	F–G	P	G–E	E	—	E	P	—	—	—
Silver	F–G	G–E	P	G	—	—	—	P	F–G	P–F	—	—

P—poor (0 to 20 percent removal); F—fair (20 to 60 percent removal); G—good (60 to 90 percent removal); E—excellent (90 to 100 percent removal); "—"—not applicable/insufficient data

Note: Costs and local conditions may alter a processes applicability.

ROHM AND HAAS COMPANY
FLUID PROCESS CHEMICALS DEPARTMENT
PHILADELPHIA, PENNSYLVANIA 19105

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amber-hi-lites

ION EXCHANGE IN HEAVY METALS REMOVAL AND RECOVERY

William H. Waitz, Jr.

WEAKLY ACIDIC CATION EXCHANGE UNIT PROCESS

Editor's Note

Amber-hi-Lites has now completed 30 years of continuous publication. This milestone is a tribute to the efforts of Dr. Robert Kunin, who wrote the first issue and nearly every one since, and continues to be the principal contributor. We want publicly to acknowledge our debt to him for his guidance and hard work. Dr. Kunin joined the Research Division of Rohm and Haas Company in 1946 and was employed there until 1970 when he became a member of the marketing staff. In this new capacity he served as technical consultant to the company's ion exchange sales and marketing personnel throughout the world. He retired from Rohm and Haas in 1976 and established a private consulting practice. Throughout his association with Amber-hi-Lites, his fertile imagination, his encyclopedic knowledge of the chemical industry and his prolific pen have enabled this publication to grow and develop. We are grateful to him, and look forward to his future contributions.

The first issue of Amber-hi-Lites was dated April, 1949, and differed considerably from our current issue. There were several short items on the front page, covering various news items of interest to the ion exchange "industry." The second and third pages contained three short articles on *Protein Purification, Silica Sorption* and *Bacteria Binding* as well as several abstracts of articles on ion exchange taken from the current literature. The back page was devoted to an advertisement for two new ion exchange resins, Amberlite IRC-50 and Amberlite IRA-400.

There was a short note on the bottom of the front page which read:

"Every publication must have a motive, a plan, a reason for existence. And Amber-hi-Lites is no exception. It will report all the news of ion exchange that it can hold, so that you who now employ adsorption techniques, and you who search for efficient process shortcuts, and you who have only an academic interest in ion exchange phenomena may run and read and file to read again."

This statement of objective is as valid today as it was then. The technology of ion exchange has increased in scope and complexity, and the length and depth of Amber-hi-Lites have both increased accordingly. Short items have given way in this publication to longer, more involved treatises on a single phase or use of ion exchange. Amber-hi-Lites has provided a forum for presentation of new ideas, new products and new concepts, and it has occasionally been the starting point for spirited discussions on various aspects of the art and science of ion exchange between people whose views might differ from those expressed in these pages.

This issue of Amber-hi-Lites features an article on adsorption of heavy metals, written by William H. Waitz, Jr. Mr. Waitz is Market Planning Manager for Industrial Chemicals-North America, located in Rohm and Haas Company's Home Office in Philadelphia. He has had extensive marketing experience, most recently in the field of waste control and sugar processing applications of ion exchange resins.

Gerald D. Button
Editor

INTRODUCTION

Interest in the removal and/or recovery of heavy metals from industrial waste streams continues to increase as discharge limitations become more restrictive. Pre-treatment of wastes prior to discharge to municipal sewage treatment plants is now a reality. In the past, it has frequently been possible to comply with the limitations through the use of precipitation systems. However, as permissible discharge limits are

WEAKLY ACIDIC CATION EXCHANGE UNIT PROCESS

lowered, precipitation will not meet these lower limits. In addition, when working at the usual low concentrations encountered in industrial waste streams, excessive amounts of chemicals are required to effect precipitation and large lagoons are necessary to settle out the resulting sludge. As inflation increases the value of metals, recovery begins to look more attractive. Consequently, there is increasing interest in ion exchange as a part of industrial waste treatment systems.

Ion exchange has been used widely for a number of years in the recovery of gold from plating wastes and for the rejuvenation of chrome plating baths by the removal of Fe^{+3} and Cr^{+3}. The chrome plating installations also use anion exchange resins to recover CrO_4^{-2} ions from the rinse water for return to the plating baths.[1] Recovery of Na_2CrO_4 from cooling tower blowdown for return to the system is another application being used in several large scale operations.[2]

In designing an ion exchange system to remove objectionable ions from waste streams, one must, of course, consider the selectivity of the resins for various ions. Fortunately, the natural selectivity of ion exchange resins favors the larger ions with higher valence. At low concentrations, therefore, both weakly and strongly acidic cation exchange resins will exchange ions of alkali metals and alkaline earths for heavy metal ions. The weakly and strongly basic anion exchange resins have an affinity for the large heavy metal anion complexes such as $Fe(CN)_6^{-4}$.[3]

The major exceptions to this preference for larger ions with higher valence are that weakly acidic cation exchange resins prefer to be in the acid (hydrogen ion) form and weakly basic anion exchange resins prefer to be in the free base form rather than a salt form. As a result, weakly acidic cation exchangers prefer hydrogen ions to all other cations and weakly basic anion exchange resins will shift preferentially to the free base form in the presence of hydroxide ions.

The resin choice in designing an ion exchange system for heavy metals removal or recovery is, of course, dependent upon the goal of the installation. If the removal of a single species is required, then a resin that is primarily selective for that ion, such as a "chelating resin," is called for. If, on the other hand, a variety of heavy metals must be removed, this can often be accomplished with a weakly acidic resin in the sodium form which will replace all the heavy metal ions with sodium ions. Where deionizing and recycling of waste water is of interest, a strongly acidic cation exchange resin in the hydrogen form must be used since it will release hydrogen ions to replace all other cations in the stream.

If one or more of the heavy metals to be removed is present as an anionic complex, an anion exchange resin, usually in the salt form, is selected. This resin will adsorb only those metals which are present as anions; all others present as cations will pass through the resin bed totally unadsorbed.

CHELATING RESIN

Amberlite IRC-718 is a macroreticular chelating resin specifically designed for the removal of certain heavy metals. For most applications, it must be operated in the sodium form and, therefore, cannot be used in total deionization. However, because of its high affinity for Cu^{+2} and Fe^{+3}, it can be operated in the hydrogen form when being used to remove these ions.

The selectivity, relative to calcium, of Amberlite IRC-718 for various cations at pH 4, determined in column experiments under laboratory conditions, is shown in Table I (as below). These values will, of course, be affected by both the concentration of metals and the pH of the stream being treated, as well as by changes in electrolyte and background metal concentrations. Note the resin's much greater selectivity for heavy metals than for calcium.

TABLE I
Selectivities of Amberlite IRC-718 For Metal Ions
ph = 4.0

Metal Ion	$K^M/_{Ca}$
Hg^{+2}	2800
Cu^{+2}	2300
Pb^{+2}	1200
Ni^{+2}	57
Zn^{+2}	17
Cd^{+2}	15
Co^{+2}	6.7
Fe^{+2}	4.0
Mn^{+2}	1.2
Ca^{+2}	1.0

The selectivity of Amberlite IRC-718 was also investigated in an ammoniacal stream (pH=9) containing 200 g/l $(NH_4)_2SO_4$. The results are given in Table II.

TABLE II
Selectivities of Amberlite IRC-718 for Metal Ions
(pH = 9.0, ammonia)

Metal Ion	$K^M/_{Ca}$
Co^{+2}	83
Ni^{+2}	30
Cd^{+2}	14
Cu^{+2}	10
Zn^{+2}	3
Ca^{+2}	1

Amberlite IRC-718 can be regenerated efficiently with a 4 to 10% solution of a strong acid. Capacities for various heavy metals under a variety of conditions are given in Table III.

[1]Kunin, R., Amber-hi-lites, #104, March 1968
[2]Kunin, R., Amber-hi-lites #151, May 1976
[3]Avery, N.L. and Waitz, W.H., Amber-hi-lites #155, summer 1977

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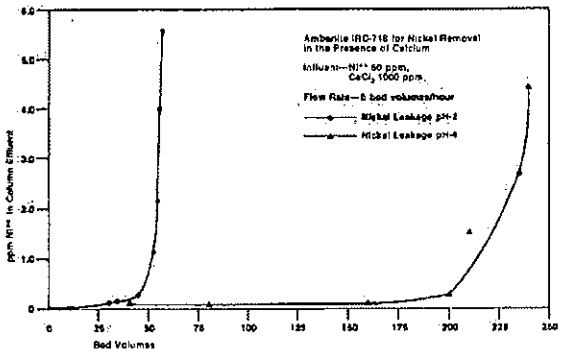

FIGURE II

CHELATING RESIN VERSUS WEAKLY ACIDIC CATION EXCHANGE RESIN

Although Amberlite IRC-718 is often required to achieve efficient heavy metals removal, Amberlite DP-1, a weakly acidic cation exchange resin in the sodium form, sometimes exhibits equal or superior capacity and regeneration efficiency when treating waste streams containing heavy metals. In addition, this resin is less costly than Amberlite IRC-718. Table V and Figure III compare Amberlite DP-1 with Amberlite IRC-718, both in the sodium form, for the removal of zinc from a solution containing 50 ppm of Zn^{+2} and 1,000 ppm of $CaCl_2$ at a pH of 7.0. The flow rate was 8 bed volumes per hour or 1 gpm/ft^3 and removal was essentially the same for both resins except that Amberlite IRC-718 showed a sharper break in the leakage curve after 250 bed volumes.

Table VI and Figure IV illustrate the elution curves for zinc from Amberlite IRC-718 and Amberlite DP-1 with a 10% HCl regenerant at a flow rate of 8 bed volumes per hour or 1 gpm/ft^3. It can be seen that Amberlite DP-1 gives a sharper elution curve and is, therefore, the better choice under these particular circumstances.

Equivalent to proposed resin

TABLE V
Amberlite IRC-718 (Na^+) vs. Amberlite DP-1
Influent: Zn^{+2} 50 ppm
$CaCl_2$ 1000 ppm
pH = 7.0
Flow Rate: 8 Bed Volumes/hour (1 gpm/ft^3)

Bed Volumes	Effluent Analysis ppm Zn^{+2} Amberlite DP-1	Amberlite IRC-718
86	0.01	0.01
128	0.02	0.01
171	0.07	0.01
214	0.10	0.05
257	0.27	0.22
274	-	0.72
300	0.91	2.44
342	2.28	8.20

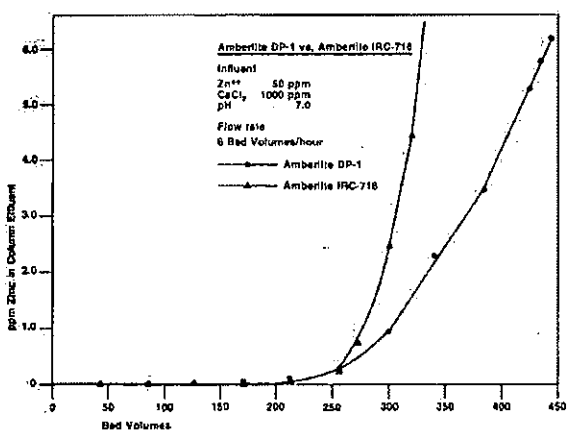

FIGURE III

Table VI
Zinc Regeneration
150 mls of 10% HCL Followed by D.I. H_2O
Flow Rate: 8 Bed Volumes/hour (1 gpm/ft^3)

Bed Volumes	Effluent Analysis ppm Zn^{+2} Amberlite DP-1	Amberlite IRC-718
1	6,000	1,560
2	13,950	8,450
3	252	2,400
4	9	1,505
5	1	2,405
7	1	46

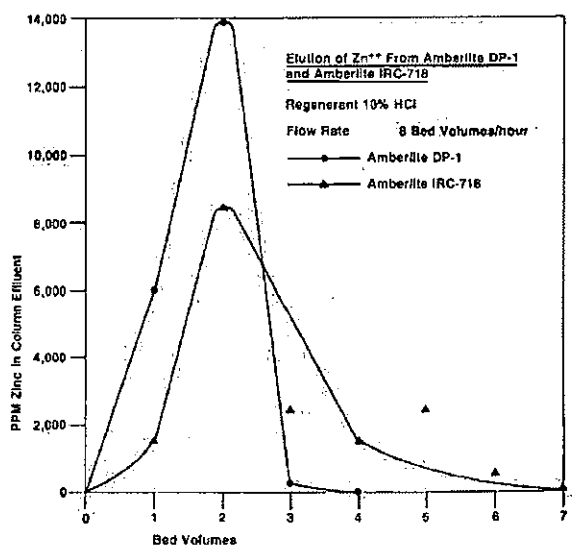

FIGURE IV

In Table VII and Figure V, Amberlite IRC-718 and Amberlite DP-1 are compared for Pb^{+2} removal. In this waste stream the concentration of Pb^{+2} was 50 ppm in the presence of 1,000 ppm of $CaCl_2$ and at a pH of 4.0. The flow rate through the resin was 8 bed volumes per hour or 1 gpm/ft^3 The data show the significant advantage of Amberlite DP-1 over Amberlite IRC-718 in this application.

APPENDIX B
Treatability Study

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gai consultants
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RE: Treatability Study Dominion Dumfries VA

Mr. Eudy

Enclosed is an explanation of the theory behind our water treatment proposal along with the onsite treatability study that was conducted on the Dominion site in Dumfries, VA. Our recommendations of chemistry was based on design, effectiveness, and changing variables that we expect during the life of the project. We would like to take an opportunity to define existing chemistries proposed and tested during the site visit. Many commodity chemistries exist and while effective have limitations. We see many times during standardized bench testing chemistries used will succeed during analysis fail during deployment. ProAct/Carbonair uses an approach to closely replicate onsite conditions during our bench testing that factors in many aspects often overlooked by standardized testing. Finally, our goal is to find green or environmentally friendly chemistries that will give you and your client comfort that minimizes exposure to your team and the ecosphere.

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Description of Proposed Wastewater Treatment Process at the Old Dominion, Dumfries, VA Site

ProAct/Carbonair has proposed a system to treat wastewater at the Dominion, Dumfries, VA site based on the following information:

Maximum flow rate:	2,000	gpm
Average flow rate:	1,750	gpm
Total volume to be treated:	200,000,000	gallons
Water temperature:	55	°F

Contaminant	**Influent Conc.[a]**	**Effluent Criteria[b] (Monthly Average)**	**Effluent Criteria[b] (Daily Maximum)**	**Unit**
pH	7.85	6-9	6-9	s.u.
TSS	150	30	100	mg/L
O&G	6.9	15	20	mg/L
Aluminum (total)	17,800	NL	NL	ug/L
Aluminum (dissolved)	280	N/A	N/A	ug/L
Antimony (total)	14	1,300	1,300	ug/L
Antimony (dissolved)	16	1,300	1,300	ug/L
Arsenic (total)	**1,200**	240	440	ug/L
Arsenic (dissolved)	**900**	N/A	N/A	ug/L
Barium (total)	830	NL	NL	ug/L
Barium (dissolved)	380	N/A	N/A	ug/L

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Beryllium (total)	7.2	NL	NL	ug/L
Beryllium (dissolved)	0.18	N/A	N/A	ug/L
Boron (total)	1,300	NL	NL	ug/L
Boron (dissolved)	1,400	N/A	N/A	ug/L
Cadmium (total)	0.27	1.4	2.6	ug/L
Cadmium (dissolved)	< 1	N/A	N/A	ug/L
Chloride	251,000	370,000	670,00	ug/L
Chromium III (total)	16	88	160	ug/L
Chromium III (dissolved)	2.6	N/A	N/A	ug/L
Chromium VI (total)	0.14	17	32	ug/L
Chromium VI (dissolved)	0.12	N/A	N/A	ug/L
Cobalt (total)	16	NL	NL	ug/L
Cobalt (dissolved)	2.2	NL	NL	ug/L
Copper (total)	84	9.6	18	ug/L
Copper (dissolved)	1.9	N/A	N/A	ug/L
Iron (total)	11,800	NL	NL	ug/L
Iron (dissolved)	7,100	N/A	N/A	ug/L
Lead (total)	**38**	14	26	ug/L
Lead (dissolved)	< 2	N/A	N/A	ug/L
Mercury (total)	< 0.2	1.2	2.2	ug/L
Mercury (dissolved)	0.35	N/A	N/A	ug/L
Molybdenum (total)	430	NL	NL	ug/L
Molybdenum (dissolved)	430	N/A	N/A	ug/L
Nickel (total)	**28**	24	44	ug/L
Nickel (dissolved)	8	N/A	N/A	ug/L
Selenium (total)	**40**	8	15	ug/L
Selenium (dissolved)	**25**	N/A	N/A	ug/L
Silver (total)	< 1	2.2	4.0	ug/L

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Silver (dissolved)	< 2	N/A	N/A	ug/L
Thallium (total)	**1.4**	0.94	0.94	ug/L
Thallium (dissolved)	0.65	N/A	N/A	ug/L
Vanadium (total)	7.2	NL	NL	ug/L
Vanadium (dissolved)	< 2	N/A	N/A	ug/L
Zinc (total)	66	98	180	ug/L
Zinc (dissolved)	190	N/A	N/A	ug/L

a) **The design influent concentrations are based on the maximum detected concentrations from Pond D and Pond E.**
b) **The effluent criteria are based on the VDEQ limits for discharge via Outfall 503 to Outfall 001.**
Bold values indicate the exceedance of the discharge limits.

NL = No limit

N/A = Not applicable

As can be seen from the table shown above, there are only five contaminants (arsenic, lead, nickel, selenium, and thallium) that appeared to have TOTAL concentration levels exceeding the VDEQ discharge limits. Of these five contaminants, there are only two contaminants (arsenic and selenium) that appeared to have DISSOLVED concentration levels exceeding the VDEQ discharge limits.

The wastewater from the ponds will be first pumped into multiple frac tanks arranged in parallel where gross solids will be allowed to settle. Each frac tank will be installed with a blower which can be used to aerate the wastewater in order to oxidize and convert arsenic that may be in the form of arsenite (As+3) into the form of arsenate (As+5) which can be more effectively removed by iron salt co-precipitation and activated alumina (AA) adsorption. However, we believe that arsenic in the ponds may have already been slowly oxidized by ambient air for quite some time, and the aeration may be unnecessary.

The effluent from the frac tanks will be injected with a cationic and anionic polymeric flocculation aiding agents, and delivered to multiple Geotubes arranged in parallel, where flocs will be allowed to form and settle. The main purpose of this step is to reduce the high arsenic concentration to such a level that the polishing AA media provided downstream can last a reasonably long period of time. Selenium and other heavy metals (lead, nickel, thallium) are also expected to be removed in this step. From an onsite treatability study conducted at the Dominion site, BHR-P50 (hybrid PAC biopolymer blend) in conjunction with LBP-2101 (anionic polysaccharide) were found to be very effective in flocculation and removal of suspended solids in this wastewater.

The filtrate from the Geotubes will be delivered to multiple self-backwashable sand filters followed by small micron bag filters to remove fine particulates that may be associated with insoluble heavy metals. After the flocculation and particulate filtration steps, the wastewater is expected to be relatively clear and should only contain dissolved metals. The clear wastewater will be further treated using AA and a weak acidic cationic exchange resin. The AA will be used to remove residual dissolved arsenic, selenium, and thallium while the resin will be used to remove residual dissolved cationic heavy

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metals (Al, Ba, Cr(III), Cu, Fe (II), Pb, Ni, Tl, and Zn). Although all the dissolved cationic metals are expected to be below the discharge limits, the resin is recommended as a precautionary measure. The resin will not be placed on line unless some of those cationic metals are found to exceed the discharge limits.

On-site Treatability Study

at the Dominion, Dumfries, VA Site

Introduction

The initial testing conducted onsite encompassed the homogenization of the downstream ash pond with the upstream discharge pond currently undergoing a dredge process. Although an exact replication of the water was not possible we looked at various concentrations during the homogenization process. TSS solids from the ash pond had NTU values over 2000 while NTU values from the upstream pond had under 20. The initial analysis took into account the discussion of the treatment train, flow rate, and effluent limitation guideline. For the purposes of this onsite test Particulate size analysis, NTU, pH, Conductivity, TDS, Salinity, and arsenic was measured only. Basic dose response testing was conducted using various chemicals as listed below:

Aluminum Sulfate 48%

Anionic PAM

Catiionic PAM

Chitosan

Anionic Biopolymer Chitosan mix.

Dry anionic PAM mineral blend.

Hybrid inorganic biopolymer blend.

The homogenized particulate size analysis indicated that over 65% of the solids were under 1.5 µm. This analysis gave us the starting point to begin the process of chemical selection. Commodity chemicals such as Alum or other inorganic salts are effective in neutralizing the pronounced –ve charge "Zeta Potential" that encompasses the colloidal particulate allowing for collision, aggregation and precipitation under Van der Waals equation. While effective in supernates that have little velocity these have no sheer resistance abilities and often must be followed by a high molecular weight polymer such as PAM or polyacrylamides.

Anionic and Cationic polyacrylamides are derived from petroleum which gives the precipitates a gelatinous floc structure which is often extremely viscous and stick by nature leading to blinding of any filtrate material weather fabric, sand, or remediation media. Due to the fact that both geobag and sand are proposed in the model both forms of PAM were dismissed.

Anionic Biopolymers were tested both pre & post Alum however because of the solids content the amount of Alum required depressed the alkalinity to levels that compromised the pH. Additionally the resulting amount of un-biodegradable aluminum ion that would be present within the sludge was found

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to be high and additional costs in handling may be high. Buffering the pH could be accomplished but did not seem desirable to the team onsite.

Importantly as rapid clarification and precipitation was during the study floc characteristics were as equally important. In most cases bench testing will use a set standard by mixing at fast and slow rates proceeded by observing the sample at 0 velocity. While effective in determining clarification this doesn't replicate real time events and often the agglomerated flocs sheer apart by-passing filtration measures. Our sampling procedures measures clarification, sedimentation precipitation velocity all while maintaining energy within the container. Finally the precipitate is filtered under pressure rather than gravity to ensure sheer resistance abilities.

Treatability

After the initial dose range finding studies were concluded we focused on two chemistries that gave us the indication for success and cohabitation effectiveness within the discussed treatment train.

BHR-P50 optimized at 100 mg/L. is a hybrid PAC biopolymer blend. The constituents of this chemistry provides the inorganic metal salt that reverses the zeta potential like alum but with 50% less alumni content resulting in little to no pH or alkalinity fluctuations. The biopolymer constituent allows for a more pronounced aggregation and provided the precipitate moderate sheer ability. This blend is classified as a cationic coagulant/polymer.

LBP-2101 optimized post BHR-P50 at 50 mg/L. is an anionic polysaccharide. It's constituent which differs from PAM's form an excellent floc when used in conjunction with a cationic coagulant or polymer. Once agglomerated the floc has excellent sheer abilities suitable for high flow filtration. Due to the fact it is compromised from simple sugar monomers these have effective filtration abilities with no blinding effects. The additional benefit of using these two chemistries in conjunction leave no possible +ve charge entering the surface waters and in fact residual testing can be accomplished onsite. Chemistries using cationic constituents have a much higher Eco toxicity then anionic constituents. This combination leaves with a net neutral charge. +/-. The proposed chemical model reduced the overall NTU value by 97% with settling alone, filtration combination noted a 99% reduction in NTU's.

The above concentrations allows for flexibility in changing conditions. Our operators will have the capability to monitor and adjust if necessary in real time rather than waiting for outside or offsite lab analysis. No change in pH or other water characteristics were noted. Arsenic was not present in any of the samples collected. Both chemistries are listed as non-hazardous.

APPENDIX C
Conceptual Treatment System Design Basis and Equipment General Arrangement

C150132.00 / March 2016

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www.carbonair.com | sales@carbonair.com

Customer: Glover Construction
Site: Dumfries, VA
Date: 1/19/16

Design Basis:

Flow rate:	**2,000**	gpm (maximum)
	1,750	gpm (average)
Volume to be treated:	200,000,000	gallons
Water temperature:	55	°F (assumed)

Contaminant	Influent Conc.[a]	Effluent Criteria[b] (Monthly Average)	Effluent Criteria[b] (Daily Maximum)	Unit
pH	7.85	6-9	6-9	s.u.
TSS	150	30	100	mg/L
O&G	6.9	15	20	mg/L
Aluminum (total)	17,800	NL	NL	ug/L
Aluminum (dissolved)	280	N/A	N/A	ug/L
Antimony (total)	14	1,300	1,300	ug/L
Antimony (dissolved)	16	1,300	1,300	ug/L
Arsenic (total)	**1,200**	240	440	ug/L
Arsenic (dissolved)	900	N/A	N/A	ug/L
Barium (total)	830	NL	NL	ug/L
Barium (dissolved)	380	N/A	N/A	ug/L
Beryllium (total)	7.2	NL	NL	ug/L
Beryllium (dissolved)	0.18	N/A	N/A	ug/L
Boron (total)	1,300	NL	NL	ug/L
Boron (dissolved)	1,400	N/A	N/A	ug/L
Cadmium (total)	0.27	1.4	2.6	ug/L
Cadmium (dissolved)	< 1	N/A	N/A	ug/L
Chloride	251,000	370,000	670,00	ug/L
Chromium III (total)	16	88	160	ug/L
Chromium III (dissolved)	2.6	N/A	N/A	ug/L
Chromium VI (total)	0.14	17	32	ug/L
Chromium VI (dissolved)	0.12	N/A	N/A	ug/L
Cobalt (total)	16	NL	NL	ug/L
Cobalt (dissolved)	2.2	NL	NL	ug/L
Copper (total)	84	9.6	18	ug/L
Copper (dissolved)	1.9	N/A	N/A	ug/L
Iron (total)	11,800	NL	NL	ug/L
Iron (dissolved)	7,100	N/A	N/A	ug/L
Lead (total)	**38**	14	26	ug/L
Lead (dissolved)	< 2	N/A	N/A	ug/L
Mercury (total)	< 0.2	1.2	2.2	ug/L
Mercury (dissolved)	0.35	N/A	N/A	ug/L
Molybdenum (total)	430	NL	NL	ug/L

Molybdenum (dissolved)	430	N/A	N/A	ug/L
Nickel (total)	**28**	24	44	ug/L
Nickel (dissolved)	8	N/A	N/A	ug/L
Selenium (total)	**40**	8	15	ug/L
Selenium (dissolved)	25	N/A	N/A	ug/L
Silver (total)	< 1	2.2	4.0	ug/L
Silver (dissolved)	< 2	N/A	N/A	ug/L
Thallium (total)	**1.4**	0.94	0.94	ug/L
Thallium (dissolved)	0.65	N/A	N/A	ug/L
Vanadium (total)	7.2	NL	NL	ug/L
Vanadium (dissolved)	< 2	N/A	N/A	ug/L
Zinc (total)	66	98	180	ug/L
Zinc (dissolved)	190	N/A	N/A	ug/L

a) Based on the maximum detected concentrations from Pond D and Pond E.
b) Based on the VDEQ limits for discharge via Outfall 503 to Outfall 001.
Bold values indicate the exceedance of the discharge limits.
NL = No limit
N/A = Not applicable

Recommendations:

Aeration Tanks (to oxidize arsenic) Carbonair does not believe this step is necessary
4 – 21,000 gallon tank

Injection Trailers
- Includes automatic injection capabilities for pH Adjustment, Flocculation and $FeCl_3$

Ferric Chloride ($FeCl_3$) Injection (to produce iron flocs for adsorption of arsenic)

10-gph injection pump
- We recommend that $FeCl_3$ be initially injected at a dosage of 10 ppm. The required injection rates of the 20% by wt solution are calculated to be 4.2 and 3.7 gph at 2,000 and 1,750 gpm, respectively.
- The initial 40% $FeCl_3$ solution consumption rates are calculate to be ~ 50 and 44 gpd at 2,000 and 1,750 gpm, respectively.

PolymerInjection (to enlarge iron flocs for adsorption of arsenic)

10-gph injection pump
- Exact polymer and dosing to be determined by bench testing

Flocculation/Settling Tanks/Basins (to allow iron to form flocs to adsorb arsenic)

Sand Filters (to remove suspended iron flocs)

Four Model 4-54 sand filters in parallel, each Model 4-54 comprising four 54-inch diameter filters in parallel
- Each filter in Model 4-54 will be backwashed with treated water from the other three filters for at a backwashing flow rate of ~ 250 gpm for 10 minutes. During the backwashing period, the total flow rate through the four Model 4-54's should be reduced to ~ 1,500 gpm.
- We recommend that the backwash water be delivered back to the ponds.

Post-Filters (to remove fine particulates)

Four Krystil Klear Multi-Round Model 3636 bag filter housings (1-micron high efficiency) in parallel
- The post-filters are recommended for the removal of fine particulates, which may be associated with any heavy metals.

Activated Alumina Adsorbers (to remove dissolved selenium)

Four PC78's in parallel, each vessel filled with 500 ft^3 (20,000 lbs) of granular activated alumina (AA)

- Assuming all the dissolved arsenic to be removed by pre-treatment upstream , all the four vessels are predicted to last ~ 598.4 million gallons of water or **208** days of continuous operation at 2,000 gpm.

NOTICE

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ARSENIC REMOVAL SYSTEM

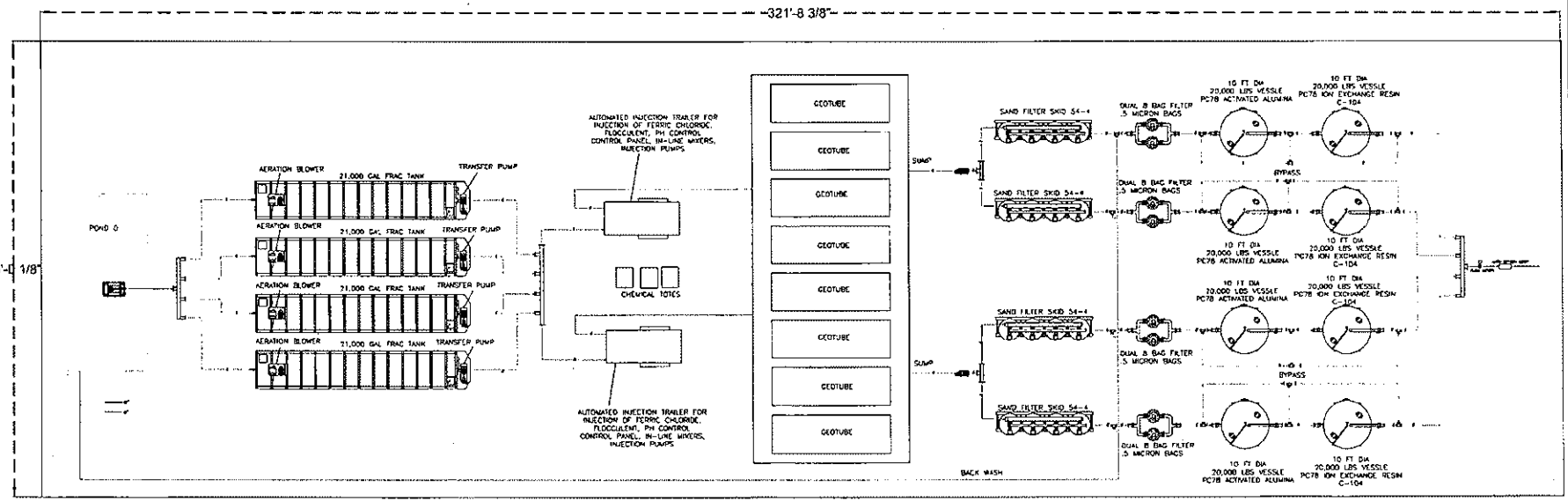
Carbonair
1480 County Road C West, Roseville, MN 55113
Phone: 800-526-4999 Fax: 651-202-2985 www.carbonair.com

Project name:	Dumfries, VA	
Flow rate:	2000	gpm
Total selenium (as arsenic) concentration:	25	ppb
Arsenite (AsIII) concentration:	Unknown	ppb
Arsenate (AsV) concentration:	Unknown	ppb

Adsorber model:	PC78	
Number of adsorbers:	4	
Adsorber arrangement:	In parallel	
Type of adsorbing media:	Activated Alumina	
Media bulk density:	40	lbs/cu.ft.
Volume of media in each adsorber:	500	cu.ft.
Total volume of media:	2000	cu.ft.
Total mass of media:	80000	lbs
Preoxidation:	Yes	

Estimated treatable volume of water (with preoxidation):	598,400,000	gal

ITEM	QTY	DESCRIPTION	MANUFACTURER	MANF NO



DRAWING NO. 1	SIZE B	SCALE NTS	REV	JOB NO.	PLAN VIEW
CUSTOMER	MATERIAL				2000 GPM WTS
DRAWN BY JONATHAN DIPPLE	DATE 2/1/16		SHEET 1	UNIT NO.	

REV	DATE	DESCRIPTION	DRW	APPR

ProAct SERVICES CORPORATION

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PATENT PENDING

MEMO

Date:	December 18, 2015
Project No.	C150132.00
To:	Michael Glagola
From:	Kenneth Kinder, John Klamut
cc:	Michael Winters, Charlie Straley
Subject:	**Pond D Rapid Drawdown Analysis and Dewatering Volume Evaluation**

Mr. Glagola,

For the closure of Pond D at the Possum Point Power Station, the free water in the impoundment will be removed by pumping. It is anticipated that the water will be removed by pumping at a rate to lower the water level in the pond on the order of 1 to 2 feet per day. The lowering of the pond will create excess pore pressure developing within the interior slope of the pond embankment which will dissipate over time.

In order to evaluate the stability of the interior slope of the pond, stability analyses were performed to evaluate the embankment slope with existing groundwater levels, post-draining groundwater levels, and the condition of rapid drawdown with the ground water level on the ground surface, The attached calculations summarize the stability analyses with these conditions.

The "most-critical" scenario is the rapid drawdown condition, which considered the free water theoretically being instantaneously removed from the impoundment. This analysis resulted in a Factor of Safety of 1.3, which is greater that the desired Factor of Safety of 1.2 (Table 3-1, Corps of Engineers Slope Stability Engineering Manual, EM 1110-2-1902, 2003).

The anticipated drawdown rate of the water surface in Pond D will be controlled by the pumping rate and treatment capacity of the water treatment system. The anticipated drawdown rate of free water from Pond D is not expected to exceed 1 to 2 feet per day. The rapid drawdown condition had a factor of safety greater than the desired factor of safety. Therefore, a drawdown rate of 1 to 2 feet per day should not cause instability of the upstream face of the embankment slope.

GAI also calculated the volume of water contained in the ash to assist with estimating dewatering pumping rates. GAI estimated the range of water extraction volumes for Pond D to be approximately 50 million to 70 million gallons. The attached calculations summarize the dewatering water volume evaluation.

COMMONWEALTH OF VIRGINIA
JOHN R. KLAMUT
Lic. No. 048859
12-18-2015
PROFESSIONAL ENGINEER

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RAPID DRAWDOWN STABILITY ANALYSES

SUBJECT: DOMINION POSSUM POINT POWER STATION – POND D CLOSURE
RAPID DRAWDOWN STABILITY ANALYSES

BY KLS DATE 12/01/15 PROJ. NO. C150132.00

CHKD. BY MEZ DATE 12/02/15 SHEET NO. 1 OF 3

gai consultants

OBJECTIVE:

Evaluate rapid drawdown rotational failure surfaces under static conditions for the proposed dewatering of Pond D at the Dominion Possum Point Power Station located in Prince William County, Virginia.

METHODOLOGY:

Stability will be evaluated under static conditions using two-dimensional limit equilibrium analysis with the design software Slope/W by GeoStudio 2007, version 7.23.

REFERENCES:

1. Stability Modeling with SLOPE/W 2007 Version. Program documentation. Vers. 7.23. GEO-SLOPE International Ltd.
2. Corps of Engineers (2003) "Appendix G - Procedures and Examples for Rapid Drawdown". Engineering Manual, EM 1110-2-1902. Department of the U.S Army Corps of Engineers.

BACKGROUND:

Dominion is proposing the closure of Pond D located at the Possum Point Power Station in Prince William County, Virginia. Pond D is located just north of the power station and will include an approximately 70 acre geosynthetic cap area.

Free water and ash dewatering water has been pumped from Pond ABC and Pond E and is being stored in Pond D. To facilitate the closure of Pond D, the free water will be removed from Pond D by pumping and treating prior to discharge. The anticipated drawdown rate of the water surface in Pond D will be controlled by the pumping rate and treatment capacity of the water treatment system. The anticipated drawdown rate is not expected to exceed 1-2 feet per day.

PURPOSE:

Dominion anticipates dewatering Pond D at a rate of up to 1-2 feet per day. During rapid drawdown, the stabilizing effect of the water on the upstream face is lost, but the pore water pressures within the embankment could remain high immediately after drawdown. As a result, the stability of the upstream face of the embankment can be reduced. The dissipation of the pore water pressures in the embankment is largely influenced by the permeability and the storage characteristics of the embankment materials. Highly permeable materials drain quickly during rapid drawdown, but low permeability materials take a long time to drain. Slope/W was used to analyze the rapid drawdown by using the effective stress approach. This procedure, in essence, means the change in pore-pressure is equal to the vertical change in water level, and that the total stress change is equal to the pore-pressure change so that the effective stress remains unchanged.

ANALYSIS:

Short-term static stability analyses were performed along the perimeter embankment of Pond D to evaluate the upstream face stability during a rapid drawdown. One cross-section was selected to represent the most critical slope condition and the location of this section is shown on the figure presented in Attachment 1. Additionally, detailed information regarding the cross section geometry of the section is included in the slope stability software output presented in Attachment 3 (undrained analyses) and Attachment 4 (drained analyses).

The soil parameters used in the slope stability analyses are summarized in Attachment 2. The material properties used to represent the in-place embankment soils, clay foundation and drainage blanket were obtained from slope stability analyses previously completed for Pond D as part of the Final Design Report completed by Virginia Power, Engineering and Construction, Civil Engineering department (originally submitted

October, 1986). The analysis was completed using both drained and undrained parameters for ash, embankment soils and the clay foundation.

As-built drawings and aerial mapping were utilized to model bottom of existing ash, top of existing ash soil surfaces. The initial piezometric surface used in the analyses is based on the depth of ponded water encountered in Boring B-4 during the subsurface investigation conducted in June, 2015. The final piezometric surface used in the analysis is based on a proposed dewatering elevation equal to approximately 10-ft below the elevation of the in-place ash material.

Slope/W uses the piezometric line during the analysis to compute pore-water pressure at the base of each slice. By removing the ponded water through adjusting the piezometric line, the hydrostatic force offered by the ponded water is removed, but the effective stress remains the same at the base of each slice. Therefore, to model the rapid drawdown conditions, the piezometric line representing ponded water is lowered and follows the upstream ground surface, but remains unchanged in the embankment.

This approach is based on the assumption that the soil has some finite hydraulic conductivity such that the change in pore-water pressure at the base of the slice is instantaneously equal to the change in ponded water pressure head above the slice. Considering that water is incompressible and that soils near the slope face likely have some finite conductivity, this is not an unrealistic assumption.

Upstream stability analyses were performed for the initial ground water conditions, for the rapid drawdown conditions and for the final groundwater conditions.

A review of the laboratory results for the materials, including the clay liner material, utilized in the construction of the embankment indicates that the average Liquid Limit is less than 38 percent. Based on the empirical correlation, the coefficient of consolidation is estimated to be greater than 2 ft^2/day. The degree of consolidation will reach nearly a fully drained condition (assuming a 1-foot drainage distance). The excess pore pressure will dissipate quickly enough to not impact the stability of the embankment.

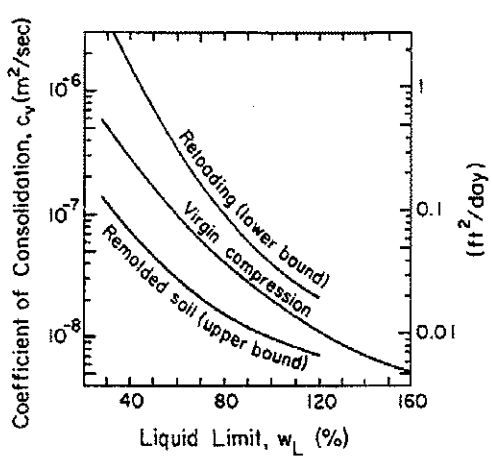

Figure 6-15. c_v versus w_L

Source: NAVFAC (21), p. 7.1-144.

Coefficient of Consolidation vs. Liquid Limit (NAVFAC, 1986)

SUMMARY:

Stability analyses performed for the upstream face during the proposed dewatering (initial, final and rapid drawdown scenarios) are summarized in Attachment 3 (undrained analyses) and Attachment 4 (drained analyses). Static conditions were evaluated using the Morgenstern-Price method which is an equilibrium method that considers both shear and normal inter-slice forces and satisfies both moment and force equilibrium. A large number of deep-seated failure surfaces were generated and the most critical failure surface for each analysis section was isolated to determine the minimum factor of safety.

The following table summarizes the results of static slope stability analyses considering both drained and undrained conditions for the upstream embankment face.

Analysis	Desired Factor of Safety(1)	Factor of Safety Undrained Conditions	Factor of Safety Drained Conditions
Initial GWT Steady State	1.5	2.24	1.69
Rapid Drawdown	1.2	1.88	(2)
Final GWT Steady State	1.5	2.22	1.73

Notes: (1) Desired Factors of Safety taken from Table 3-1 of the Corps of Engineers Slope Stability Engineering Manual, EM 110-2-1902, 2003 (Reference 2).

(2) Drained Conditions not present for Rapid Drawdown analysis. No value was computed.

As shown in the summary table above and in the SLOPE/W software output presented in Attachment 3 and Attachment 4, the resulting factors of safety calculated for static (drained and undrained) conditions are greater than 1.5 for the initial and final groundwater levels assuming steady state conditions. For the rapid drawdown case, the factors of safety were greater than 1.2 for both drained and undrained conditions. In addition, the excess pore pressure will dissipate with the embankment slope under a drawdown rate of 1 to 2 feet per day. Therefore, dewatering the pond at a rate of 1 to 2 feet per day is not anticipated to induce instability of the upstream embankment face.

ATTACHMENT 1

STABILITY ANALYSIS SECTION

DRAWING TITLE
STABILITY ANALYSIS SECTION - POND D CLOSURE

PROJECT
POSSUM POINT POWER STATION
COAL COMBUSTION RESIDUAL
SURFACE IMPOUNDMENT
CLOSURES
DUMFRIES, VA

gai consultants

CLIENT
VIRGINIA ELECTRIC AND
POWER COMPANY
GLEN ALLEN, VA

NO	DATE	DWN	CHK	APV	DESCRIPTION

REVISION RECORD

DRAWN BY	CHECKED BY	APPROVED BY
DOYLEMP	KINDERW	KLAMJUR
DWG TYPE	SCALE	ISSUE DATE
	AS SHOWN	12/3/2015

SHEET NO.: 1 OF 1
REVISION

GAI FILE NUMBER
POND D GEOTECH SECTION
ALT./CLIENT DRAWING NUMBER
GAI DRAWING NUMBER
1

PERMIT

ATTACHMENT 2

SUMMARY OF SLOPE STABILITY SOIL PARAMETERS

Summary Stability Analysis Design Parameters
Dominion - Possum Point Power Station
Pond D Closure

By: MEZ 07/08/15
Ck: KLS 7/9/15

Material	Total Unit Weight	Undrained Shear Strength		Drained Shear Strength	
		Cohesion	Friction Angle	Cohesion	Friction Angle
	(pcf)	(psf)	(deg)	(psf)	(deg)
Embankment Soil(1)	120.00	775.0	18.0	0.0	33.0
Clay Foundation(1)	125.00	750.0	15.0	200.0	25.0
Ash(2)	90.00	350.0	18.0	0.0	36.0
Final Cover Soil(3)	120.00	0.0	28.0	0.0	28.0
Drainage Blanket(1)	125.00	0.0	37.0	0.0	37.0

Notes:

(1) Unit weights and shear strengths estimated obtained from slope stability analysis performed as part of the Final Design Report completed for Pond D by Virginia Power, Enginering and Construction Civil Engineering Department, October 1986.

(2) Shear strength parameters estimated from consolidated undrained triaxial testing completed on representative samples taken from Pond D and in-situ CPT testing completed on Pond D in June, 2015.

(3) Parameters for final cover soil estiamted as lower range of typical values for sandy silt and clayey sands.

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ATTACHMENT 3

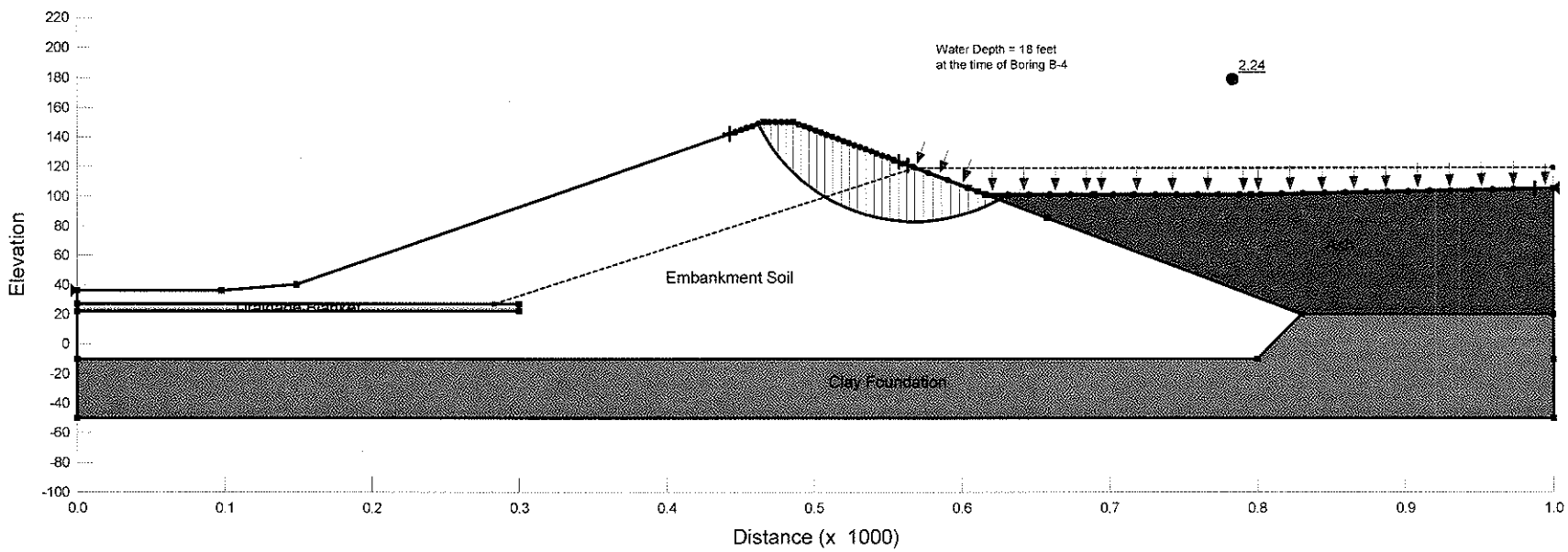
UNDRAINED SLOPE STABILITY ANALYSIS RESULTS

GAI Project: C150132.00

Dominion Possum Point Pond D Closure
Section 1
Undrained
Static Analysis
Initial GWT

By: KLS 11/30/15
Ck: MEZ 12/2/15

Soil Parameters:
Name: Embankment Soil Model: Mohr-Coulomb Unit Weight: 120 pcf Cohesion: 775 psf Phi: 18 ° Piezometric Line: 1
Name: Clay Foundation Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 750 psf Phi: 15 ° Piezometric Line: 1
Name: Ash Model: Mohr-Coulomb Unit Weight: 90 pcf Cohesion: 350 psf Phi: 18 ° Piezometric Line: 1
Name: Drainage Blanket Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 0 psf Phi: 37 ° Piezometric Line: 1

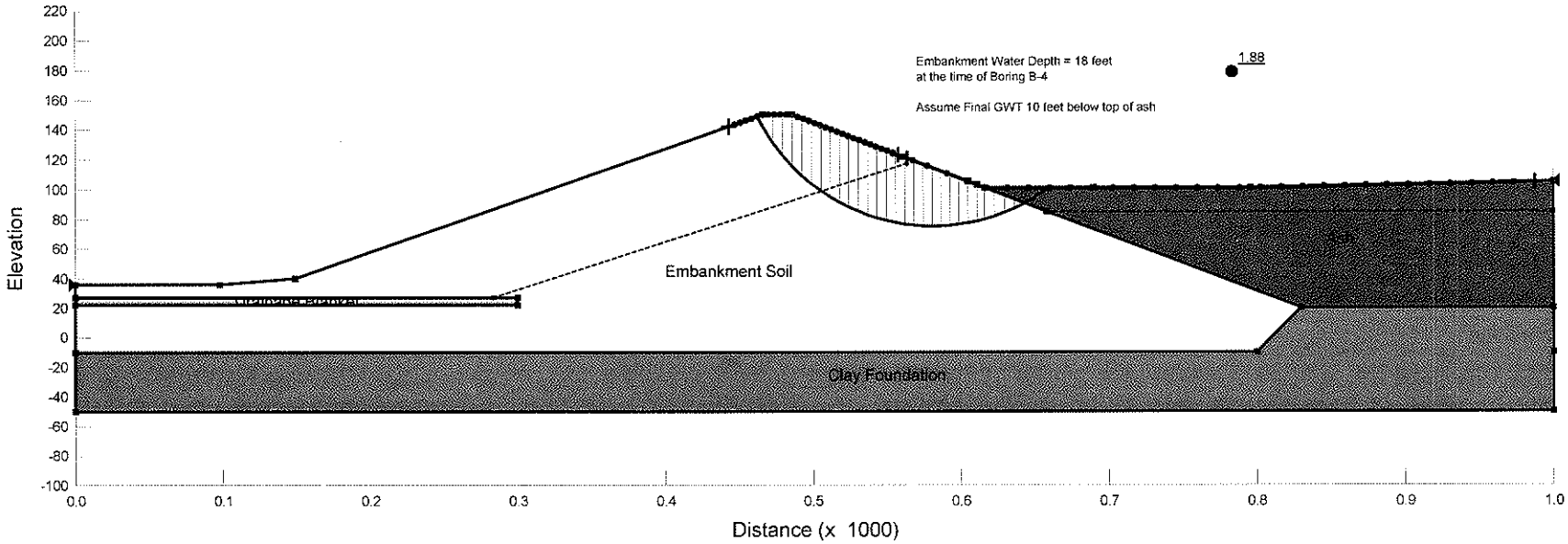


GAI Project: C150132.00

Dominion Possum Point Pond D Closure
Section 1
Undrained
Static Analysis
Rapid Drawdown

By: KLS 11/30/15
Ck: MEZ 12/2/15

Soil Parameters:
Name: Embankment Soil Model: Mohr-Coulomb Unit Weight: 120 pcf Cohesion: 775 psf Phi: 18 ° Piezometric Line: 1
Name: Clay Foundation Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 750 psf Phi: 15 ° Piezometric Line: 1
Name: Ash Model: Mohr-Coulomb Unit Weight: 90 pcf Cohesion: 350 psf Phi: 18 ° Piezometric Line: 1
Name: Drainage Blanket Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 0 psf Phi: 37 ° Piezometric Line: 1

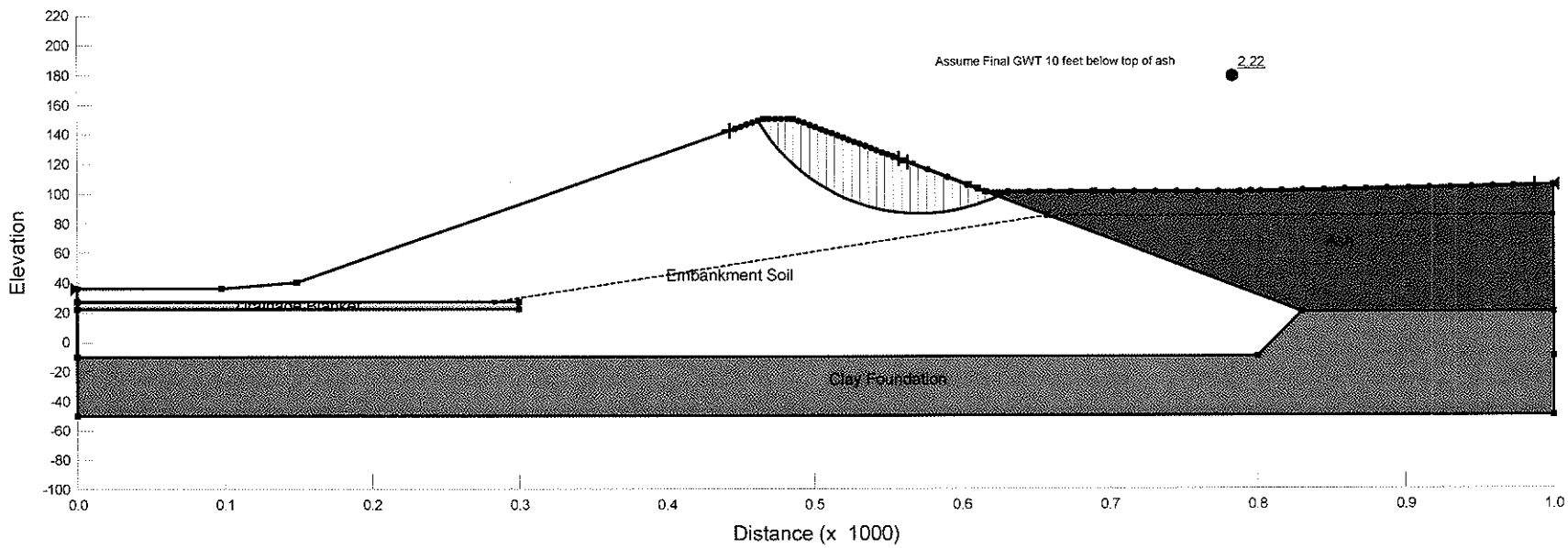


GAI Project: C150132.00

Dominion Possum Point Pond D Closure
Section 1
Undrained
Static Analysis
Final GWT

By: KLS 11/30/15
Ck: MEZ 12/2/15

Soil Parameters:
Name: Embankment Soil Model: Mohr-Coulomb Unit Weight: 120 pcf Cohesion: 775 psf Phi: 18 ° Piezometric Line: 1
Name: Clay Foundation Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 750 psf Phi: 15 ° Piezometric Line: 1
Name: Ash Model: Mohr-Coulomb Unit Weight: 90 pcf Cohesion: 350 psf Phi: 18 ° Piezometric Line: 1
Name: Drainage Blanket Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 0 psf Phi: 37 ° Piezometric Line: 1



ATTACHMENT 4

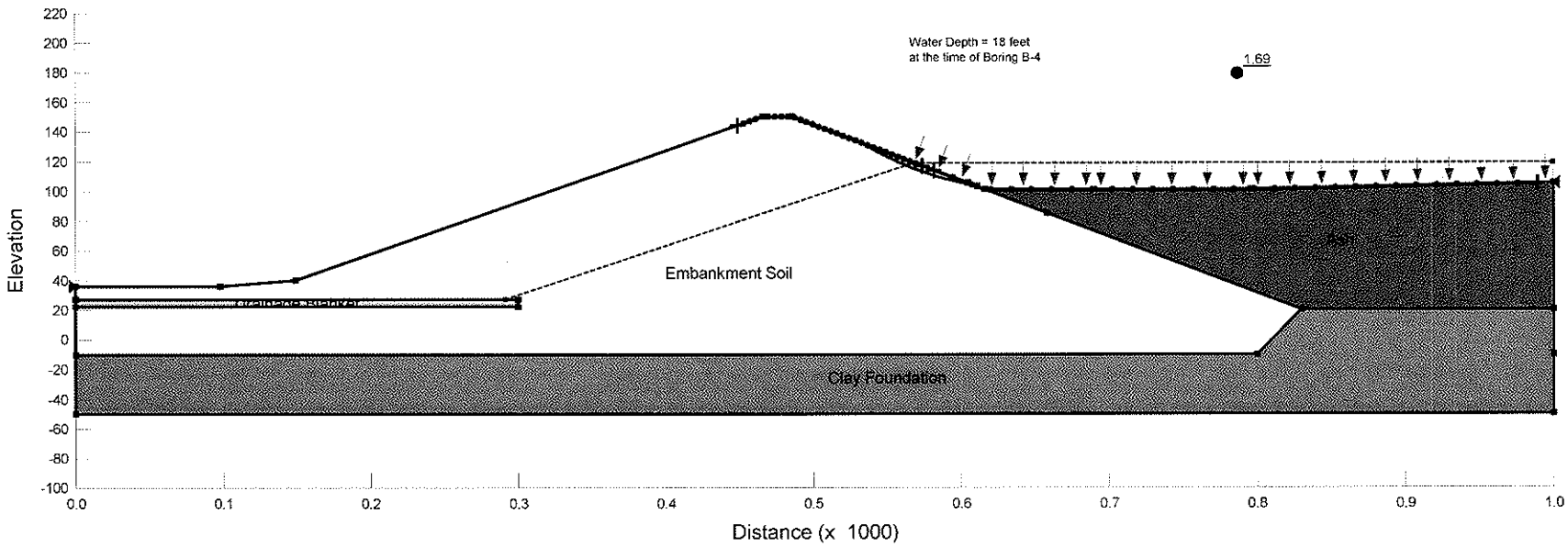
DRAINED SLOPE STABILITY ANALYSIS RESULTS

GAI Project: C150132.00

Dominion Possum Point Pond D Closure
Section 1
Drained
Static Analysis
Initial GWT

By: KLS 12/1/15
Ck: MEZ 12/2/15

Soil Parameters:
Name: Embankment Soil Model: Mohr-Coulomb Unit Weight: 120 pcf Cohesion: 0 psf Phi: 33 ° Piezometric Line: 1
Name: Clay Foundation Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 200 psf Phi: 25 ° Piezometric Line: 1
Name: Ash Model: Mohr-Coulomb Unit Weight: 90 pcf Cohesion: 0 psf Phi: 36 ° Piezometric Line: 1
Name: Drainage Blanket Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 0 psf Phi: 37 ° Piezometric Line: 1

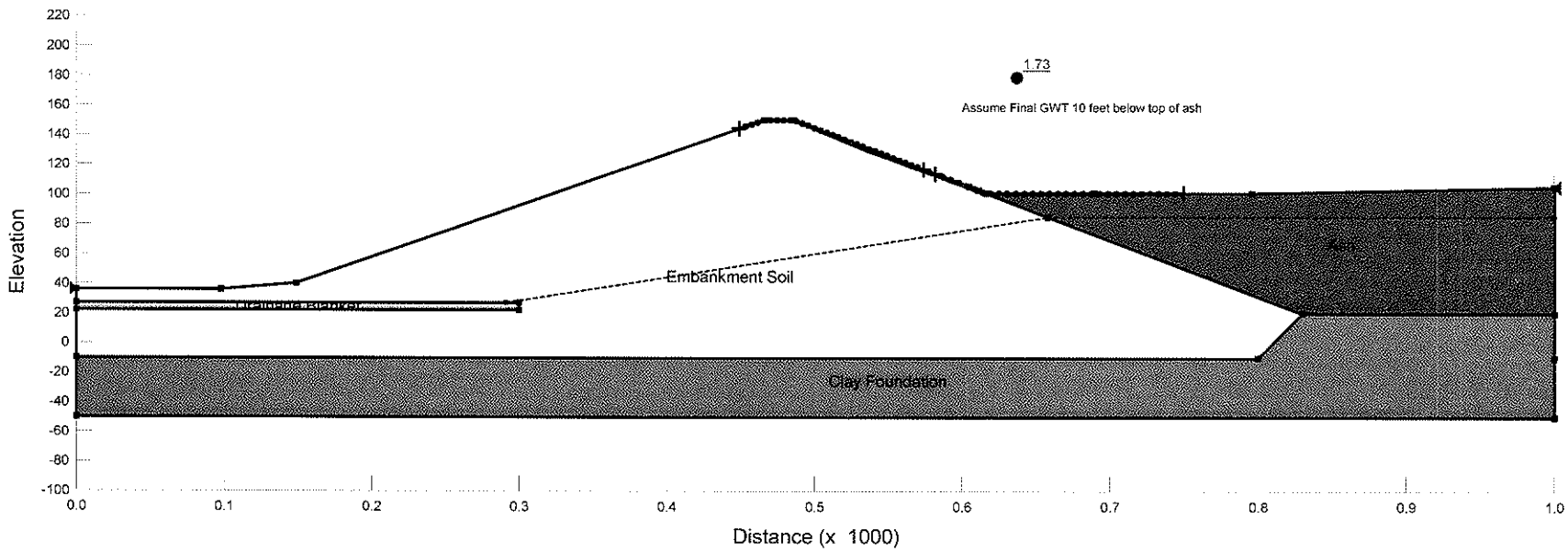


GAI Project: C150132.00

Dominion Possum Point Pond D Closure
Section 1
Drained
Static Analysis
Final GWT

By: KLS 12/1/15
Ck: MEZ 12/2/15

Soil Parameters:
Name: Embankment Soil Model: Mohr-Coulomb Unit Weight: 120 pcf Cohesion: 0 psf Phi: 33 ° Piezometric Line: 1
Name: Clay Foundation Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 200 psf Phi: 25 ° Piezometric Line: 1
Name: Ash Model: Mohr-Coulomb Unit Weight: 90 pcf Cohesion: 0 psf Phi: 36 ° Piezometric Line: 1
Name: Drainage Blanket Model: Mohr-Coulomb Unit Weight: 125 pcf Cohesion: 0 psf Phi: 37 ° Piezometric Line: 1



DEWATERING EVALUATION

SUBJECT: DOMINION POSSUM POINT POWER STATION – POND D CLOSURE
POROSITY (n) and DEGREE OF SATURATION (S) for DEWATERING EVALUATION

BY BEG DATE 12/4/15 PROJ. NO. C150132.00

CHKD. BY CAG DATE 12/4/15 SHEET NO. 1 OF 4

gai consultants

OBJECTIVE:

Evaluate CCR porosity (n) and Degree of Saturation (S) for use in dewatering and pumping volumes estimates for Pond D at the Dominion Possum Point Power Station located in Prince William County, Virginia.

METHODOLOGY:

Porosity (n) and Degree of Saturation (S) are calculated from laboratory testing data of undisturbed samples obtained from Ponds A, B, C and D. Laboratory testing data is summarized below and in References 1 and 2, and n and S are calculated based on soil mechanics theory presented in Reference 3 also as described below.

REFERENCES:

1. GAI Report, "Geotechnical Summary Report," Dominion Generation, Possum Point Power Station, Coal Combustion Residual Surface Impoundment Closures Project, Prince William County, Virginia, October 2015.

2. GAI Calculation, "Dominion Possum Point Power Station – Pond D Closure Settlement Analysis," August 2015

3. Das, Braja M., "Principles of Geotechnical Engineering," PWS Publishers, 1985.

BACKGROUND:

Dominion is proposing the closure of Pond D located at the Possum Point Power Station in Prince William County, Virginia. Pond D is located just north of the power station and will include an approximate 70-acre geosynthetic cap area. The proposed closure of Pond D will utilize ash from Ponds A, B, C and E and will modify the existing grades of Pond D to facilitate surface water runoff and reduce infiltration. Also, a dewatering plan will be implemented within Pond D to extract water from the coal combustion residuals (CCR) prior to placement of ash/fill.

To estimate dewatering pumping rates and volume of water that could be extracted from ash materials in Pond D, an estimate of the water to be extracted is being performed. The water-extraction evaluation requires input of the CCR porosity, initial Degree of Saturation, and a realistic assumption for the potential final Degree of Saturation (post-dewatering).

ANALYSIS:

Laboratory testing data from undisturbed samples of Possum Point CCR is summarized below, which was obtained from References 1 and 2. Of particular interest is natural water content (w%), specific gravity (Gs) and void ratio (eo). The average values for Pond D samples, Ponds A, B and C samples and all samples combined are derived from the data.

The dewatering evaluation estimates the volume of water to be extracted from the upper 10 feet of the ash ponds and is based on porosity (n), and the initial (in-situ) and final (assumed) degree of saturation (S and Sf, respectively). Reference 3 provides the theory and relationships between soil w%, Gs and eo for determining n and S. The final Degree of Saturation (Sf) is based on an assumed, realistic final range of moisture content, and the post-dewatering void ratio and specific gravity are conservatively assumed to equal the in-situ values. This assumption will generate a lower Sf and thus a larger volume of water to be extracted.

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From Reference 3, the relationship between porosity (n) and void ratio (e) is defined in Eq. 2.7 as:

$$n = e/(1+e)$$

and the Degree of Saturation (S) is defined in Eq. 2.17 in terms of moisture content (w), specific gravity (Gs) and void ratio (e) as:

$$Se = wGs, \text{ or}$$

$$S = wGs/e$$

Summary of Pond D Laboratory Testing Results (Reference 2)

Boring I.D.	Sample I.D.	Depth (ft)	Specific Gravity	SOIL ENGINEERING PROPERTIES: In-situ Parameters			Consolidated Unrained Triaxial				One-Dimensional Consolidation			
				w_{nat} (%)	Dry Unit Weight, γ_d (pcf)	Moist Unit Weight, γ_m (pcf)	ϕ' (deg)	c' (psi)	ϕ (deg)	c (psi)	e_o	C_c	C_r	OCR
ASH D-1	ST-7	12.0 - 14.0	2.04	98.3	38.1	75.5	36.6	0.5	17.9	3.7	1.646	0.474	0.027	5.781
ASH D-2	ST-14	27.4 - 27.9	2.12	82.1	49.7	90.4	38.6	0.1	22.4	2.4	1.902	0.334	0.055	3.042
ASH D-4	U-8	14.0 - 16.0	2.19	36.5	62.6	85.5	43.3	0.0	26.5	4.1	1.472	0.419	0.013	6.074
ASH D-5	U-5	22.0 - 24.0	2.05	103.3	39.5	80.2	34.9	2.2	16.3	8.8	1.752	0.384	0.048	4.155
ASH D-5	U-15	42.0 - 44.0	2.08	75.7	48.1	84.4	35.7	1.0	16.5	4.4	1.386	0.305	0.072	2.326
ASH D-6	U-3	13.0 - 15.0	2.06	82.4	42.8	78.1	33.8	2.5	15.2	11.2	0.926	0.103	0.007	6.825

Pond D Average 2.09 79.7 1.51

Summary of Ponds A, B and C Laboratory Testing Results (Reference 1)

Boring ID	Sample ID	Depth (ft)	Gs	w%	γd (pcf)	γt (pcf)	ϕ' (deg)	c' (psi)	ϕ (deg)	c (psi)	eo	Cc	Cr	OCR
Ash A-2	ST-3	10.0 -12.0	2.23	44.9	77.9	112.9	32.3	1.13	21.0	3.32	1.49	0.247	0.012	8.715
Ash B-2	ST-2	2.0 – 4.0	2.24	65.0	58.8	97.0	37.1	2.53	31.4	4.68	1.79	0.370	0.029	16.475
Ash C-2	ST-5	8.0 – 10.0	2.16	55.8	59.3	92.4	37.3	0.56	31.8	1.93	1.14	.0200	0.012	9.070
Ash C-3	ST-3	4.0 – 6.0	2.08	45.2	44.9	65.2	38.2	0.63	21.7	4.77	1.95	0.687	.010	9.962

Pond A, B, C Average 2.18 52.7 1.59

Pond A, B, C and D Average 2.13 68.9 1.55

(All Values)

SUBJECT: DOMINION POSSUM POINT POWER STATION – POND D CLOSURE
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BY BEG DATE 12/4/15 PROJ. NO. C150132.00

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Pond D – In-situ (initial) porosity (n) and Degree of Saturation (S) conditions:

$$n = 1.51/(1+1.51)$$
$$= 0.60$$

$$S = [(79.7/100)*2.09]/1.51$$
$$=1.1$$

Ponds A, B, C and D – In-situ (initial) porosity (n) and Degree of Saturation (S) conditions:

$$n = 1.55/(1+1.55)$$
$$= 0.61$$

$$S = [(68.9/100)*2.13]/1.55$$
$$=0.95$$

Use, n = 0.60 and S = 1.1 for water-extraction evaluation of Pond D in-situ (initial) conditions.

Pond D – Final (post-dewatering) Degree of Saturation (S_f) conditions:

Based on the Ponds A, B and C natural water contents, it is realistic to assume the final Pond D water content (post-dewatering) would be similar or slightly lower, i.e., $w \leq 0.52$.

Therefore, use a range of post-dewatering water content from w = 0.40 to 0.50.

Although there could be a slight reduction in void ratio during dewatering, assuming no change in post-dewatered void ratio is reasonable and conservative, i.e., e = 1.51, which will generate a larger volume of water extracted.

Also, no change in the material specific gravity is anticipated post-dewatering, therefore, the in-situ (average) Gs = 2.09 shown above is assumed.

Thus,

$$S_f \text{ min} = [(40.0/100)*2.09]/1.51$$
$$=0.55$$

and,

$$S_f \text{ max} = [(50.0/100)*2.09]/1.51$$
$$=0.69$$

Use, S_f = 0.55 minimum and S_f = 0.69 maximum for water-extraction evaluation of Pond D (final) Degree of Saturation conditions.

SUBJECT: DOMINION POSSUM POINT POWER STATION – POND D CLOSURE
POROSITY (n) and DEGREE OF SATURATION (S) for DEWATERING EVALUATION

BY BEG DATE 12/4/15 PROJ. NO. C150132.00

CHKD. BY CAG DATE 12/4/15 SHEET NO. 4 OF 4

gai consultants

CONCLUSIONS and RECOMMENDATIONS:

Based on site-specific, undisturbed samples of CCR materials from Ponds A, B, C and D, and corresponding laboratory testing results/data, porosity (n), and initial Degree of Saturation (S) and final Degree of Saturation (S_f) were calculated. The following values are recommended for dewatering evaluation:

- Use, n = 0.60 and S = 1.1 for water-extraction evaluation of Pond D in-situ (initial) conditions.
- Use, S_f = 0.55 minimum and S_f = 0.69 maximum for water-extraction evaluation of Pond D (final) Degree of Saturation conditions.

Applying the recommended porosity and Degree of Saturation, the range of water extraction volumes estimated for Pond D is approximately 50 million gallons to 70 million gallons.

Pond D Estimated Dewatering Volume

In-situ Ash Water				
Porosity	Initial Degree of Saturation	Final Degree of Saturation	Estimated Ash Volume* (CY)	In-Situ Volume to be Dewatered (million gallons)
0.6	1.1	0.55	1,032,500	68.81

Pond D Estimated Dewatering Volume

In-situ Ash Water				
Porosity	Initial Degree of Saturation	Final Degree of Saturation	Estimated Ash Volume* (CY)	In-Situ Volume to be Dewatered (million gallons)
0.6	1.1	0.69	1,032,500	51.30

*Note: 1,032,500 CY of ash volume assumes 64 acres of pond area dewatering to a depth of 10 feet.

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Joe Elton
Deputy Director of Operations

Rochelle Altholz
Deputy Director of Administration and Finance

David Dowling
Deputy Director of Soil and Water and Dam Safety

Reply to: Division of Dam Safety & Floodplain Management
600 East Main Street, 4th Flr.
Richmond, VA 23219
(804) 786-3914; Fax: (804) 371-2630
E-mail: robert.bennett@dcr.virginia.gov

October 13, 2015

Re: Alteration Permit

Dear Dam Owner:

Attached is the Alteration Permit approved by the Virginia Soil and Water Conservation Board. The alteration project must conform to the approved plans and specifications referenced in the Alteration Permit. Any proposed changes to the approved plans and specifications must be submitted in advance and approved in writing by the Regional Dam Safety Engineer.

Work specified in the Alteration Permit must commence within the time frame identified in the Alteration Permit. If work does not commence within the prescribed time frame, the permit shall expire. The applicant may petition the Board for a time extension for good cause and with updated alteration sequence and milestones. For general responsibilities regarding inspections, reporting requirements, maintenance, emergency action plan and exercises, please check the latest Dam Safety Act, Impounding Structure Regulations, and Guidance Documents available at www.dcr.virginia.gov .

If you have any questions, please contact your Regional Dam Safety Engineer, or me at my address above.

Sincerely,

Robert T. Bennett

Robert T. Bennett, P.E., R.A.
Division Director
Division of Dam Safety & Floodplain Management

Enclosure: Alteration Permit

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH *of* VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Joe Elton
Deputy Director of Operations

Rochelle Altholz
Deputy Director of Administration and Finance

David Dowling
Deputy Director of Soil and Water and Dam Safety

DAM SAFETY AND FLOODPLAIN MANAGEMENT

Dam Safety Alteration Permit
Low Hazard Dam, Inventory Number 15321

This permit entitles Dominion Generation to alter Possum Point Ash Dam #E in Prince William County pursuant to the provisions of the Dam Safety Act (Section 10.1-604 et seq., Code of Virginia) and the Virginia Soil and Water Conservation Board (Board) Regulations promulgated thereunder and other requirements of the Board.

This one year permit is issued to perform the alterations per the plans and specifications by Michael J. Winters, VA PE #033623; and John R. Klamut, VA PE #048859, dated August 3, 2015; and August 24, 2015, effective September 30, 2015 and expires September 30, 2016.

Clyde E. Cristman, Director
Department of Conservation and Recreation

MEMO

Date:	December 2, 2015
Project No.	C150132.00
To:	Kenneth Roller, Dominion
From:	Scott Quinlan, GAI Consultants, Inc.
cc:	John Klamut, GAI Consultants, Inc.
Subject:	**Re: Possum Point DEQ Request**

Kenneth,

Pursuant to your request for information on the dewatering of Pond D and the proposed treatment system for handling the waters generated from the Pond Closures project at Possum Point Power Station in Dumfries, VA this serves as a summary for your use. The treatment systems are proposed by Apex Companies, LLC, the subcontractor to Glover Construction, who is the awarded contractor for the Possum Point Station's Pond Closures Project. This memo addresses the following:

- Projected duration and volumetric flow rate for dewatering Ash Pond D;
- Treatment descriptions summarizing the handling of the Ponds A, B, C, D, and E waters to comply with the DRAFT Permit.

Projections for Decanting Ash Pond D

The volume of surface water in Pond D is approximately 145 million gallons. The approximate design capacity of the proposed treatment systems are:

- 2000 gpm maximum for the treatment configuration that includes discharge directly to a permitted Outfall (refer to attached Figure 2); and
- 2000 gpm maximum, consisting of two (2) parallel 1000 gpm filtration systems (refer to attached Figure 1) for the controlled decanting of Pond D surface water to a holding basin in repurposed Pond E. Note that we are presently setup onsite with two (2), 1000 gpm filtration trains: 1) for Ponds A, B, and C waters that are pumped to Pond D, and 2) for Pond E waters that are pumped to Pond D.

Filtration and treatment of the surface water for direct discharge to a permitted Outfall may take between 45-60 days. Although the decanting of Ash Pond D surface water may initially occur over 45-60 days, decanting will continue throughout the project based on rain events at potentially lower flows than the maximum 2000 gpm flow rate. Dewatering will also occur throughout the project into 2018 but is anticipated to be at much less than the max 2000 gpm flow rate.

Proposed Filtration Description for Ponds A, B, C, D, and E waters that are to be discharged to Pond D or to a holding basin in repurposed Pond E:

Please refer to the attached Exhibit 1 for a summary specification and Figure 1 for a block flow diagram of the proposed filtration system. Filtration is the method of treatment for ash particulate removals and to comply with the 30 mg/L TSS criterion. For each filtration train, 1000 gpm maximum pumped waters are directed to an 18,000 gallon baffled tank equipped with an influent sampling port. A 1000 gpm portable diesel pump system with optional pre-filtration then directs the waters through a multiple stage bag / cartridge filter system. The filtered water is sent to an 18,000 gallon baffled tank equipped with an effluent sampling port, and then discharged. TSS/turbidity are analyzed and recorded at hourly intervals from the

influent and effluent sampling ports.

Proposed Treatment Description for Ponds A, B, C, D, and E waters that are to be discharged to an Outfall:

Please refer to the attached Exhibit 2 for a summary specification and Figure 2 for a block flow diagram of the proposed treatment system. Filtration is the method of treatment for ash particulate removals and to comply with the 30-mg/L TSS criterion. For dissolved constituent removals, extended treatment will be brought online, if needed to comply with other Permit criteria, and is accommodated via diversion piping and valves. 2000-gpm maximum pumped waters are directed to parallel 18,000-gallon baffled tanks equipped with an influent sampling port. A 2000-gpm portable diesel pump system with optional pre-filtration then directs the waters through a multiple stage bag / cartridge filter system. The filtered water is sent through extended treatment, as needed, then collected in parallel 18,000-gallon baffled tanks equipped with an effluent sampling port, and ultimately discharged. TSS/turbidity are analyzed and recorded at hourly intervals from the influent and effluent sampling ports. Weekly samples are analyzed at the effluent sampling port in accordance with the permit conditions. Secondary containment is provided, as needed.

Should you require further information please contact us at your earliest convenience.

Exhibit 1: Draft Water Filtration System Specifications And Operation
Possum Point Power Station Ponds A, B, C, D, & E

Conceptual Plan

The objective is to remove ash from water recovered from the ash basins and ensure ash is not being transferred from one basin to another. The criteria for this process is removal of total suspended solids (TSS) from recovered water to a concentration less than 30 mg/L.

The method selected to meet the required criteria is filtration. Previous bench scale testing indicated a 25 micron filter would reduce TSS in recovered water from the ponds from a concentration of ~300 mg/L to less than 10 mg/L.

The operational criteria includes system maximum flow of 1,000 gpm and hourly TSS/turbidity measurements to confirm compliance with the 30 mg/L criteria.

The Contractor will maintain appropriate records of sampling and results and provide to Dominion.

System Components

Bag filter housings – 220 gpm at pressure up to 150 psi
Steel bag filter holders
Bag filters – potential sizes 10, 25, 75, & 100 micron
Cartridge filter housings – 200 gpm at 150 psi, as needed in addition to or in lieu of bag filters.
Cartridge filters – potential sizes 0.45 to 10 microns
Baffled Tanks – baffled with 18,000 gallon capacity, heaters installed
1,000 gpm diesel pump – with high and low float switches
Filter Trailer – six filter housings, 1,320 gpm capacity, heated and lights
Six-inch hoses and connections
Hach Portable TSS/Turbidity meter

System Flow

The filtration system will receive water from the existing dewatering basins in Ponds ABC or E and pump directly into an 18,000 gallon influent baffled tank. The water is then pumped from the influent baffled tank through the filtration trailer, into the effluent baffled tank, and then pumped up to Pond D. In the event, Pond E is repurposed to a holding pond for filtered water from Pond D a similar system would be utilized.

Draft Water Filtration System Specifications And Operation
Possum Point Power Station Ponds A, B, C, D, & E

TSS/Turbidity measurements are made hourly from the influent baffled tank and from a sampling port (SP-1) immediately after filtration and before the effluent baffled tank from a sampling port (SP-2).

Exhibit 2: Draft Water Treatment System Specifications And Operation
Possum Point Power Station Ponds A, B, C, D, & E

APEX

Conceptual Plan

The objective is to treat water as necessary from Ponds A, B, C, D, & E in order to meet VDEQ discharge requirements as proposed in the draft discharge permit (see limits for Outfalls 005 and 503 attached). The water treatment proposed corresponds to the treatment system outlined in red on the attached figure (C150132-00-047-00-P-B2-002) which was included in Dominion's August 18, 2015 permit modification application.

The method selected to meet the required criteria is filtration with supplemental treatment as needed. Previous bench scale testing indicated a three stage process will remove all suspended solids and reduce metals to concentrations below the proposed discharge limits. An extended treatment unit has also been included in the design to remove pollutants not captured by filtration in order to meet the discharge limitations.

The operational criteria include system maximum flow of 2,000 gpm and weekly laboratory analyses for all required discharge parameters.

The Contractor will maintain appropriate records of sampling and results and provide to Dominion.

System Components

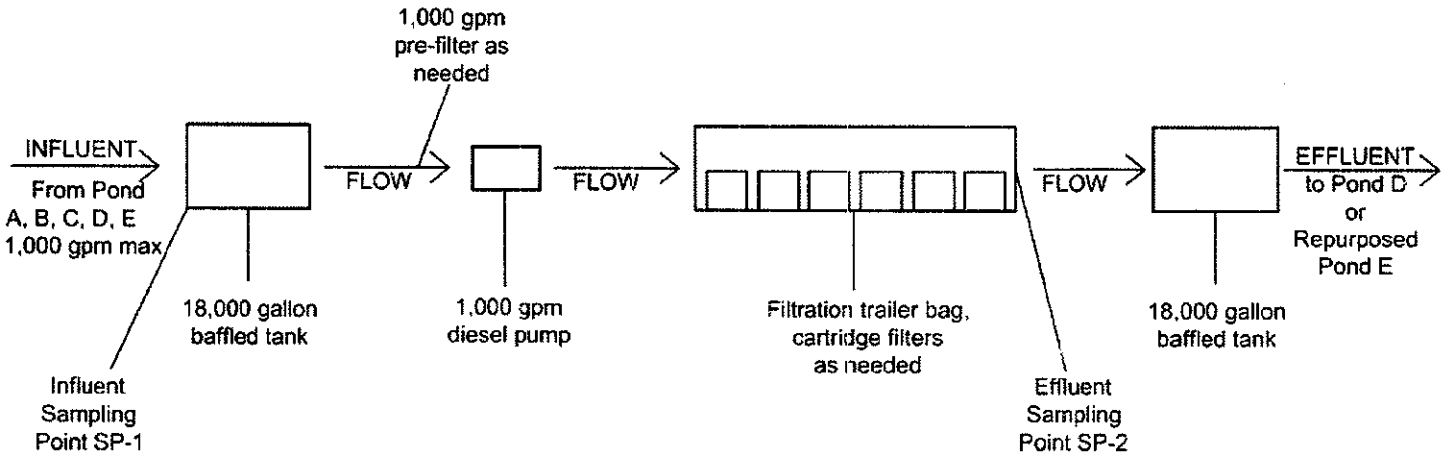
Bag filter housings – 220 gpm at pressure up to 150 psi
Steel bag filter holders
Bag filters – potential sizes10, 25, 75, & 100 micron
Cartridge filter housings – 200 gpm at 150 psi, as needed in addition to or in lieu of bag filters.
Cartridge filters – potential sizes 0.45 to 10 microns
Extended treatment, as needed, to remove pollutants not captured by filtration
Baffled Tanks – baffled with 18,000 gallon capacity, heaters installed
2,000 gpm diesel pump – with high and low float switches
Filter Trailer – six filter housings, 2,320 gpm capacity, heated and lights
Six-inch hoses and connections
Hach Portable TSS/Turbidity meter
Secondary Containment as needed

System Flow

The filtration system receives water from the Ponds A, B, C, D, & E and pumps directly into dual (parallel) 18,000 gallon baffled tanks. The water is then pumped from the influent baffled tank through the filtration trailer. If needed the water can then be

pumped through the Extended treatment unit, into the effluent baffled tank, and then to the outfall.

TSS/Turbidity measurements are made hourly from the influent baffled tank and from a sampling port immediately after the effluent baffled tank. Weekly discharge samples are collected from the same sample ports and sent to the laboratory for analysis.



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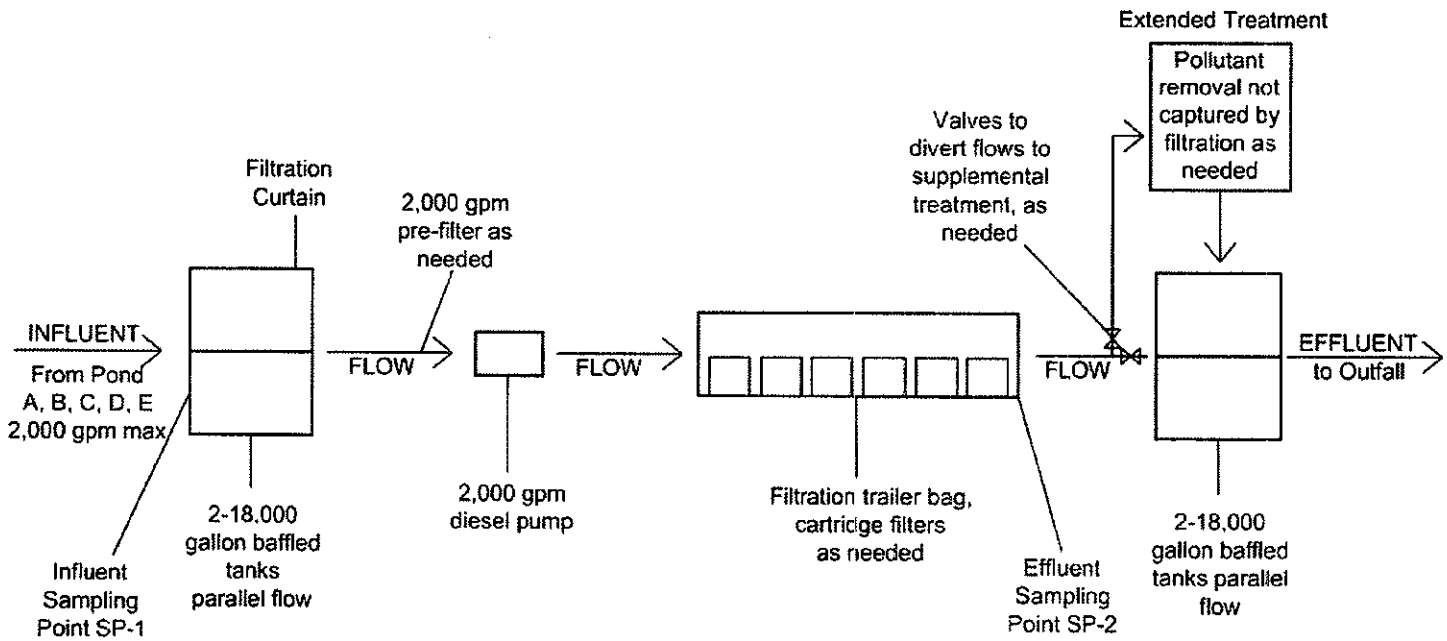
DWN BY	SP
DATE	11-20-15
SCALE	NTS
CAD NO.	
PRJ NO.	GLOV15003-001

WATER FILTRATION SYSTEM

APEX

FIGURE

1



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DATE	11-20-15
SCALE	NTS
CAD NO.	
PRJ NO.	GLOV15003-001

WATER TREATMENT SYSTEM

APEX

FIGURE

2

Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

Dominion®

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN
OCT 26 2015
REGIONAL OFFICE
WOODBRIDGE, VA

BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED

October 21, 2015

Ms. Susan D. Mackert
Environmental Specialist II
Virginia Department of Environmental Quality - Northern Regional Office
13901 Crown Court,
Woodbridge, VA 22193

Re: Dominion – Possum Point Power Station VPDES Permit No. VA0002071
Permit Modification Request - Addendum

Dear Ms. Mackert:

Virginia Electric & Power Company d/b/a Dominion Virginia Power (Dominion) is submitting the enclosed addendum to our December 22, 2014 request to modify the subject permit. Our addendum includes an application Form 2F for coverage of two storm water outfalls S107 and S108. Both outfalls receive stormwater from ash handling areas associated with the closure of Possum Point Power Station's ash ponds.

Should you require additional information, please contact Ian Whitlock at (804) 273-2991 or Jeff Marcell at (703) 609-3813.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Enclosures

Mrs. Mackert
October 21, 2015

I certify under penalty of law that this document 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.

NAME: David A. Craymer

OFFICIAL TITLE: V.P. Power Generation System Operations

PHONE NO: (804) 273-3685

SIGNATURE: _____

DATE SIGNED: 10/21/15

Please print or type in the unshaded areas	EPA ID Number *(copy from item I of Form 1)* ***110000340774***	Form Approved. OMB No. 2040-0086

Form **2F** NPDES

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
S107	**38**	**32**	**43.8**	**77**	**16**	**37**	**Quantico Creek**
S108	**38**	**32**	**52**	**77**	**17**	**21**	**Unnamed Tributary to Quantico Creek**

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
CCR Rule 40 CFR Part 257, Subpart D	***S107 S108***	***Stormwater Associated with Industrial Activity***	***Closure of the station's existing, inactive ash ponds.***	***04/18/15***	***04/18/15***

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structure control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each are not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
S107	**0 acres**	**14.4 acres**			
S108	**0.4 acres**	**0.76 acres**			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Outfall S107 collects storm water from the berm of Ash Pond D via two drop inlets. It is characterized as a non-industrial stormwater outfall in the existing permit. Collected stormwater is discharged to Quantico Creek southeast of Ash Pond D. This outfall also collects groundwater infiltration from toe drains associated with Ash Pond D. The drainage area is approximately 14.4 acres, consists of grass and vegetative slopes, and is considered to be 100% pervious.

Outfall S108 is a new storm water outfall that discharges to an unnamed tributary of Quantico Creek, located south of Pond E. This outfall is located at the point of convergence for runoff from a VDOT culvert and the culverts containing the station's former ash sluice lines. The drainage area associated with this outfall will receive runoff from the area south of Pond E and located near the construction entrance. The drainage area is approximately 0.76 acres and consists of approximately 95% pervious surfaces.

The drainage areas for Outfalls S107 and S108 are located in close proximity to the station's ash ponds. Consequently, stormwater contributing to these outfalls may be impacted by ash management activities associated with the pond closure project. Given the location of these drainage areas Dominion is requesting that Outfalls S107 and S108 be permitted as storm water outfalls associated with industrial activity. As the pond closure project progresses ash management activities will eventually cease and only construction activities covered by a Virginia Construction Stormwater General Permit will occur within the drainage areas for S107 and S108.

Dominion has implemented BMPs in the drainage areas contributing to Outfalls S107 and S108 including grading of haul roads, the installation of straw bales and silt fences, and periodic inspections. In addition, the station's SWPPP (developed in accordance with the VPDES individual permit) will be updated to incorporate BMPs, to minimize the impact of ash management activities that may occur with the associated drainage areas.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
S107 **S108**	**Discharge to Surface Water**	**4-A**

V. Non Stormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name of Official Title *(type or print)*	Signature	Date Signed
David A. Craymer **VP Power Generation System Operations**		10/21/15

B. provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Outfall S107- There is a continuous discharge from this outfall due to groundwater contribution. This outfall will be inspected for non-storm water flows.

Outfall S108 – This outfall discharges primarily during rain events. This outfall will be inspected for non-storm water flows.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

No spills or leaks of toxic or hazardous pollutants have occurred within the last three years within the drainage area associated with S107. On August 6, 2015, pump failure resulted in the overflow of an unknown volume of wastewater from a temporary water storage tank that was collecting groundwater and the effluent from the station's internal Outfall 502. The overflow event, which occurred within the drainage area for S108 is described in and On September 29-30, 2015, heavy rains resulted in excessive stormwater runoff within the drainage area contributing to Outfall S108. The runoff, which contained an unknown volume of coal ash, overwhelmed existing BMPs and was discharged via S108. The discharge and follow-up actions are described in an October 5, 2015 letter to DEQ.

VII. Discharge Information

A,B,C, & D: See instruction before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables Vii-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

No analytical data exist for either stormwater outfall S107 or S108. The industrial activities that will occur in the drainage areas for these outfalls consists of the management of coal combustion residual (e.g., fly ash) that was generated during periods when the station burned coal to generate electricity. These types of activities, and associated pollutants, were considered during the development of Sector O requirements included in EPA's and Virginia's Industrial Stormwater General Permits. Related conditions have been incorporated into Possum Point's individual VPDES permit.

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

--

IX. Contact analysis Information

Were any of the analysis reported in item VII performed by a contact laboratory or consulting firm?

☐ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☒ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

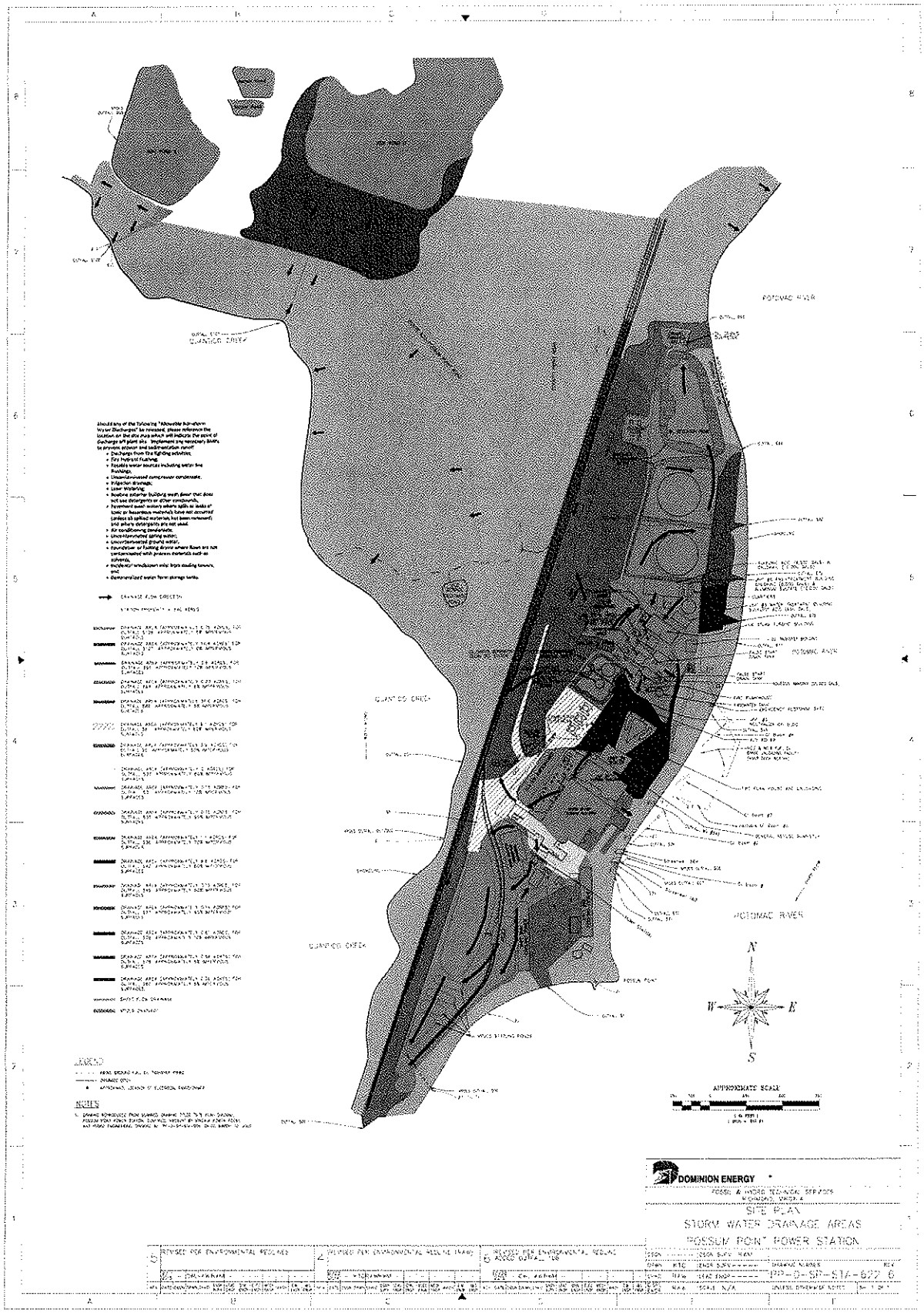
Continued from Page 3

EPA ID Number *(copy from Item I of Form 1)*
110000340774

X. Certification

I certify under penalty of law that this document 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.

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
David A. Craymer **VP Power Generation System Operations**	**(804) 273-3685**
C. Signature	D. Date Signed
	10/21/15


POTOMAC RIVER
QUANTICO CREEK
POTOMAC RIVER
QUANTICO CREEK
N
W
E
S
APPROXIMATE SCALE
LEGEND
NOTES
DOMINION ENERGY
SITE PLAN
STORM WATER DRAINAGE AREAS
POSSUM POINT POWER STATION
REVISED PER ENVIRONMENTAL REDLINES
REVISED PER ENVIRONMENTAL REDLINE (RAW)
REVISED PER ENVIRONMENTAL REDLINE
ADDED OUTFALL 108
DRAWING NUMBER
PP-0-SP-STA-622 6
SCALE N/A

Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

Dominion®

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
OCT - 9 2015
REGIONAL OFFICE
WOODBRIDGE, VA

October 6, 2015

Ms. Susan Mackert
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

RE: Possum Point Power Station VPDES Permit No. VA0002071: Permit Modification Request Letters

Dear Ms. Mackert:

As you know, we have submitted three successive permit modification request letters to DEQ in connection with our ash pond closure project at the Possum Point Power Station (June 30, 2014, December 22, 2014, and August 18, 2015). When we met on September 28, 2015 to discuss the closure project, you requested additional clarification on the status of our requested modifications, which we respectfully offer below.

1. Clarification on June 30, 2014 Permit Modification Request:
   - **Modifications No Longer Necessary**
     - Ash Ponds A, B, and C are presently being decommissioned and the ponds will be permanently retired. Ash material in Ponds A, B and C is being relocated to Ash Pond D. Ash Dewatering and Contact Waters are currently being directed to Ash Pond D for storage. There is no discharge from Outfall S104. Upon clean closure of Ash Ponds A, B, and C, the decant structure associated with Pond C will be permanently decommissioned and Outfall S104 will be eliminated. Therefore, there is no longer a need to incorporate Outfall S104 into the VPDES permit.
   - **Modifications Still Requested**
     - Recognition of the Unit 6 Reverse Osmosis (RO) trailers as a permanent discharge.
     - Incorporation of the several additional minor changes to permit language and updates to outfall descriptions in the permit.
2. Clarification on December 22, 2014 Modification Request-Addendum:
   - **Modifications No Longer Necessary**
     - Clean-closure of Ponds A, B, C and E will eliminate the potential for contamination of stormwater by industrial activities within the drainage areas for Outfalls S105, S108, and S109. Consequently, a permit modification to incorporate these outfalls as industrial stormwater discharges is no longer necessary.
     - Given the permanent closure of Ponds A, B, C and E, we withdraw our request to include the proposed modifications to permit conditions I.F.1, I.F.3, II.R, I.A.12 and I.D.3.a.
   - **Modifications Still Requested**
     - Coverage of Outfall S35.
     - Modification of permit condition I.A.12 to recognize that industrially influenced storm water may be discharged through existing Outfall S107.
3. Clarification on August 18, 2015 Modification Request
   - Everything in our August 18, 2015 request remains necessary and is still requested.

Please feel free to contact Ken Roller at (804) 273-3494 or kenneth.roller@dom.com should you have any questions concerning this submittal.

I certify under penalty of law that this document 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.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

Dominion®

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

VA. DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN
AUG 20 2015
REGIONAL OFFICE
WOODBRIDGE, VA

August 18, 2015

Ms. Susan Mackert
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

RE: Possum Point Power Station VPDES Permit No. VA0002071: Modification Request Letter

Dear Ms. Mackert:

As you know from our recent meetings, we are actively pursuing closure of the ash ponds at the Possum Point Power Station pursuant to EPA's final coal combustion residuals (CCR) rule. Some of the preparatory work for closure is already authorized and regulated under the Station's existing VPDES Permit No. VA0002071. Other preparatory work is subject to DEQ's concurrence as part of Dominion's Notice of Planned Changes, which was submitted in July 2015. For the active construction and post-construction phase of the closure project, Dominion will also need modifications to the VPDES permit. This letter, application, and supporting documents comprise a request that the VPDES Permit be modified as described below. The requested modifications will enable Dominion to properly handle the various waste streams associated with construction activities, as well as final conditions post-closure.

1. Present Situation
   - Ash Pond E is presently being decommissioned and the impoundment will be retired. Ash material in Pond E is being relocated to Ash Pond D. Ash Dewatering and Contact Waters are presently being directed to Ash Pond D for storage. Ash Pond E will be replaced with a treatment system, as required.
   - Ash Ponds A, B, and C are presently being decommissioned and the impoundment will be retired. Ash material in Ponds A, B and C is being relocated to Ash Pond D. Ash Dewatering and Contact Waters are presently being directed to Ash Pond D for storage.
   - Ash Pond D will be decommissioned and the impoundment retired. The ash material will be capped. Pond D Comingled Water, or surface waters in Ash Pond D, will need to be decanted, treated, as required, and discharged. After decanting, Ash Dewatering and Contact Waters at Ash Pond D will need to be treated and discharged.
2. Proposed Modifications Being Sought
   - Interim Configuration:
     - Oil Water Treatment Basin (Internal Outfall 502) will be rerouted to the station's existing Low Volume Settling Ponds (Outfall 004).
     - Ash Pond E will be replaced with an interim treatment system suitable to protect water quality and achieve any necessary water quality-based limits established by DEQ. However, should a Permit Modification be delayed beyond January 1, 2016, reclaimed Pond E may be used to store waters (after required treatment).

- Outfall 501 water will be directed to Ash Pond D (or Pond E should a Permit Modification be delayed beyond January 1, 2015) for storage and treated to protect water quality and achieve any necessary water quality-based limits established by DEQ before being discharged to Outfall 005 (or ALTERNATE discharge to Outfall 001/002 and/or Outfall 004).
- Pond D Comingled Water will be decanted, directed to an interim treatment system suitable to protect water quality and achieve any necessary water quality-based limits established by DEQ, and discharged to Outfall 005 (with ALTERNATE discharge to Outfall 001/002 and/or Outfall 004). However, should a Permit Modification be delayed beyond January 1, 2016, Pond D Comingled Water will first be treated with a filtering system to remove coal combustion residuals (CCR) (ash) solids and held in reclaimed Pond E.
- Ash Dewatering and Contact Waters from the closure of Ash Pond A, B, C, and D will be directed to an interim treatment system and then discharged to Outfall 005 (with ALTERNATE discharge to Outfall 001/002 and/or Outfall 004). However, should a Permit Modification be delayed beyond January 1, 2016, Ash Dewatering and Contact Waters will first be treated with a filtering system to remove coal combustion residuals (CCR) (ash) solids and held in reclaimed Pond E.

- Final Configuration:
  - Oil Water Treatment Basin (Internal Outfall 502) will be rerouted to the station's existing Low Volume Settling Ponds (Outfall 004).
  - A new treatment system that replaces closed Pond E, as required, will accept the Metals Cleaning Waste Treatment Facility (Internal Outfall 501) effluent, as well as Pond D Underdrainage from the closed/capped Ash Pond D.

3. Reasons for the Modification
   - Ash Ponds A, B, C, and E will be decommissioned and clean-closed in accordance with the final CCR rule.
   - Ash Pond D will be decommissioned and closed-in-place in accordance with the final CCR rule.

The permit fee required for this modification and the original fee form as well as the authorization to public notice the draft permit were submitted to DEQ, Receipts Control, P.O. Box 1104, Richmond, VA 23218, in June 2014 with the original request for modification of the permit.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Enclosures:
1. Form 1 General.
2. Topographic Map.
3. Water Flow Balance Line Diagram –Interim Configuration.
4. Water Flow Balance Line Diagram – Final Configuration.
5. Form 2C NPDES, Page 1 – Interim Configuration.
6. Form 2C NPDES, Page 1 – Final Configuration.

7. Form 2C NPDES, Page 2 – Interim Configuration.
8. Form 2C NPDES, Page 2 – Final Configuration.
9. Form 2C NPDES, Pages 3 & 4.
10. Form 2C NPDES, Pages V-1 to V-9 – Outfall 004, Interim & Final Configuration.
11. Form 2C NPDES, Pages V-1 to V-9 – Outfall 005, Interim Configuration: Pond D Comingled Waters.
12. Form 2C NPDES, Pages V-1 to V-9 – Outfall 005, Interim Configuration: Ash Dewatering and Contact Waters.
13. Form 2C NPDES, Pages V-1 to V-9 – Outfall 005, Final Configuration.
14. Form 2C NPDES, Pages V-1 to V-9 – Outfall 501, Interim & Final Configuration.
15. Form 2C NPDES, Pages V-1 to V-9 – Outfall 502, Interim & Final Configuration.
16. Form 2C NPDES, Pages V-1 to V-9 – Outfall 004, ALTERNATE Interim Configuration: Pond D Comingled Water.
17. Form 2C NPDES, Pages V-1 to V-9 – Outfall 001/002, ALTERNATE Interim Configuration: Pond D Comingled Water.
18. Form 2C NPDES, Pages V-1 to V-9 – Outfall 004, ALTERNATE Interim Configuration: Ash Dewatering and Contact Waters.
19. Form 2C NPDES, Pages V-1 to V-9 – Outfall 001/002, ALTERNATE Interim Configuration: Ash Dewatering and Contact Waters.
20. VPDES Permit Modification Concept Report.

CERTIFICATION

I certify under penalty of law that this document 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.

NAME: David A. Craymer

OFFICIAL TITLE Vice President, Power Generation System Operations

PHONE NO.: (804) 273-3685

SIGNATURE: [signature]

DATE SIGNED: 8/18/15

Please print or type in the unshaded areas only. Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	110000340774		D
1	2 – 13	14	15

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE.

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

C 1 SKIP DOMINION - POSSUM POINT POWER STATION

15 16 – 29 30 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*: C 2 DAVID A. CRAYMER (15 16 45)

B. PHONE *(area code & no.)*: (804) 273-3592 (46 48 49 51 52 55)

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX: C 3 5000 DOMINION BLVD (15 16 45)

B. CITY OR TOWN: C 4 GLEN ALLEN (15 16 40)

C. STATE: VA (41 42)

D. ZIP CODE: 23060 (47 51)

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: C 5 19000 POSSUM POINT ROAD (15 16 45)

B. COUNTY NAME: PRINCE WILLIAM (46 70)

C. CITY OR TOWN: C 6 DUMFRIES (15 16 40)

D. STATE: VA (41 42)

E. ZIP CODE: 22026 (47 51)

F. COUNTY CODE *(if known)*: 153 (52 54)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 4911 (specify) ELECTRIC POWER STATION	7 (specify)
C. THIRD	**D. FOURTH**
7 (specify)	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME: 8 VIRGINIA ELECTRIC AND POWER COMPANY

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*: A (804) 273-3592

E. STREET OR P.O. BOX: 5000 DOMINION BLVD

F. CITY OR TOWN: B GLEN ALLEN

G. STATE: VA

H. ZIP CODE: 23060

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*: 9 N VA0002071	D. PSD *(Air Emissions from Proposed Sources)*: 9 P NR070225
B. UIC *(Underground Injection of Fluids)*: 9 U	E. OTHER *(specify)*: 9 (specify)
C. RCRA *(Hazardous Wastes)*: 9 R VAD000620476	E. OTHER *(specify)*: 9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

NATURAL GAS OR FUEL OIL FIRED ELECTRIC POWER GENERATING STATION. REFER TO ATTACHMENT A FOR TOPOGRAPHIC MAP.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
DAVID A. CRAYMER VP POWER GENERATION SYSTEM OPER.		8/18/15

COMMENTS FOR OFFICIAL USE ONLY

C

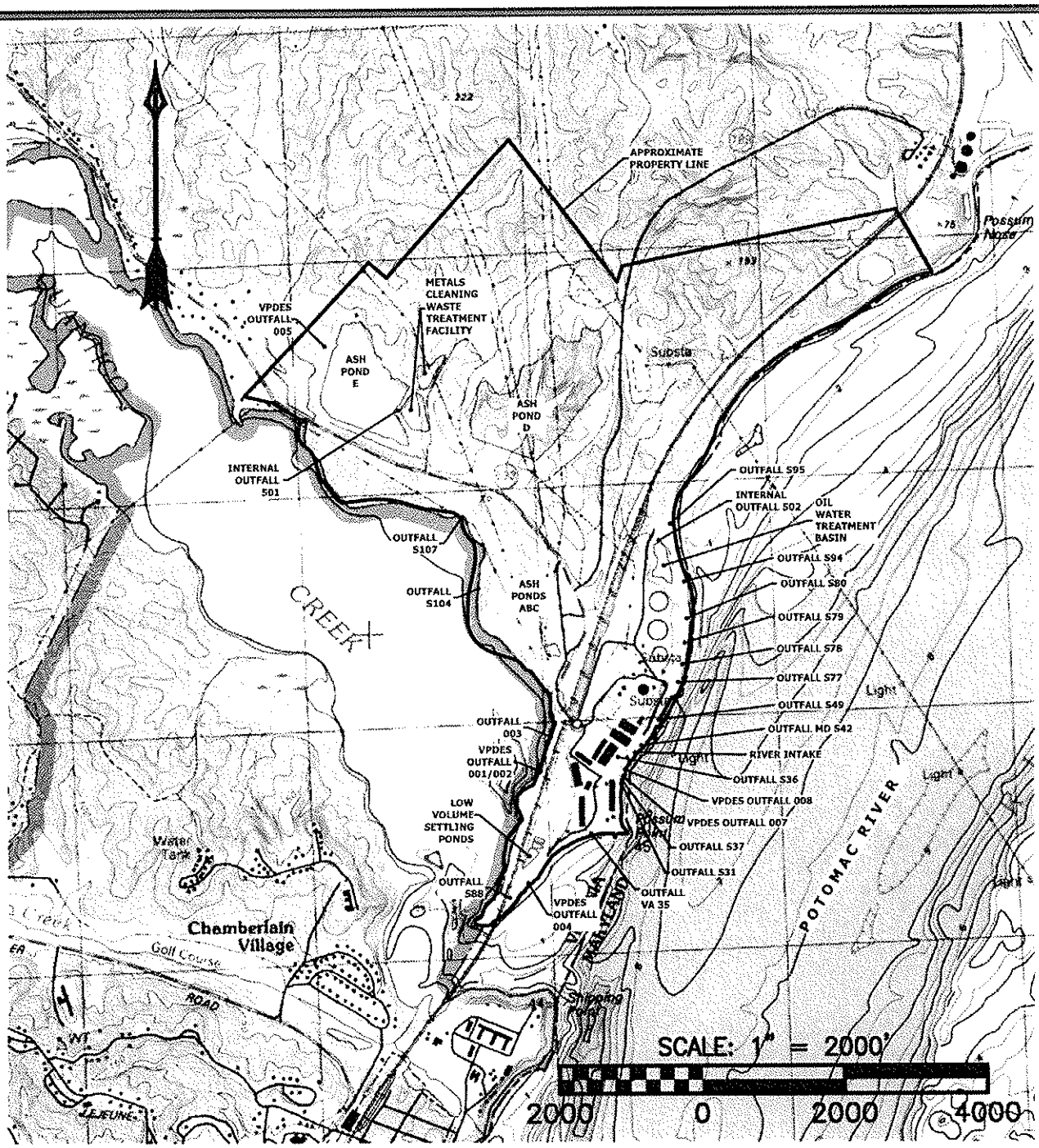
EPA Form 3510-1 (8-90)

Addendum to Form 1

POSSUM POINT POWER STATION
ADDENDUM to Form 1

Form 1, Part II.E

The Possum Point Power Station ("Station") may temporarily store hazardous wastes for short periods in an accumulation area located inside the warehouse. However, hazardous wastes, if any, are stored in exempt quantities and/or will not be stored on site for more than 90 days. The normal generator status for the Station is conditionally exempt, small quantity generator.



DRAWING TITLE	GAI DRAWING NUMBER:
TOPOGRAPHIC MAP	**C150132-00-047-00-P-A2-001**

PROJECT		GAI FILE NUMBER:		
POSSUM POINT POWER STATION 19000 POSSUM POINT ROAD, DUMFRIES, PRINCE WILLIAM COUNTY VA 22026	gai consultants	**C150132-00-047-00-P-A2-001**		
		DRAWN BY:	CHECKED BY:	APPROVED BY:
		VASKOAJ	**DEBARJD**	**QUINLSC**
CLIENT		SHEET NO.:	SCALE:	ISSUE DATE:
DOMINION RESOURCES SERVICE 5000 DOMINION BOULEVARD, INC. GLEN ALLEN, VIRGINIA 23060		1 OF 1	**AS SHOWN**	**07/15/2015**
		© 2015 GAI Consultants, Inc.		

This drawing was produced with computer aided drafting technology and is supported by electronic drawing files. Do not revise this drawing via manual drafting methods.

ISSUING OFFICE: Pittsburgh | 385 E. Waterfront Drive, Homestead, PA 15120

PLOTTED ON: 7/13/2015 2:46:29 PM PLOTTED BY: Zack Dimasi PLOT FILE: GAI.stb

GAI CAD FILE PATH: Z:\Energy\2015\C150132.00 – DOM – Possum Point PS CCB\CAD\Production Drawings\PROCESS\Topo Map\C150132-00-047-00-P-A2-001.dwg

Interim Configuration

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
110000340774

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

Please print or type in the unshaded areas only.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
004	38	31	57	77	17	04	Mouth of Quantico Creek
005	38	32	10	77	12	36	Tributary to Quantico Creek
(501)	38	32	38	77	17	20	Internal Discharge to Outfall 005
(502)	38	32	42	77	16	47	Internal Discharge to Outfall 004
001/002	38	32	12	77	17	00	Quantico Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
004	Process Wastewater	2.59 MGD	Sedimentation/Floc./Flot./Neutralization/Chem. Precipitation/Mixing/Discharge to Surface Water	(2)	
	Cooling Water	(1)	(1)	(1)	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
	Ash Dewatering & Contact Waters / Pond D Comingled Water (ALTERNATES)	0.72 MGD / 2.53 MGD	(1) & Coagulation/Filtration/Ion Exchange/ Anaerobic/Chemical Condit./Landfill (AS REQ'D)	(1)	(3)
005	Process Wastewater	1.04 MGD	Sedimentation / Mixing	1-U	1-O
	(1)	(1)	Discharge to Surface Water	4-A	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
	Ash Dewatering & Contact Waters / Pond D Comingled Water	0.72 MGD / 2.53 MGD	(1) & Flocc./Chem. Precip./Neutr./Coag./Filtr. /Ion Exch./Anaer./Chem. Cond./Landf.(AS REQ'D)	(1)	(4)
(501)	Process Wastewater	1.04 MGD	Mixing / Neutralization	1-O	2-K
	(1)	(1)	Chemical Precipitation / Sedimentation	2-C	1-U
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
(502)	Process Wastewater	0.57 MGD	Mixing / Sedimentation	1-O	1-U
	(1)	(1)	Flotation	1-H	
	Cooling Water	(1)	(1)	(1)	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
001/002	Cooling Water	86.38 MGD	Mixing / Discharge to Surface Water	1-O	4-A
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
	Ash Dewatering & Contact Waters (ALTERNATE)	0.72 MGD	(1) & Sed./Floc./Neutr./Chem. Precip./Coag./ Filt./Ion Ex./Anaer./Chem.Cond./Land.(AS REQ'D)	(1)	(5)
	Pond D Comingled Water (ALTERNATE)	2.53 MGD	(1)	(1)	

FOOTNOTES:

(1): included in above for respective Outfall; for Treatment Codes, includes both columns.
(2): 1-U / 1-G / 1-H / 2-K / 2-C / 1-O / 4-A.
(3): 2-D / 1-Q / 2-J / 3-C / 5-E / 5-Q (AS REQUIRED).
(4): 1-G / 2-C / 2-K / 2-D / 1-Q / 2-J / 3-C / 5-E / 5-Q (AS REQUIRED).
(5): 1-U / 1-G / 2-K / 2-C / 2-D / 1-Q / 2-J / 3-C / 5-E / 5-Q (AS REQUIRED).

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

Final Configuration

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
110000340774

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

Please print or type in the unshaded areas only.

FORM **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
004	38	31	57	77	17	04	Mouth of Quantico Creek
005	38	32	10	77	12	36	Tributary to Quantico Creek
(501)	38	32	38	77	17	20	Internal Discharge to Outfall 005
(502)	38	32	42	77	16	47	Internal Discharge to Outfall 004
001/002	38	32	12	77	17	00	Quantico Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
004	Process Wastewater	2.59 MGD	Sedimentation/Floc./Flot./Neutralization/Chem. Precipitation/Mixing/Discharge to Surface Water	(2)	
	Cooling Water	(1)	(1)	(1)	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
005	Process Wastewater	1.04 MGD	(3)	(4)	
	Cooling Water	(1)	(1)	(1)	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
	Pond D Underdrainage	0.15 MGD	(1)	(1)	
(501)	Process Wastewater	1.04 MGD	Mixing / Neutralization	1-O	2-K
	(1)	(1)	Chemical Precipitation / Sedimentation	2-C	1-U
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
(502)	Process Wastewater	0.57 MGD	Mixing / Sedimentation	1-O	1-U
	(1)	(1)	Flotation	1-H	
	Cooling Water	(1)	(1)	(1)	
	Stormwater Runoff (annual average)	(1)	(1)	(1)	
001/002	Cooling Water	86.38 MGD	Mixing / Discharge to Surface Water	1-O	4-A
	Stormwater Runoff (annual average)	(1)	(1)	(1)	

FOOTNOTES:

(1): included in above for respective Outfall; for Treatment Codes, includes both columns.
(2): 1-U / 1-G / 1-H / 2-K / 2-C / 1-O / 4-A.
(3): Mixing / Discharge to Surface Water / Sedimentation / Flocculation / Flotation / Neutralization / Chemical Precipitation / Coagulation / Filtration / Ion Exchange / Anaerobic Treatment / Chemical Conditioning / Landfill (AS REQUIRED).
(4): 1-O / 4-A / 1-U / 1-G / 1-H / 2-K / 2-C / 2-D / 1-Q / 2-J / 3-C / 5-E / 5-Q (AS REQUIRED).

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

Interim Configuration

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
(501)	Piping & Equipment Flushing/Cleaning			1.04				
(502)	Unit 5 Seal Oil System			0.567				
005, 004*, 001/002*	Pond D Comingled Water			2.53		137 MG		60 +/-
005, 004*, 001/002*	Ash Dewatering & Contact Waters			0.72		107 MG		547 +/-

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

*OPTIONAL

Final Configuration

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
(501)	Piping & Equipment Flushing/Cleaning			1.04				
(502)	Unit 5 Seal Oil System			0.567				

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

 CONTINUE ON PAGE 3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
110000340774

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in item V performed by a contract laboratory or consulting firm?

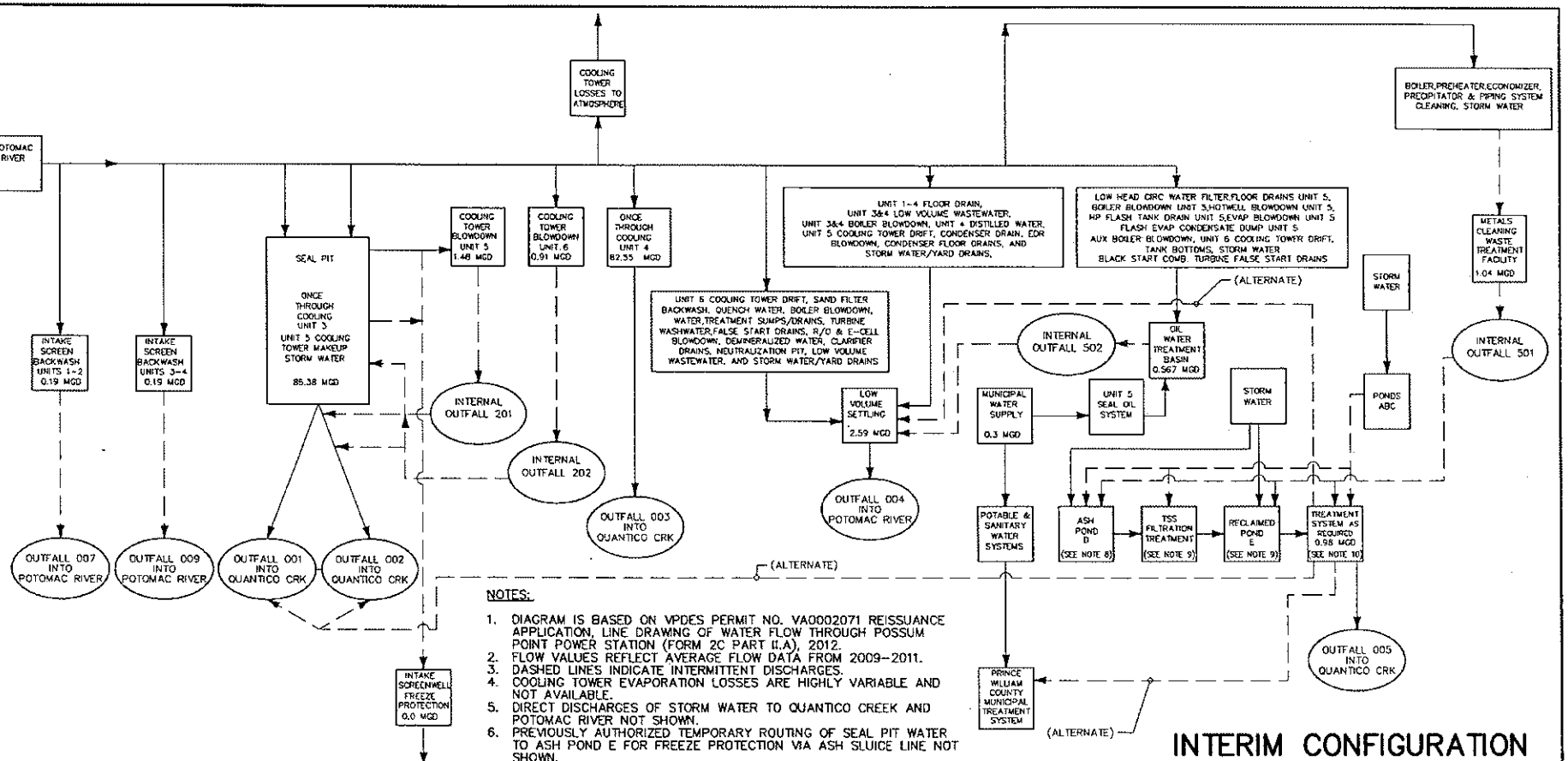
☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
ALS Environmental	10 Riverside Drive Spring City, PA 19475	(610) 948-4903	Refer to attached Conceptual Engineer's Report.

IX. CERTIFICATION

I certify under penalty of law that this document 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.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
David A. Craymer, VP Power Generation Systems Operations	(804) 273-3592
C. SIGNATURE	**D. DATE SIGNED**
David A Craymer	8/18/15



NOTES:

1. DIAGRAM IS BASED ON VPDES PERMIT NO. VA0002071 REISSUANCE APPLICATION, LINE DRAWING OF WATER FLOW THROUGH POSSUM POINT POWER STATION (FORM 2C PART II.A), 2012.
2. FLOW VALUES REFLECT AVERAGE FLOW DATA FROM 2009-2011.
3. DASHED LINES INDICATE INTERMITTENT DISCHARGES.
4. COOLING TOWER EVAPORATION LOSSES ARE HIGHLY VARIABLE AND NOT AVAILABLE.
5. DIRECT DISCHARGES OF STORM WATER TO QUANTICO CREEK AND POTOMAC RIVER NOT SHOWN.
6. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF SEAL PIT WATER TO ASH POND E FOR FREEZE PROTECTION VIA ASH SLUICE LINE NOT SHOWN.
7. ALTERNATE FLOW PATH FLOWS ARE NOT ADDED TO RECEIVING SYSTEM OR OUTFALL FLOWS.
8. PRIOR TO OCT. 1, 2015, ALL WATERS ARE PLANNED TO BE STORED IN POND D.
9. AFTER OCT. 1, 2015, FILTERED POND D AND OTHER WATERS ARE PLANNED TO BE STORED IN RECLAIMED POND E (UNTIL PERMIT MODIFICATION IS GRANTED).
10. AFTER PERMIT MODIFICATION IS GRANTED, WATERS MAY BE DIRECTLY TREATED, AS REQUIRED, AND DISCHARGED.

INTERIM CONFIGURATION

VIRGINIA POWER
NORTH CAROLINA POWER
FOSSIL & HYDRO ENGINEERING
RICHMOND,VIRGINIA

WATER FLOW BALANCE LINE DIAGRAM

POSSUM POINT POWER STATION

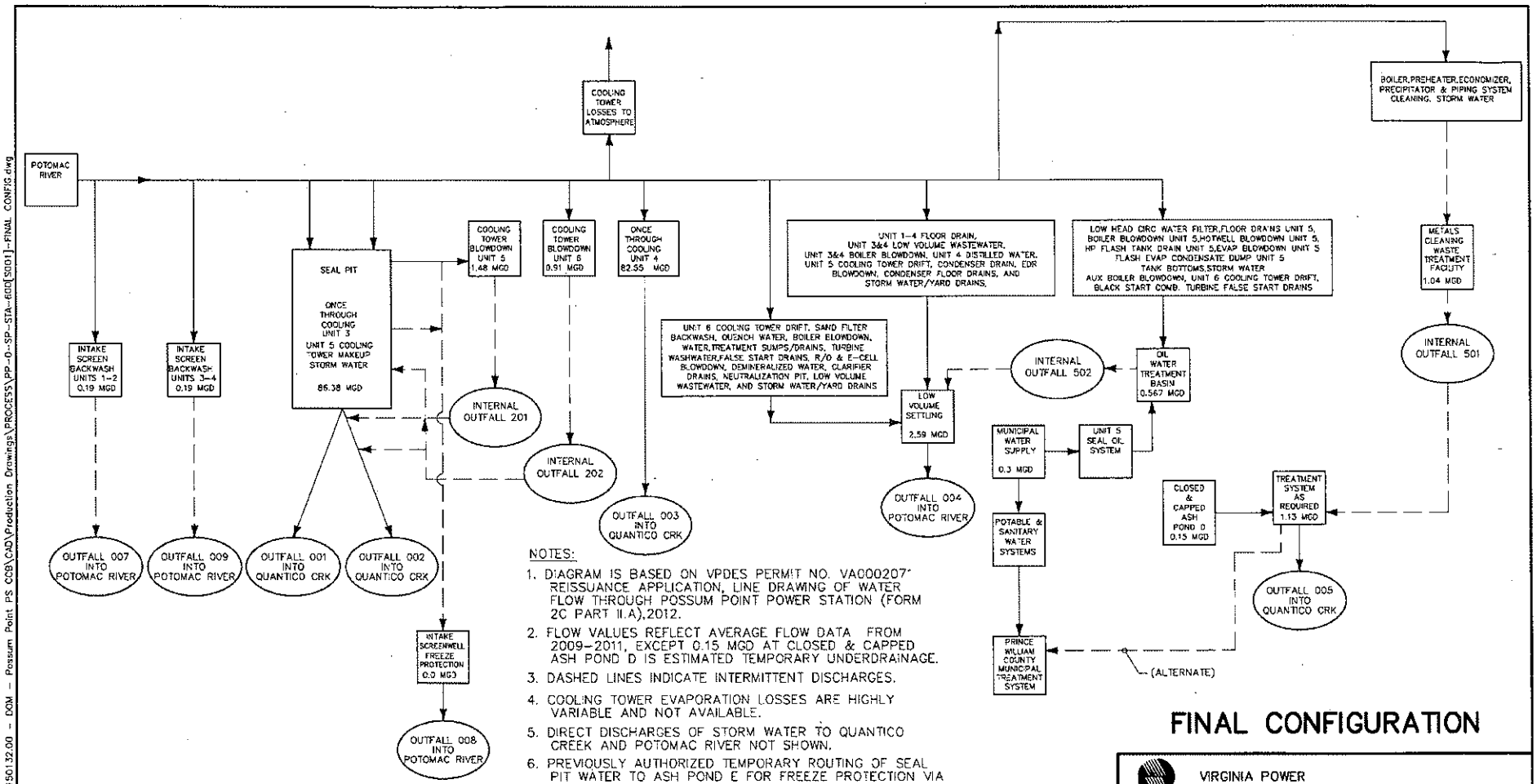
CAD FILE: DGNSPEC FOR FILE VERIFICATION DATE$$$$$$$

DRAWING NO. PP-0-SP-STA-600 REV. 1

APPROVAL OF THE SUPT OF TECH SERVICES IS REQ'D PRIOR TO ISSUE OF THIS DWG

REV	DATE	DRWN	CHKD	APPD	ENGR
2	REVISED FOR VPDES INDUSTRIAL WW PERMIT MODIFICATION				
	8/17/15	LITZIJ	DEBARJD	QUINLSC	
1	REVISED PER ENVIRONMENTAL REDLINE TO INCORPORATE STATION REVIEW.				
	5/31/12	KTC	OD-D	RWM	
0	ORIG. ISSUE FOR 600 SERIES ACAD CONVERSION. REV PER ENVIRONMENTAL REDLINE.				
	3/6/12	KTC	OD-D	RWM	— —

GAI CAD FILE PATH: Z:\Energy\2015\C150132.00 - BOM - Possum Point PS CCB\CAD\Production Drawings\PROCESS\PP-0-SP-STA-800(S001)-INTERIM CONFIG.dwg



NOTES:

1. DIAGRAM IS BASED ON VPDES PERMIT NO. VA0002077 REISSUANCE APPLICATION, LINE DRAWING OF WATER FLOW THROUGH POSSUM POINT POWER STATION (FORM 2C PART II.A),2012.
2. FLOW VALUES REFLECT AVERAGE FLOW DATA FROM 2009-2011, EXCEPT 0.15 MGD AT CLOSED & CAPPED ASH POND D IS ESTIMATED TEMPORARY UNDERDRAINAGE.
3. DASHED LINES INDICATE INTERMITTENT DISCHARGES.
4. COOLING TOWER EVAPORATION LOSSES ARE HIGHLY VARIABLE AND NOT AVAILABLE.
5. DIRECT DISCHARGES OF STORM WATER TO QUANTICO CREEK AND POTOMAC RIVER NOT SHOWN.
6. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF SEAL PIT WATER TO ASH POND E FOR FREEZE PROTECTION VIA ASH SLUICE LINE NOT SHOWN.

FINAL CONFIGURATION

VIRGINIA POWER
NORTH CAROLINA POWER
FOSSIL & HYDRO ENGINEERING
RICHMOND,VIRGINIA

WATER FLOW BALANCE LINE DIAGRAM

POSSUM POINT POWER STATION

CAD FILE: DGNSPEC FOR FILE VERIFICATION DATE$$$$$$$

DRAWING NO. PP-0-SP-STA-600 REV. 1

APPROVAL OF THE SUPT OF TECH SERVICES IS REQ'D PRIOR TO ISSUE OF THIS DWG

REV	DATE	DRWN	CHKD	APPD	ENGR	REV	DATE	DRWN	CHKD	APPD	ENGR	REV	DATE	DRWN	CHKD	APPD	ENGR
2	8/14/15	LITZIJ	DEBARJD	QUINLSC		1	5/31/12	KTC	OD-D	RWM		0	3/6/12	KTC	OD-D	RWM	— —

REVISED FOR VPDES INDUSTRIAL WW PERMIT MODIFICATION

REVISED PER ENVIRONMENTAL REDLINE TO INCORPORATE STATION REVIEW.

ORIG. ISSUE FOR 600 SERIES ACAD CONVERSION. REV PER ENVIRONMENTAL REDLINE.

GN CAD FILE PATH: Z:\Energy\2015\C150132.00 - DOM - Possum Point PS CCB\CAD\Production Drawings\PROCESS\PP-0-SP-STA-600[S001]-FINAL CONFIG.dwg

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): 110000340774

Interim & Final Configuration*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 004

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<3.1	<140	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)**	10.39	457	--	--	--	--	1	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)**	5.7	260	--	--	--	--	1	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	21	930	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	0.16	7.1	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow ***	VALUE 5.27		VALUE 4.90		VALUE 2.59		35	MGD	--	VALUE --		--
g. Temperature ** (*winter*)	VALUE 13.7		VALUE --		VALUE --		1	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 32.0		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH **	MINIMUM 7.38	MAXIMUM 8.96	MINIMUM --	MAXIMUM --			172	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide ** (24959-67-9)	X		5.1	230	--	--	--	--	1	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		<0.2	<9	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color **	X		13	--	--	--	--	--	1	PCU	LB/DA	--	--	--
d. Fecal Coliform **		X	No Sample	--	--	--	--	--	0	COL/0.1L	LB/DA	--	--	--
e. Fluoride (16984-48-8)	X		<0.16	<7.1	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)	X		<1.80	<79.2	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

*** Values are based on sum of Outfall 004 and Internal Outfall 502 flows in 2013 VPDES Permit Reissuance Application.

Interim & Final Configuration*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N) **	X		0.18	8.0	0.18	7.4	0.064	1.39	11	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<4	<200	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		0.2	9	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total **		X	<0.734	--	--	--	--	--	1	pCi/L	--	--	--	--
(2) Beta, Total **		X	<2.9	--	--	--	--	--	1	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (as SO_4) (14808-79-8)	X		42.7	1880	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (as S)	X		<0.12	<5.3	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (as SO_3) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants **	X		<0.01	<0.44	--	--	--	--	1	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		<0.09	<4.0	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.043	1.90	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		<0.03	<1.4	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		<0.0007	<0.031	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		5.7	260	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		8.7	390	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.003	0.132	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.07	3.1	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total ** (7440-31-5)	X		<0.005	<0.220	--	--	--	--	1	PPM	LB/DA	--	--	--
x. Titanium, ** Total (7440-32-6)	X		<0.002	<0.088	--	--	--	--	1	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

Interim & Final Configuration*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.001	<0.044	--	--	--	--	1	PPM	LB/DA	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		<0.003	<0.132	--	--	--	--	1	PPM	LB/DA	--	--	--
3M. Beryllium, Total (7440-41-7)	X	X		<0.0002	<0.009	--	--	--	--	1	PPM	LB/DA	--	--	--
4M. Cadmium, Total (7440-43-9)	X	X		<0.0003	<0.014	--	--	--	--	1	PPM	LB/DA	--	--	--
5M. Chromium, Total (7440-47-3)	X	X		<0.001	<0.044	--	--	--	--	1	PPM	LB/DA	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.009	<0.396	--	--	--	--	1	PPM	LB/DA	--	--	--
7M. Lead, Total (7439-92-1)	X	X		<0.001	<0.044	--	--	--	--	1	PPM	LB/DA	--	--	--
8M. Mercury, Total (7439-97-6)	X	X		<0.0002	<0.009	--	--	--	--	1	PPM	LB/DA	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		<0.011	<0.484	--	--	--	--	1	PPM	LB/DA	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		<0.003	<0.132	--	--	--	--	1	PPM	LB/DA	--	--	--
11M. Silver, Total (7440-22-4)	X	X		<0.0002	<0.009	--	--	--	--	1	PPM	LB/DA	--	--	--
12M. Thallium, Total (7440-28-0)	X	X		<0.0006	<0.027	--	--	--	--	1	PPM	LB/DA	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		<0.02	<0.88	--	--	--	--	1	PPM	LB/DA	--	--	--
14M. Cyanide, Total (57-12-5)	X	X		<0.01	<0.44	--	--	--	--	1	PPM	LB/DA	--	--	--
15M. Phenols, Total **	X	X		0.01	0.44	--	--	--	--	1	PPM	LB/DA	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS		No Sample									

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION -- VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X	X		<8.4	<0.37	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X	X		<1.4	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X	X		<3.5	<0.16	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X	X		<3.8	<0.17	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X	X		<2.3	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X	X		<2.5	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3) **	X	X		<1.1	<0.05	--	--	--	--	1	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8) **	X	X		<1.2	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X	X		<14	<0.62	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X	X		<1.8	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3) **	X	X		<4.7	<0.21	--	--	--	--	1	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X	X		<2.3	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X	X		<2.3	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X	X		<4.7	<0.21	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X	X		<5.7	<0.26	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X	X		<1.2	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3) **	X	X		<1.1	<0.05	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X	X		<2.3	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X	X		<5.5	<0.25	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X	X		<3.3	<0.15	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X	X		<1.3	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6) **	X	X		<3.8	<0.17	--	--	--	--	1	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)		X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X	X		<1.6	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X	X		<1.5	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X	X		<40	<1.8	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

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** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

Interim & Final Configuration*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3: EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X	X		<9	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) ** Perylene (191-24-2)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisoprapyl*) Ether (102-80-1)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

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** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (as *Azo-benzene*) (122-66-7)	X	X		<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3) **	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)**	X	X		<5	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X	X		<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X	X		<0.04	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

Interim & Final Configuration*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 ** (53469-21-9)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
19P. PCB-1254 ** (11097-69-1)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
20P. PCB-1221 ** (11104-28-2)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21P. PCB-1232 ** (11141-16-5)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
22P. PCB-1248 ** (12672-29-6)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
23P. PCB-1260 ** (11096-82-5)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
24P. PCB-1016 ** (12674-11-2)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X	X		<4	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on weighted average of the 2015 measured data for Outfall 502 and data in 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise noted).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): 110000340774

Interim Configuration: Pond D Comingled Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*) — OUTFALL NO. 005

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<0.8	30	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	<8	<300	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.03	<0.88	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow **	VALUE 3.5		VALUE 2.53		VALUE 0.98		70	MGD	--	VALUE --		--
g. Temperature (*winter*)	VALUE No Sample		VALUE --		VALUE --		0	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 31.43		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM 7.97	MAXIMUM 8.10	MINIMUM --	MAXIMUM --			3	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		0.07	2.1	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color		X	No Sample	--	--	--	--	--	0	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		0.5	20	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)		X	<0.081	<2.4	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on 2015 measured data (or as otherwise indicated).

** Values are based on Outfall 005 data in 2013 VPDES Permit Reissuance Application.

Interim Configuration:
Pond D Comingled Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
h. Oil and Grease		X	<3	<90	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)		X	<0.06	<1.8	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(2) Beta, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (as SO_4) (14808-79-8)	X		104	3100	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (as S)		X	<0.35	<11	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (as SO_3) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		0.10	3.0	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.15	4.4	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		0.47	14	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)		X	<0.00083	<0.03	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.061	1.8	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		15	440	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.05	1.5	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.037	1.1	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005

Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		0.0035	0.11	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		0.019	0.56	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X		X	<0.0001	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X		X	<0.00083	<0.025	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		0.0028	0.09	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		0.0056	0.17	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X		X	<0.01	<0.30	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X		X	<0.00058	<0.02	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total			X	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

* Values are based on 2015 measured data.

Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<2.4	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X		X	<0.89	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X		X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X		X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X		X	<0.11	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X		X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X		X	<0.13	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<0.17	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X		X	<0.19	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X		X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X		X	<0.27	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on 2015 measured data.

Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X		X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X		X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X		X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.59	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<0.46	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<2.9	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<1.3	<0.04	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<2.3	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X		X	<1.8	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X		X	<0.23	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<0.36	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on 2015 measured data.

Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X		X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X		X	<22.4	<0.66	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<0.36	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.41	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) Perylene (191-24-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<0.38	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<0.5	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<0.14	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON PAGE V-7

* Values are based on 2015 measured data.

Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<2.8	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X		X	<0.38	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<0.31	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<0.38	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X		X	<0.25	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X		X	<0.37	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X		X	<0.38	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X		X	<0.7	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<0.45	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<0.54	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data.

Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	<0.0007	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X		X	<0.00014	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X		X	<0.00017	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X		X	<0.00015	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X		X	<0.00025	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X		X	<0.013	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X		X	<0.00024	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X		X	<0.00017	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X		X	<0.00017	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X		X	<0.00014	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X		X	<0.00029	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X		X	<0.00015	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X		X	<0.0003	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X		X	<0.00015	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X		X	<0.00032	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X		X	<0.0004	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005.

Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	<0.00017	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X		X	<0.01	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item I of Form I*): 110000340774

Interim Configuration: Ash Dewatering and Contact Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* — OUTFALL NO. 005

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. a. (2) MASS	2. b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	2. b. (2) MASS	2. c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	2. c. (2) MASS	2. d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. a. (2) MASS	4. b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<0.8	<30	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	23	680	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.27	<7.9	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow **	VALUE 3.5		VALUE 2.53		VALUE 0.98		70	MGD	--	VALUE --		--
g. Temperature (*winter*)	VALUE No Sample		VALUE --		VALUE --		0	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 19.34		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM No Sample	MAXIMUM 7.6	MINIMUM --	MAXIMUM --			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. a. (2) MASS	3. b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. b. (2) MASS	3. c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. c. (2) MASS	3. d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. a. (2) MASS	5. b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		0.01	0.30	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color	X		No Sample	--	--	--	--	--	0	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		3	90	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)		X	<0.20	<5.9	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters (or as otherwise indicated).

** Values are based on Outfall 005 data in 2013 VPDES Permit Reissuance Application.

Interim Configuration: Ash Dewatering and Contact Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
h. Oil and Grease		X	<2	<60	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)		X	<0.33	<9.7	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(2) Beta, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		26.4	780	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)		X	<0.35	<11	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		0.07	2.1	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.4	20	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		1.2	36	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		0.015	0.44	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		5.5	170	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		27.3	800	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.091	2.7	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.69	21	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<0.0008	<0.03	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		0.96	29	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X		X	<0.0001	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X		X	<0.00083	<0.03	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		0.0070	0.21	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X		X	<0.0014	<0.05	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X		X	<0.00033	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X		X	<0.00016	<0.01	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		0.02	0.59	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X		X	<0.00058	<0.02	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total			X	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<2.4	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X		X	<0.89	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X		X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X		X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X		X	<0.11	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X		X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X		X	<0.13	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X		X	<0.17	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X		X	<0.19	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X		X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X		X	<0.27	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X		X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X		X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X		X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X		X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<0.59	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	<0.46	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	<2.9	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<1.3	<0.04	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	<2.3	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X		X	<1.8	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X		X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	<0.36	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X		X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X		X	<22.4	<0.66	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<0.36	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<0.41	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) Perylene (191-24-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<0.37	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<0.5	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<0.14	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X		X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X		X	<2.8	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X		X	<0.37	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<0.31	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X		X	<0.37	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X		X	<0.25	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X		X	<0.36	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X		X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X		X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X		X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X		X	<0.38	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X		X	<0.62	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X		X	<0.45	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<0.53	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X		X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X		X	<0.35	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	<0.0007	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X		X	<0.00013	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X		X	<0.00016	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X		X	<0.00015	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X		X	<0.00025	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X		X	<0.013	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X		X	<0.00023	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X		X	<0.00016	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X		X	<0.00016	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X		X	<0.00013	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X		X	<0.00028	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X		X	<0.00014	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X		X	<0.0002	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X		X	<0.00015	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X		X	<0.00031	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X		X	<0.0003	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005

Interim Configuration: Ash Dewatering and Contact Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	<0.00016	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X		X	<0.0099	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
110000340774

Final Configuration*

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO.
005

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<0.8	<8	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	<5	<50	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.03	<0.3	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow **	VALUE 1.34		VALUE 1.34		VALUE 1.13		4	MGD	--	VALUE --		--
g. Temperature (*winter*)	VALUE No Sample		VALUE --		VALUE --		0	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 19.35		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM No Sample	MAXIMUM 10.20	MINIMUM --	MAXIMUM --			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		0.23	2.3	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color		X	No Sample	--	--	--	--	--	0	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)		X	<0.12	<1.2	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)		X	<0.21	<2.1	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on 2015 measured data for Outfall 501 (or as otherwise indicated).

** Values are based on Internal Outfall 501 data in 2013 VPDES Permit Reissuance Application and initial flow of Closed Ash Pond D underdrain which is presumed to be approximately 0.15-MGD and is expected to reduce to 0-MGD over time.

Final Configuration*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<0.5	<5	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		0.16	1.6	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(2) Beta, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		129	1290	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)		X	<0.35	<3.5	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		0.10	1.0	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.022	0.219	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)		X	<0.016	<0.159	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)		X	<0.00083	<0.009	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.065	0.646	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		7.3	73	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.0018	0.018	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.012	0.120	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on 2015 measured data for Outfall 501.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005

Final Configuration*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)			X	<0.0005	<0.005	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)			X	<0.0001	<0.001	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.0038	<0.038	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)		X		0.023	0.229	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)			X	<0.00066	<0.007	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)		X		0.0042	0.042	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)			X	<0.00058	<0.006	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total			X	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

* Values are based on 2015 measured data for Outfall 501.

Final Configuration*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X	<2.4	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)			X	<0.89	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)			X	<0.11	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)			X	<0.13	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)			X	<0.17	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)			X	<0.19	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)			X	<0.27	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on 2015 measured data for Outfall 501.

Final Configuration*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	<0.59	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)			X	<0.46	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)			X	<2.9	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	<1.3	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)			X	<2.3	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)			X	<1.8	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on 2015 measured data for Outfall 501.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)			X	<22.3	<0.222	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	<0.41	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) Perylene (191-24-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X	<0.49	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)			X	<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)			X	<0.14	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

* Values are based on 2015 measured data for Outfall 501.

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)			X	<0.28	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131 -11-3)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)			X	<0.31	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)			X	<0.25	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)			X	<0.36	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)			X	<0.6	<0.1			--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)			X	<0.45	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	<0.53	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on 2015 measured data for Outfall 501.

Final Configuration*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	<0.0006	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)			X	<0.00024	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)			X	<0.013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)			X	<0.00023	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)			X	<0.00028	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)			X	<0.00014	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)			X	<0.0002	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)			X	<0.00031	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)			X	<0.0003	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on 2015 measured data for Outfall 501.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	005

Final Configuration*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)			X	<0.0098	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data for Outfall 501.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
110000340774

Interim & Final Configuration*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 501

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<0.8	<8	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	<5	<50	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.03	<0.3	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow **	VALUE 1.19		VALUE 1.19		VALUE 1.037		4	MGD	--	VALUE --		--
g. Temperature (*winter*)	VALUE No Sample		VALUE --		VALUE --		0	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 19.35		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM No Sample	MAXIMUM 10.20	MINIMUM --	MAXIMUM --			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		0.23	2.3	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color		X	No Sample	--	--	--	--	--	0	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)		X	<0.12	<1.2	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)		X	<0.21	<2.1	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on 2015 measured data (or as otherwise indicated).
** Values are based on Internal Outfall 501 data in 2013 VPDES Permit Reissuance Application.

Interim & Final Configuration*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<0.5	<5	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		0.16	1.6	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(2) Beta, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		129	1290	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)		X	<0.35	<3.5	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		0.10	1.0	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.022	0.219	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)		X	<0.016	<0.159	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)		X	<0.00083	<0.009	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.065	0.646	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		7.3	73	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.0018	0.018	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.012	0.120	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	501

Interim & Final Configuration*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)			X	<0.0005	<0.005	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)			X	<0.0001	<0.001	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.0038	<0.038	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)		X		0.023	0.229	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)			X	<0.00066	<0.007	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)			X	<0.00033	<0.004	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)			X	<0.00016	<0.002	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)		X		0.0042	0.042	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)			X	<0.00058	<0.006	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total			X	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

CONTINUE ON REVERSE

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X	<2.4	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)			X	<0.89	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloromethyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)			X	<0.11	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodibromomethane (124-48-1)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
10V. 2-Chloroethylvinyl Ether (110-75-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichlorobromomethane (75-27-4)			X	<0.13	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichlorodifluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloroethane (75-34-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloroethane (107-06-2)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloroethylene (75-35-4)			X	<0.17	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloropropane (78-87-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloropropylene (542-75-6)			X	<0.19	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)			X	<0.27	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				DELISTED 01-8-1981 ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	<0.59	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)			X	<0.46	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)			X	<2.9	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	<1.3	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)			X	<2.3	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)			X	<1.8	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)			X	<22.3	<0.222	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	<0.41	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) Perylene (191-24-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X	<0.49	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)			X	<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)			X	<0.14	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON PAGE V-7

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)			X	<0.28	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)			X	<0.31	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)			X	<0.25	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)			X	<0.36	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)			X	<0.6	<0.1			--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)			X	<0.45	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	<0.53	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	<0.0006	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)			X	<0.00024	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)			X	<0.013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)			X	<0.00023	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)			X	<0.00028	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)			X	<0.00014	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)			X	<0.0002	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)			X	<0.00031	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)			X	<0.0003	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	501

Interim & Final Configuration*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)			X	<0.0098	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item I of Form 1*): 110000340774

Interim & Final Configuration*

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*) — OUTFALL NO. 502

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	3.4	17	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)	No Sample	--	--	--	--	--	0	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	10	48	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	0.108	0.512	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow **	VALUE 0.567		VALUE 0.567		VALUE 0.567		35	MGD	--	VALUE --		--
g. Temperature (*winter*)	VALUE No Sample		VALUE --		VALUE --		0	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 22.38		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM No Sample	MAXIMUM 8.52	MINIMUM --	MAXIMUM --			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual		X	0	0	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color		X	No Sample	--	--	--	--	--	0	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)		X	<0.12	<0.57	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (as N)		X	<0.21	<1.0	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on 2015 measured data.

** Values are based on Internal Outfall 502 data in 2013 VPDES Permit Reissuance Application.

Interim & Final Configuration*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
h. Oil and Grease		X	<0.5	<3	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		0.1	0.5	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(2) Beta, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(3) Radium, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		37.2	177	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)		X	<0.35	<1.7	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		0.082	0.388	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.036	0.171	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)		X	<0.016	<0.076	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)		X	<0.00083	<0.004	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.69	3.3	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		9.7	46	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.0045	0.022	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.14	0.67	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	502

Interim & Final Configuration*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X	<0.00033	<0.002	--	--	--	--	1	PPM	LB/DA	--	--	--
2M. Arsenic, Total (7440-38-2)			X	<0.0005	<0.003	--	--	--	--	1	PPM	LB/DA	--	--	--
3M. Beryllium, Total (7440-41-7)			X	<0.0001	<0.001	--	--	--	--	1	PPM	LB/DA	--	--	--
4M. Cadmium, Total (7440-43-9)			X	<0.00016	<0.001	--	--	--	--	1	PPM	LB/DA	--	--	--
5M. Chromium, Total (7440-47-3)			X	<0.00033	<0.002	--	--	--	--	1	PPM	LB/DA	--	--	--
6M. Copper, Total (7440-50-8)	X			0.015	0.071	--	--	--	--	1	PPM	LB/DA	--	--	--
7M. Lead, Total (7439-92-1)			X	<0.00033	<0.002	--	--	--	--	1	PPM	LB/DA	--	--	--
8M. Mercury, Total (7439-97-6)			X	<0.00016	<0.001	--	--	--	--	1	PPM	LB/DA	--	--	--
9M. Nickel, Total (7440-02-0)	X			0.032	0.152	--	--	--	--	1	PPM	LB/DA	--	--	--
10M. Selenium, Total (7782-49-2)			X	<0.00066	<0.004	--	--	--	--	1	PPM	LB/DA	--	--	--
11M. Silver, Total (7440-22-4)			X	<0.00033	<0.002	--	--	--	--	1	PPM	LB/DA	--	--	--
12M. Thallium, Total (7440-28-0)			X	<0.00016	<0.001	--	--	--	--	1	PPM	LB/DA	--	--	--
13M. Zinc, Total (7440-66-6)	X			0.02	0.10	--	--	--	--	1	PPM	LB/DA	--	--	--
14M. Cyanide, Total (57-12-5)			X	<0.00058	<0.003	--	--	--	--	1	PPM	LB/DA	--	--	--
15M. Phenols, Total			X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS		No Sample									

* Values are based on 2015 measured data.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X	<2.4	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)			X	<0.89	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)			X	<0.11	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)			X	<0.13	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)			X	<0.17	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)			X	<0.19	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)			X	<0.16	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)			X	<0.27	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X	<0.22	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X	<0.12	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)			X	<0.21	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				DELISTED 01-8-1981 ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)			X	<0.24	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X	<0.59	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)			X	<0.46	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)			X	<2.9	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X	<1.3	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)			X	<2.3	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)			X	<1.8	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)			X	<0.23	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)			X	<0.36	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

* Values are based on 2015 measured data.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)			X	<22.5	<0.107	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)			X	<0.36	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)			X	<0.41	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) Perylene (191-24-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloraisopropyl*) Ether (102-80-1)			X	<0.5	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)			X	<0.33	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)			X	<0.34	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)			X	<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)			X	<0.14	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

* Values are based on 2015 measured data.

Interim & Final Configuration*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X	<0.15	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)			X	<2.8	<0.02	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131 -11-3)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)			X	<0.31	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-toluene (606-20-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl Phthalate (117-84-0)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)			X	<0.25	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)			X	<0.37	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)			X	<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)			X	<0.32	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X	<0.29	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)			X	<0.38	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)			X	<0.61	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)			X	<0.45	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X	<0.54	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on 2015 measured data.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X	<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)			X	<0.35	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X	<0.26	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X	<0.0006	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)			X	<0.00024	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)			X	<0.013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)			X	<0.00023	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)			X	<0.00013	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)			X	<0.00028	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)			X	<0.00014	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)			X	<0.0002	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)			X	<0.00015	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)			X	<0.00031	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)			X	<0.0003	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on 2015 measured data.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	502

Interim & Final Configuration*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X	<0.00016	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)			X	No Sample	--	--	--	--	--	0	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)			X	<0.0098	<0.001	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on 2015 measured data.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item I of Form I*): 110000340774

ALTERNATE Interim Configuration: Pond D Comingled Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 004

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<2.0	<150	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*) **	10.39	761	--	--	--	--	1	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*) **	5.7	420	--	--	--	--	1	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	<0.10	<1500	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.10	<7.4	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow ***	VALUE 8.77		VALUE 7.43		VALUE 3.57		35	MGD	--	VALUE --		--
g. Temperature (*winter*)**	VALUE 13.7		VALUE --		VALUE --		1	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 31.8		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH	MINIMUM 7.38	MAXIMUM 8.96	MINIMUM --	MAXIMUM --	[redacted]		172	STANDARD UNITS		[redacted]		

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide ** (24959-67-9)	X		5.1	380	--	--	--	--	1	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		<0.1	<10	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color **	X		13	--	--	--	--	--	1	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		<0.4	<30	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)	X		<1.35	<98.9	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

*** Values are based on sum of Outfalls 004, 005 and 502 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*) **	X		0.18	14	0.18	12	0.064	1.91	11	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<4	<300	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		<0.2	<20	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total **		X	<0.734	--	--	--	--	--	1	pCi/L	--	--	--	--
(2) Beta, Total **		X	<2.9	--	--	--	--	--	1	pCi/L	--	--	--	--
(3) Radium, Total **		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total **		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		73.0	5350	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)	X		<0.24	<18	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants **	X		<0.01	<0.74	--	--	--	--	1	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		<0.10	<7.4	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.1	8	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		<0.25	<19	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		<0.0008	<0.059	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		3.0	220	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		12	880	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.03	2.2	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.06	4.4	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5) **	X		<0.005	<0.366	--	--	--	--	1	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6) **	X		<0.002	<0.147	--	--	--	--	1	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.003	<0.220	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		<0.011	<0.806	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X	X		<0.0002	<0.015	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X	X		<0.0003	<0.022	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X	X		<0.001	<0.074	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.005	<0.366	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X	X		<0.001	<0.074	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X	X		<0.0002	<0.015	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		<0.007	<0.513	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		<0.005	<0.366	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X	X		<0.0003	<0.022	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X	X		<0.0004	<0.030	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		<0.02	<1.5	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X	X		<0.01	<0.8	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total **	X	X		0.01	0.74	--	--	--	--	1	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X	X		<5.5	<0.41	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X	X		<1.2	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X	X		<1.9	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X	X		<2.1	<0.16	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X	X		<1.3	<0.10	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X	X		<1.4	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)**	X	X		<1.1	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)**	X	X		<1.2	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X	X		<7.2	<0.53	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X	X		<0.98	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)**	X	X		<4.7	<0.35	--	--	--	--	1	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X	X		<1.3	<0.10	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X	X		<1.3	<0.10	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X	X		<2.5	<0.19	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X	X		<3.0	<0.22	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X	X		<0.75	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl** Chloride (74-87-3)	X	X		<1.1	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).
** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X	X		<1.4	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X	X		<2.9	<0.22	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X	X		<1.8	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X	X		<0.72	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6) **	X	X		<3.8	<0.28	--	--	--	--	1	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X	X		<0.92	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X	X		<0.88	<0.07	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X	X		<21	<1.6	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

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** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION -- BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X	X		<20	<1.5	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) ** Perylene (191-24-2)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-** toluene (606-20-2)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl ** Phthalate (117-84-0)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X	X		<0.3	<0.03	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X	X		<4	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (1,2,3-*cd*) Pyrene (193-39-5)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).

** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X	X		<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).
** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242** (53469-21-9)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
19P. PCB-1254** (11097-69-1)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
20P. PCB-1221** (11104-28-2)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21P. PCB-1232** (11141-16-5)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
22P. PCB-1248** (12672-29-6)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
23P. PCB-1260** (11096-82-5)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
24P. PCB-1016** (12674-11-2)	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond D Comingled Water and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004(or as otherwise indicated).
** Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item I of Form 1*): 110000340774

ALTERNATE Interim Configuration: Pond D Comingled Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 001/002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<3.0	<3200	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*) **	14.66	15440	--	--	--	--	1	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*) **	25.8	27200	--	--	--	--	1	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	<13	<14000	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.07	<74	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow ***	VALUE 126.2		VALUE 125.3		VALUE 87.36		36	MGD	--	VALUE --		--
g. Temperature ** (*winter*)	VALUE 15.5		VALUE --		VALUE --		1	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 38.9		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH **	MINIMUM 7.7	MAXIMUM 8.4	MINIMUM --	MAXIMUM --			36	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide ** (24959-67-9)	X		0.28	300	--	--	--	--	1	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		<0.1	<200	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color **	X		20	NA	--	--	--	--	1	PCU	--	--	--	--
d. Fecal Coliform **		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		0.2	300	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)	X		2.41	2540	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Waters and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

*** Values are based on the sum of Outfall 001/002 and Outfall 005 flows in the 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Pond D Comingled Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N) **	X		0.4	500	--	--	--	--	1	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<5	<6000	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		<0.32	<340	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total **		X	<0.646	--	--	--	--	--	1	pCi/L	--	--	--	--
(2) Beta, Total **		X	<2.79	--	--	--	--	--	1	pCi/L	--	--	--	--
(3) Radium, Total **		X	--	--	--	--	--	--	1	pCi/L	--	--	--	--
(4) Radium 226, Total **		X	--	--	--	--	--	--	1	pCi/L	--	--	--	--
k. Sulfate (as SO_4) (14808-79-8)	X		30.3	32000	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide ** (as S)	X		<0.06	<64	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite ** (as SO_3) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants **	X		<0.01	<11	--	--	--	--	1	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		<0.10	<110	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.05	<53	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		0.04	43	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		<0.0008	<0.843	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.41	440	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		8.3	8800	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		<0.01	<11	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.12	130	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total ** (7440-31-5)	X		<0.005	<5.27	--	--	--	--	1	PPM	LB/DA	--	--	--
x. Titanium, ** Total (7440-32-6)	X		<0.005	<5.27	--	--	--	--	1	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Water and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	001/002

ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.002	<2.11	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		<0.004	<4.22	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X	X		<0.0003	<0.316	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.011	<11.6	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		<0.005	<5.27	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		<0.004	<4.22	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		<0.01	<11	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X	X		<0.01	<11	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total **	X	X		<0.01	<11	--	--	--	--	1	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

CONTINUE ON REVERSE

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Water and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X	X		<1.5	<1.6	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X	X		<4.3	<4.6	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X	X		<4.6	<4.9	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X	X		<3.1	<3.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)**	X	X		<1.1	<1.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether** (110-75-8)	X	X		<1.2	<1.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X	X		<1.6	<1.7	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X	X		<2.2	<2.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)**	X	X		<4.7	<5.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X	X		<5.8	<6.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X	X		<7.0	<7.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X	X		<1.4	<1.5	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl** Chloride (74-87-3)	X	X		<1.1	<1.2	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Water and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X	X		<6.8	<7.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X	X		<4.0	<4.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X	X		<1.6	<1.7	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)**	X	X		<3.8	<4.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X	X		<1.9	<2.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X	X		<1.8	<1.9	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)**	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Water and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

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ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X	X		<6.8	<7.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) ** Perylene (191-24-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane ** (111-91-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether ** (101-55-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--

EPA Form 3510-2C (8-90)

CONTINUE ON PAGE V-7

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ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X	X		<20	<22	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-** toluene (606-20-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl ** Phthalate (117-84-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X	X		<100	<106	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

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** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration:
Pond D Comingled Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X	X		<0.2	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON PAGE V-9

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EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	001/002

ALTERNATE Interim Configuration: Pond D Comingled Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242** (53469-21-9)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
19P. PCB-1254** (11097-69-1)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
20P. PCB-1221** (11104-28-2)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
21P. PCB-1232** (11141-16-5)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
22P. PCB-1248** (12672-29-6)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
23P. PCB-1260** (11096-82-5)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
24P. PCB-1016** (12674-11-2)	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on the weighted average of the 2015 measured data for Pond D Comingled Water and data in the 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): 110000340774

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 004

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<3	<300	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*)**	10.39	761	--	--	--	--	1	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*) **	5.7	420	--	--	--	--	1	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	22	1700	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.19	<14	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow ***	VALUE 8.77		VALUE 7.43		VALUE 3.57		35	MGD	--	VALUE --		--
g. Temperature (*winter*) **	VALUE 13.7		VALUE --		VALUE --		1	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 28.8		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH **	MINIMUM 7.38	MAXIMUM 8.96	MINIMUM --	MAXIMUM --			172	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide** (24959-67-9)	X		5.1	380	--	--	--	--	1	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		<0.1	<10	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color**	X		13	--	--	--	--	--	1	PCU	--	--	--	--
d. Fecal Coliform		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		<0.9	<70	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)	X		<1.4	<110	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

*** Values are based on sum of Outfalls 004, 005, and 502 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)**	X		0.18	14	0.18	12	0.064	1.91	11	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<4	<300	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		<0.3	<30	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total**		X	<0.734	--	--	--	--	--	1	pCi/L	--	--	--	--
(2) Beta, Total**		X	<2.9	--	--	--	--	--	1	pCi/L	--	--	--	--
(3) Radium, Total**		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
(4) Radium 226, Total**		X	No Sample	--	--	--	--	--	0	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		38.6	2830	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)	X		<0.18	<14	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants**	X		<0.01	<0.74	--	--	--	--	1	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		<0.09	<6.6	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.2	20	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		<0.33	<25	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		<0.005	<0.366	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		5.7	420	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		14	1100	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		0.026	1.91	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.23	17	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5)**	X		<0.005	<0.366	--	--	--	--	1	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6)**	X		<0.002	<0.147	--	--	--	--	1	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.001	<0.074	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		<0.25	<19	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X	X		<0.0002	<0.015	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X	X		<0.0003	<0.022	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X	X		<0.001	<0.074	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.007	<0.513	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X	X		<0.001	<0.074	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X	X		<0.0002	<0.015	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		<0.010	<0.732	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		<0.003	<0.220	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X	X		<0.0003	<0.022	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X	X		<0.0005	<0.037	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		<0.02	<1.5	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X	X		<0.01	<0.74	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total **	X	X		0.01	0.74	--	--	--	--	1	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X	X		<6.9	<0.51	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X	X		<1.3	<0.10	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X	X		<2.7	<0.20	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloro-methyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X	X		<2.9	<0.22	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X	X		<1.8	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodi-bromomethane (124-48-1)	X	X		<2.0	<0.15	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3)**	X	X		<1.1	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
10V. 2-Chloro-ethylvinyl Ether (110-75-8)**	X	X		<1.2	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X	X		<11	<0.81	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichloro-bromomethane (75-27-4)	X	X		<1.4	<0.11	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichloro-difluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloro-ethane (75-34-3)**	X	X		<4.7	<0.35	--	--	--	--	1	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloro-ethane (107-06-2)	X	X		<1.8	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloro-ethylene (75-35-4)	X	X		<1.8	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloro-propane (78-87-5)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloro-propylene (542-75-6)	X	X		<3.6	0.27	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X	X		<4.3	<0.32	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X	X		<0.97	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3) **	X	X		<1.1	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).
**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X	X		<1.8	<0.14	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X	X		<4.2	<0.31	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X	X		<2.6	<0.20	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X	X		<1.0	<0.08	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)**	X	X		<3.8	<0.28	--	--	--	--	1	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X	X		<1.3	<0.10	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X	X		<1.2	<0.09	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X	X		<31	<2.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).
**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X	X		<20	<1.5	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) ** Perylene (191-24-2)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

EPA Form 3510-2C (8-90)

CONTINUE ON PAGE V-7

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131-11-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-** toluene (606-20-2)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl ** Phthalate (117-84-0)	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X	X		<0.3	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)**	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8) **	X	X		<5	<0.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X	X		<4	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X	X		<0.2	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X	X		<0.03	<0.01	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	004

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X	X		<0.1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9) **	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1) **	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)**	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5) **	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)**	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)**	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)**	X	X		<1	<0.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X	X		<3	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points, Pond E contact waters, and Outfall 502 and data in the 2013 VPDES Permit Reissuance Application for Outfall 004 (or as otherwise indicated).

**Values are based on Outfall 004 data in 2013 VPDES Permit Reissuance Application.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): 110000340774

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)* [redacted] OUTFALL NO. 001/002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	< 3	<4000	--	--	--	--	1	PPM	LB/DAY	--	--	--
b. Chemical Oxygen Demand (*COD*) **	14.66	15440	--	--	--	--	1	PPM	LB/DAY	--	--	--
c. Total Organic Carbon (*TOC*)**	25.8	27200	--	--	--	--	1	PPM	LB/DAY	--	--	--
d. Total Suspended Solids (*TSS*)	13	<14000	--	--	--	--	1	PPM	LB/DAY	--	--	--
e. Ammonia (*as N*)	<0.08	<85	--	--	--	--	1	PPM	LB/DAY	--	--	--
f. Flow***	VALUE 126.2		VALUE 125.3		VALUE 87.36		36	MGD	--	VALUE --		--
g. Temperature** (*winter*)	VALUE 15.5		VALUE --		VALUE --		1	°C		VALUE --		--
h. Temperature (*summer*)	VALUE 38.9		VALUE --		VALUE --		1	°C		VALUE --		--
i. pH**	MINIMUM 7.7	MAXIMUM 8.4	MINIMUM --	MAXIMUM --	[redacted]		36	STANDARD UNITS		[redacted]		

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide ** (24959-67-9)	X		0.28	300	--	--	--	--	1	PPM	LB/DA	--	--	--
b. Chlorine, Total Residual	X		<0.1	<200	--	--	--	--	1	PPM	LB/DA	--	--	--
c. Color **	X		20	--	--	--	--	--	1	PCU	--	--	--	--
d. Fecal Coliform **		X	No Sample	--	--	--	--	--	0	COL/0.1L	--	--	--	--
e. Fluoride (16984-48-8)	X		0.2	300	--	--	--	--	1	PPM	LB/DA	--	--	--
f. Nitrate-Nitrite (*as N*)	X		<2.5	<2700	--	--	--	--	1	PPM	LB/DA	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

*** Values are based on sum of Outfall 001/002 and Outfall 005 flows in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*) **	X		0.4	500	--	--	--	--	1	PPM	LB/DA	--	--	--
h. Oil and Grease	X		<5	<6000	--	--	--	--	1	PPM	LB/DA	--	--	--
i. Phosphorus (as P), Total (7723-14-0)	X		<0.33	<350	--	--	--	--	1	PPM	LB/DA	--	--	--
j. Radioactivity														
(1) Alpha, Total **		X	<0.646	--	--	--	--	--	1	pCi/L	--	--	--	--
(2) Beta, Total **		X	<2.79	--	--	--	--	--	1	pCi/L	--	--	--	--
(3) Radium, Total **		X	--	--	--	--	--	--	1	pCi/L	--	--	--	--
(4) Radium 226, Total **		X	--	--	--	--	--	--	1	pCi/L	--	--	--	--
k. Sulfate (*as SO_4*) (14808-79-8)	X		28.1	29600	--	--	--	--	1	PPM	LB/DA	--	--	--
l. Sulfide (*as S*)	X		<0.06	<64	--	--	--	--	1	PPM	LB/DA	--	--	--
m. Sulfite ** (*as SO_3*) (14265-45-3)		X	No Sample	--	--	--	--	--	0	PPM	LB/DA	--	--	--
n. Surfactants **	X		<0.01	<11	--	--	--	--	1	PPM	LB/DA	--	--	--
o. Aluminum, Total (7429-90-5)	X		<0.09	<95	--	--	--	--	1	PPM	LB/DA	--	--	--
p. Barium, Total (7440-39-3)	X		0.1	200	--	--	--	--	1	PPM	LB/DA	--	--	--
q. Boron, Total (7440-42-8)	X		0.04	43	--	--	--	--	1	PPM	LB/DA	--	--	--
r. Cobalt, Total (7440-48-4)	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DA	--	--	--
s. Iron, Total (7439-89-6)	X		0.48	510	--	--	--	--	1	PPM	LB/DA	--	--	--
t. Magnesium, Total (7439-95-4)	X		8.24	8680	--	--	--	--	1	PPM	LB/DA	--	--	--
u. Molybdenum, Total (7439-98-7)	X		<0.002	<2.11	--	--	--	--	1	PPM	LB/DA	--	--	--
v. Manganese, Total (7439-96-5)	X		0.13	140	--	--	--	--	1	PPM	LB/DA	--	--	--
w. Tin, Total (7440-31-5) **	X		<0.005	<5.27	--	--	--	--	1	PPM	LB/DA	--	--	--
x. Titanium, Total (7440-32-6) **	X		<0.005	<5.27	--	--	--	--	1	PPM	LB/DA	--	--	--

 CONTINUE ON PAGE V-3

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters , and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	001/002

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DAY	--	--	--
2M. Arsenic, Total (7440-38-2)	X	X		<0.02	<22	--	--	--	--	1	PPM	LB/DAY	--	--	--
3M. Beryllium, Total (7440-41-7)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
4M. Cadmium, Total (7440-43-9)	X	X		<0.0003	<0.316	--	--	--	--	1	PPM	LB/DAY	--	--	--
5M. Chromium, Total (7440-47-3)	X	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DAY	--	--	--
6M. Copper, Total (7440-50-8)	X	X		<0.011	<11.6	--	--	--	--	1	PPM	LB/DAY	--	--	--
7M. Lead, Total (7439-92-1)	X	X		<0.001	<1.06	--	--	--	--	1	PPM	LB/DAY	--	--	--
8M. Mercury, Total (7439-97-6)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
9M. Nickel, Total (7440-02-0)	X	X		<0.006	<6.32	--	--	--	--	1	PPM	LB/DAY	--	--	--
10M. Selenium, Total (7782-49-2)	X	X		<0.003	<3.16	--	--	--	--	1	PPM	LB/DAY	--	--	--
11M. Silver, Total (7440-22-4)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
12M. Thallium, Total (7440-28-0)	X	X		<0.0002	<0.211	--	--	--	--	1	PPM	LB/DAY	--	--	--
13M. Zinc, Total (7440-66-6)	X	X		<0.02	<22	--	--	--	--	1	PPM	LB/DAY	--	--	--
14M. Cyanide, Total (57-12-5)	X	X		<0.01	<11	--	--	--	--	1	PPM	LB/DAY	--	--	--
15M. Phenols, Total **	X	X		<0.01	<11	--	--	--	--	1	PPM	LB/DAY	--	--	--
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS No Sample											

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2V. Acrylonitrile (107-13-1)	X	X		<1.5	<1.6	--	--	--	--	1	PPB	LB/DAY	--	--	--
3V. Benzene (71-43-2)	X	X		<4.4	<4.7	--	--	--	--	1	PPB	LB/DAY	--	--	--
4V. Bis (*Chloromethyl*) Ether (542-88-1)				*DELISTED 02-4-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
5V. Bromoform (75-25-2)	X	X		<4.7	<5.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
6V. Carbon Tetrachloride (56-23-5)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
7V. Chlorobenzene (108-90-7)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
8V. Chlorodibromomethane (124-48-1)	X	X		<3.1	<3.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
9V. Chloroethane (75-00-3) **	X	X		<1.1	<1.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
10V. 2-Chloroethylvinyl Ether (110-75-8) **	X	X		<1.2	<1.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
11V. Chloroform (67-66-3)	X	X		<1.6	<1.7	--	--	--	--	1	PPB	LB/DAY	--	--	--
12V. Dichlorobromomethane (75-27-4)	X	X		<2.2	<2.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
13V. Dichlorodifluoromethane (75-71-8)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
14V. 1,1-Dichloroethane (75-34-3)**	X	X		<4.7	<5.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
15V. 1,2-Dichloroethane (107-06-2)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
16V. 1,1-Dichloroethylene (75-35-4)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
17V. 1,2-Dichloropropane (78-87-5)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
18V. 1,3-Dichloropropylene (542-75-6)	X	X		<5.9	<6.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
19V. Ethylbenzene (100-41-4)	X	X		<7.2	<7.6	--	--	--	--	1	PPB	LB/DAY	--	--	--
20V. Methyl Bromide (74-83-9)	X	X		<1.4	<1.5	--	--	--	--	1	PPB	LB/DAY	--	--	--
21V. Methyl Chloride (74-87-3) **	X	X		<1.1	<1.2	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-5

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X	X		<2.8	<3.0	--	--	--	--	1	PPB	LB/DAY	--	--	--
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X	X		<6.9	<7.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
24V. Tetrachloro-ethylene (127-18-4)	X	X		<4.1	<4.4	--	--	--	--	1	PPB	LB/DAY	--	--	--
25V. Toluene (108-88-3)	X	X		<6	<7	--	--	--	--	1	PPB	LB/DAY	--	--	--
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X	X		<1.6	<1.7	--	--	--	--	1	PPB	LB/DAY	--	--	--
27V. 1,1,1-Trichloro-ethane (71-55-6)**	X	X		<3.8	<4.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
28V. 1,1,2-Trichloro-ethane (79-00-5)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
29V Trichloro-ethylene (79-01-6)	X	X		<1.9	<2.1	--	--	--	--	1	PPB	LB/DAY	--	--	--
30V. Trichloro-fluoromethane (75-69-4)				*DELISTED 01-8-1981* ANALYSIS NOT REQUIRED FOR THIS PARAMETER											
31V. Vinyl Chloride (75-01-4)	X	X		<1.8	<1.9	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2A. 2,4-Dichloro-phenol (120-83-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
3A. 2,4-Dimethyl-phenol (105-67-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
5A. 2,4-Dinitro-phenol (51-28-5)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
6A. 2-Nitrophenol (88-75-5) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
7A. 4-Nitrophenol (100-02-7) **	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
8A. P-Chloro-M-Cresol (59-50-7)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9A. Pentachloro-phenol (87-86-5)	X	X		<50	<53	--	--	--	--	1	PPB	LB/DAY	--	--	--
10A. Phenol (108-95-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
11A. 2,4,6-Trichloro-phenol (88-05-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

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** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
2B. Acenaphtylene (208-96-8) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
3B. Anthracene (120-12-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
4B. Benzidine (92-87-5)	X	X		<6.5	<6.9	--	--	--	--	1	PPB	LB/DAY	--	--	--
5B. Benzo (*a*) Anthracene (56-55-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
6B. Benzo (*a*) Pyrene (50-32-8)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
7B. 3,4-Benzo-fluoranthene (205-99-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
8B. Benzo (*ghi*) ** Perylene (191-24-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
9B. Benzo (*k*) Fluoranthene (207-08-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
14B. 4-Bromophenyl Phenyl Ether (101-55-3) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
15B. Butyl Benzyl Phthalate (85-68-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
16B. 2-Chloro-naphthalene (91-58-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
17B. 4-Chloro-phenyl-Phenyl Ether (7005-72-3) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
18B. Chrysene (218-01-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
20B. 1,2-Dichloro-benzene (95-50-1)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
21B. 1,3-Di-chloro-benzene (541-73-1)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-7

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ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--
23B. 3,3-Dichloro-benzidine (91-94-1)	X	X		<20	<22	--	--	--	--	1	PPB	LB/DAY	--	--	--
24B. Diethyl Phthalate (84-66-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
25B. Dimethyl Phthalate (131 -11-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
26B. Di-N-Butyl Phthalate (84-74-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
27B. 2,4-Dinitro-toluene (121-14-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
28B. 2,6-Dinitro-** toluene (606-20-2)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
29B. Di-N-Octyl ** Phthalate (117-84-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X	X		<100	<106	--	--	--	--	1	PPB	LB/DAY	--	--	--
31B. Fluoranthene (206-44-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
32B. Fluorene (86-73-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
33B. Hexachloro-benzene (118-74-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
34B. Hexachloro-butadiene (87-68-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
35B. Hexachloro-cyclopentadiene (77-47-4)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
36B Hexachloro-ethane (67-72-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
38B. Isophorone (78-59-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
39B. Naphthalene (91-20-3)**	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
40B. Nitrobenzene (98-95-3)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
41B. N-Nitro-sodimethylamine (62-75-9)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--

CONTINUE ON REVERSE

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
44B. Phenanthrene (85-01-8) **	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
45B. Pyrene (129-00-0)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X	X		<10	<11	--	--	--	--	1	PPB	LB/DAY	--	--	--
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
2P. α-BHC (319-84-6)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
3P. β-BHC (319-85-7)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
4P. γ-BHC (58-89-9)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
5P. δ-BHC (319-86-8)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--
6P. Chlordane (57-74-9)	X	X		<0.2	<0.3	--	--	--	--	1	PPB	LB/DAY	--	--	--
7P. 4,4'-DDT (50-29-3)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
8P. 4,4'-DDE (72-55-9)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
9P. 4,4'-DDD (72-54-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
10P. Dieldrin (60-57-1)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
11P. α-Enosulfan (115-29-7)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
12P. β-Endosulfan (115-29-7)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
13P. Endosulfan Sulfate (1031-07-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
14P. Endrin (72-20-8)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
15P. Endrin Aldehyde (7421-93-4)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
16P. Heptachlor (76-44-8)	X	X		<0.05	<0.06	--	--	--	--	1	PPB	LB/DAY	--	--	--

 CONTINUE ON PAGE V-9

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
110000340774	001/002

ALTERNATE Interim Configuration: Dewatering and Contact Waters*

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X	X		<0.1	<0.2	--	--	--	--	1	PPB	LB/DAY	--	--	--
18P. PCB-1242 (53469-21-9)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
19P. PCB-1254 (11097-69-1)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
20P. PCB-1221 (11104-28-2)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
21P. PCB-1232 (11141-16-5)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
22P. PCB-1248 (12672-29-6)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
23P. PCB-1260 (11096-82-5)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
24P. PCB-1016 (12674-11-2)**	X	X		<1	<2	--	--	--	--	1	PPB	LB/DAY	--	--	--
25P. Toxaphene (8001-35-2)	X	X		<5	<6	--	--	--	--	1	PPB	LB/DAY	--	--	--

* Values are based on weighted average of the 2015 measured data for Pond E ash dewatering well points and Pond E contact waters, and data in 2013 VPDES Permit Reissuance Application for Outfall 001/002 (or as otherwise indicated).

** Values are based on Outfall 001/002 data in 2013 VPDES Permit Reissuance Application.

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VPDES Permit Modification
Conceptual Engineering Report

Virginia Electric and Power Company d/b/a Dominion Virginia Power
Coal Combustion Residuals Pond Closure Project
Possum Point Power Station
Prince William County, Virginia

GAI Project Number: C150132.00, Task 047

August 2015

Dominion

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1.0 Project Overview

1.1 Introduction

Virginia Electric and Power Company d/b/a Dominion Virginia Power (Dominion) is in the process of implementing a long-term strategy for closure of its existing coal combustion residuals (CCR) (ash) ponds at Possum Point Power Station (Station), an 1,845 megawatt natural gas and oil fired (previously coal-fired) steam electric generating station near Dumfries, Prince William County, Virginia (VA).

1.2 Project Description

Dominion is currently working to close five existing ash ponds at the Station. The five ponds are designated A, B, C, D and E and their locations are shown on Drawing C150132.00 - Aerial Outfall Exhibit, Station Outfalls and Treatment Facilities. Ponds A, B, and C were originally three contiguous ponds that have been inactive since the 1960s. All five ponds are scheduled for closure by April 2018 in accordance with the relevant provisions of the United States Environmental Protection Agency's CCR rule, which was published on April 17, 2015, and codified in 40 Code of Federal Regulations (CFR) Part 257, Subpart D.

Ash Pond E has been decanted, dewatered, and is presently being dredged, all in accordance with applicable state and local requirements. The dredged ash materials and contact/pore waters are being relocated to Ash Pond D for storage. Ash Pond E can then be clean-closed and regraded. Ash Ponds A, B, and C are in the process of being dewatered, dredged, and clean-closed. The dredged ash materials and contact/pore waters are in the process of being relocated to Ash Pond D for storage. Following transfer of the dredged ash materials and associated waters from A, B, C and E, Ash Pond D will be decanted, regraded, capped, and closed. A single regulated solid waste facility for the Station's ash will be maintained at closed Ash Pond D subject to all applicable state closure and post-closure care requirements; the construction drawings, specifications, and solid waste permitting application package for this facility will be provided to VA Department of Environmental Quality (DEQ) under separate cover.

1.2.1 Purpose and Need

The process leading to closure of Ponds A, B, C, D, and E will involve management of the following water/wastewater types:

- ***Pond E Decant Water***, which refers to the surface water stored in Pond E that was discharged into Quantico Creek in May 2015 in compliance with the Station's existing VA Pollutant Discharge Elimination System (VPDES) permit by sequentially removing stop logs at the outfall structure (to Outfall 005). The Decant Water was discharged to begin dredging of ash in Pond E.
- ***Ash Dewatering Water*** from Ponds A, B, C, D and E. Dewatering Water refers to the water that is produced from the dewatering of the ash in order to stabilize the ash and allow for its removal by mechanical dredging (Ponds A, B, C, and E) or its grading for the construction of a cap system (Pond D). Dewatering Water is currently being accumulated onsite by the excavation of trenches to drain the ash and by the installation of wells that are being used to pump water out of the ash. Dewatering Water is presently being stored in Ash Pond D as allowed under the existing VPDES permit and is not being discharged.

- ***Contact Water*** from Ponds A, B, C, D and E. Contact Water refers to stormwater that comes in contact with ash. Contact Water must be removed from the working areas to close the ponds.
- ***Outfall 501 Water*** from the Station's metal cleaning basins. Outfall 501 Water is a permitted internal outfall that was previously discharged into Pond E.
- ***Outfall 502 Water*** from the Station's oily water treatment basin. Outfall 502 Water is a permitted internal outfall that was previously discharged into Pond E.
- ***Pond D Comingled Water***, which refers to the above listed wastewaters that have accumulated or been pumped into Pond D. Pond D Comingled Water must be drained from Pond D to allow for the closure of Pond D. Pond D comingled water includes approximately 137 million gallons of Contact Water (previously permitted for discharge through Pond E) that has accumulated in Pond D as of August 4, 2015.
- ***Pond D Passive Underdrainage***, which refers to future subsurface waters draining from closed and capped Pond D soil/ash below the impermeable liner. These waters are expected to reduce over time and eventually stop flowing.

The purpose of this document is to identify the planned treatment, mixing/blending, and handling/discharge options for the above water/wastewaters. This document is intended to accompany the Station's Application to the VA DEQ for Modification of VPDES Permit No. VA0002071. The Permit Modification is required to address the proper management and discharge of waters/wastewaters during construction and post-construction (the configurations of the related flow paths are herein referred to as "Interim Configuration" and "Final Configuration", respectively).

1.2.2 Location and Description of Selected Project Facilities

Selected facilities that are or are planned to be affected by the project are discussed. Locations and descriptions of the facilities are based on their respective pre-construction condition. Refer to Drawing PP-0-SP-STA-600, Water Flow Balance Line Diagram, Pre-Construction Configuration, for the Station's facilities, flow streams, and outfalls as presently permitted.

1.2.2.1 Ash Ponds A, B, and C

Ash Ponds A, B, and C were actively utilized during the period from 1955 through the early 1960s. Subsequently, the ponds have been reclaimed by natural vegetative cover. The drainage area containing the inactive ash ponds is associated with a stormwater outfall (referred to as Outfall S104).

Dominion plans to clean-close Ponds A, B, and C by removing and relocating the ash to Pond D. During closure construction activities at Ponds A, B, and C, Dominion proposes to direct all Contact Water and Ash Dewatering Water from Ponds A, B, and C to Pond D.

1.2.2.2 Ash Pond D

Ash Pond D is the largest ash pond onsite and was constructed to provide a location for final disposal of ash produced by the Station during the period of coal-fired generation of electricity. Prior to Pond Closure activities in 2015, a permanent pool of water was roughly maintained at 50-feet below the top of the dam. Ash Pond D presently accepts stormwater runoff from the surrounding watershed. The outfall from Ash Pond D is configured and authorized under the VPDES permit to discharge to Ash Pond E.

Dominion is presently utilizing Ash Pond D for storage of ash and Ash Dewatering Water Contact Water, Outfall 501 Water, and Outfall 502 Water, as allowed by the VPDES permit. The combination of these waters is referred herein as "Pond D Comingled Water".

1.2.2.3 Ash Pond E

Ash Pond E was historically the day-to-day ash pond onsite. After ash operations ceased, it served as the final treatment system for the remainder of the various stormwater and process wastewaters generated by the Station. Ash Pond E discharges via a riser structure to permitted Outfall 005. Permitted Outfall 005 discharges to an unnamed tributary of Quantico Creek. Ash Pond E is permitted to accept, treat, and discharge the following wastewater streams from the Station:

- stormwater runoff;
- Oil Water Treatment Basin effluent from Internal Outfall 502;
- Metals Cleaning Waste Treatment Facility effluent from Internal Outfall 501;
- raw Potomac River water; and
- Pond D decanted water.

Ash Pond E has been decanted as of May 2015, prior to beginning dredging activities. The decanted waters were discharged in compliance with the VPDES permit through Outfall 005 at the riser structure by removing stop logs. There have been no discharges from Pond E since the pond was decanted.

1.2.2.4 Metals Cleaning Waste Treatment Facility

The Metals Cleaning Waste Treatment Facility consists of two lined ponds (referred to as the north and south ponds) in series that accept and treat wastewaters generated by the cleaning of the Station's boiler and other metallic equipment. The treated effluent from the Metals Cleaning Waste Treatment Facility (i.e., Outfall 501 Water) was historically discharged from the south pond to Pond E. In addition to stormwater that contributes to the Metals Cleaning Waste Treatment Facility, the ponds are presently permitted to batch treat intermittent wastewater streams generated from cleaning/flushing operations at the following facilities:

- boiler;
- preheater;
- economizer;
- precipitator; and
- associated piping.

The source of the cleaning/flush waters is raw, untreated river water from the Potomac River.

The wastewaters in the Metals Cleaning Waste Treatment Facility have been treated in 2015 and discharged to decanted Ash Pond E for collection. This operation was performed prior to dredging operations at Ash Pond E. These Outfall 501 Waters were subsequently pumped to Ash Pond D for storage. Dominion does not anticipate discharging wastewater out of the Metals Cleaning Waste Treatment Facility in the immediate future.

1.2.2.5 Oil Water Treatment Basin

The Oil Water Treatment Basin is an open pond north of the oil storage tanks and containment areas along the Potomac River. The effluent from the Oil Water Treatment Basin (Internal Outfall 502) was historically pumped via Lift Station No. 4 or No. 5 to Pond E. In addition to stormwater that contributes to the Oil Water Treatment Basin, the ponds are presently permitted to batch treat wastewater from the following facilities:

- Unit 5 seal oil system;
- low head circulation water filter;
- Unit 5 floor drains;
- Unit 5 boiler blowdown;
- Unit 5 "hotwell" blowdown;
- Unit 5 flash tank drain;
- Unit 5 evaporator blowdown;
- Unit 5 flash evaporator condensate dump;
- Unit 5 tank drains;
- auxiliary boiler blowdown;
- Unit 6 cooling tower drift; and
- turbine "false start" drains.

In addition to being routed to Ash Pond E through Outfall 502 the Oil Water Treatment Basin effluent (Internal Outfall 502) has on several occasions been temporarily diverted to the Low Volume Waste Settling Ponds and ultimately Outfall 004 with approval from DEQ. Dominion has requested, through a Notice of Planned Changes, DEQ concurrence that a similar rerouting may be performed under the Station's existing VPDES permit and we are seeking to make this a permanent configuration via this application for permit modification.

1.2.2.6 Potomac River Water

The existing VPDES permit conditions allow for the use of raw, untreated Potomac River Water to be pumped to Ash Pond E to control pH and other constituents. The associated pump and piping systems were formerly used for bottom ash sluicing operations.

1.2.2.7 Low Volume Waste Settling Ponds

The Low Volume Waste Settling Ponds consist of multiple cells with berms and overflows. The effluent from the Low Volume Waste Settling Ponds is discharged through Outfall 004 to the Potomac River. In addition to stormwater and yard drainage that contributes to the Low Volume Waste Settling Ponds, the ponds are presently permitted to treat and discharge the wastewater streams generated from the following facilities:

- Units 5 and 6 cooling tower drift;
- sand filter backwash;
- "quench" water;
- boiler blowdown;
- water treatment sumps/drains;
- turbine washwater;
- "false start" drains;
- reverse osmosis and "e-cell" blowdown;
- demineralized water;
- clarifier drains;
- neutralization pi;,
- low volume wastewater;
- Units 1, 2, 3, and 4 floor drains;
- Unit 4 distilled water;

- condenser drains and floor drains; and
- "EDR" blowdown.

Oil Water Treatment Basin effluent (Internal Outfall 502) has been permitted in the past to be diverted to the Low Volume Waste Settling Ponds and ultimately Outfall 004 on a temporary basis. Through this application addendum Dominion is seeking to make this a permanent routing configuration.

1.3 Schedule During Construction/Closure Activities

The Station is permitted under VPDES permit No. VA0002071 to discharge wastewaters from Ponds D and E through Outfall 005 to an unnamed tributary of Quantico Creek. However, at present there is currently no discharge from Outfall 005. All flows that were previously collected in Pond E are now being collected and stored in Pond D. Additionally, Pond D is being utilized to collect Ash Dewatering Water and Contact Water from Ponds A, B, C, and E. There is currently no discharge from Pond D. Refer to Drawing C150132-00-047-00-P-A2-001, Present Conditions (During Construction).

Ash Ponds A, B, C, and E will be clean-closed through the removal of ash in the ponds. To accomplish this, ash is presently being mechanically dredged from Pond E to Pond D. These operations began on June 15, 2015. Ash from Pond E is being stockpiled in the upper/northern portion of Pond D and is physically separated from the free water in Pond D. Ash from Ponds A, B, and C is scheduled to be mechanically dredged to Pond D beginning August 2015.

Ash Pond D will be closed as an inactive CCR surface impoundment by leaving the CCR in place and constructing a cap over the ash surface in accordance with 40 CFR §257.100.b.1. The ash in Pond D will be dewatered, stabilized and graded. Fill will then be placed on the ash surface to create a slope that will drain. The fill will be placed to produce a suitable platform on which to construct a geosynthetic liner and soil cap. This will limit infiltration into the ash.

In order to close the ponds as inactive surface impoundments in accordance with the new CCR regulations (40 CFR §257.100), the surface impoundments must be closed no later than April 17, 2018. Dominion has developed the schedule provided in Table 1 to close the ponds as inactive facilities.

2.0 Interim Configuration

During the active construction phase (i.e., "Interim Configuration") of the pond closures project, the following water and wastewaters will need to be addressed:

- Outfall 502 Water;
- Pond D Comingled Water;
- Ash Dewatering and Contact Waters; and
- Outfall 501 Water.

Dominion would like to have flexibility in the management of wastewaters generated throughout the closure process. Consequently, we are providing a number of options for the handling and discharge of the wastewaters that will be generated during the closure process associated with each pond.

The water and wastewater flow streams and discharge points during the closure process are presented schematically on Drawing C150132-00-047-00-P-A2-002, Interim Configuration (During Construction), subject to the requested permit modification. This configuration assumes that the VPDES permit is modified by January 1, 2016, which is the date that Dominion must begin dewatering of Pond D in order to achieve closure by the desired deadline. However, if the permit modification is delayed beyond January 1, 2016, then the Station plans to continue with Pond Closure activities, but the water and wastewater flow streams (i.e., Pond D Comingled Water, Ash Dewatering Water, and Contact Water)

will be treated with a filtering system to remove CCR (ash) solids and held in reclaimed Pond E for treatment and discharge at a later date. The water and wastewater flow streams are further described in the following sections.

2.1 Outfall 502 Water

As part of the closure process, Dominion plans to divert the Oil Water Treatment Basin (Outfall 502 Water) to the Station's existing Low Volume Waste Settling Ponds (Outfall 004). The proposed Oil Water diversion will facilitate the Station's closure of the Ash Ponds. Temporary routing of Oil Water Treatment Basin to the Low Volume Waste Settling Ponds (Outfall 004) has been permitted in the past by the DEQ on an interim basis, and Dominion has requested permission to make this same rerouting under the existing permit via a Notice of Planned Changes submitted to DEQ in July 2015.

Both Outfall 502 and Outfall 004 are currently permitted as a low volume wastewater under the existing Steam Electric Effluent Guidelines (40 CFR Part 423) and the characteristics of the two waters are similar. To demonstrate this similarity, an analysis of the water quality from the Oil Water Treatment Basin was performed and the results are tabulated in Table 2. Table 2 also includes, for comparison purposes, the water quality data for Outfall 004 as reported in our 2013 Permit Reissuance Application, and a projected presumed quality of the combined discharge. The projected presumed quality of the combined discharge is estimated using the following mass balance calculations, as applicable:

$$Combined\ Discharge\ Concentration = \left[\frac{mg}{L}\right] = \frac{Q_{004} \times \text{Concentration}_{004} + Q_{502} \times \text{Concentration}_{502}}{Q_{004} + Q_{502}}$$

Where

Q_{004} = Long term average flow[1] at Outfall 004 = 2.02-MGD

Q_{502} = 30-day maximum flow[2] at Outfall 502 = 0.567-MGD

$\text{Concentration}_{004}$ = Reported concentration[1] at Outfall 004 = $\left[\frac{mg}{L}\right]$

$\text{Concentration}_{502}$ = Measured concentration[2] at Outfall 502 = $\left[\frac{mg}{L}\right]$

$$Combined\ Discharge\ pH = [S.U.] = -\log\left(\frac{Q_{004} \times 10^{-pH_{004}} + Q_{502} \times 10^{-pH_{502}}}{Q_{004} + Q_{502}}\right)$$

Where

pH_{004} = Reported pH[1] at Outfall 004 = $[S.U.]$

pH_{502} = Measured pH[2] at Outfall 502 = $[S.U.]$

The combined discharge concentration formula above takes into account the constituent level as well as the volumetric flow rate of each of the discharges, respectively, i.e., Outfall 502 and Outfall 004 waters as a weighted average. The combined pH concentration formula above similarly takes into account the pH as well as the volumetric flow rate of each of the discharges, respectively, as a weighted average. Please note that the latter equation is a conservative estimate that does not consider the complexities of other factors in the discharges such as alkalinity, hardness, etc. that may

---

1 Per 2013 VPDES Permit Reissuance Application.

2 Per test results on May 7, 2015 sample at Oil Water Treatment Basin.

provide additional buffering capacity, i.e., resistance to changes in pH. These analyses demonstrate that the combined wastewater characteristics are consistent with that permitted for Outfall 004 under the existing permit.

2.2 Pond D Comingled Water

During the Interim Configuration Phase of the pond closure project, Pond D receives and stores Ash and Ash Dewatering Water and Contact Water from Ponds A, B, C, and E, as well as Outfall 501 Water. Pond D has recently received Outfall 502 Water, as well. These comingled waters will be given time to blend and allow for settling of suspended solids. In order to allow for closure of Pond D it will be necessary to first remove the accumulated Pond D Comingled Water, which will be decanted and ultimately discharged through Outfall 005. Prior to discharge through Outfall 005, Pond D Comingled Water may be transferred, with pre-treatment to remove solids, to the clean-closed Pond E for storage. Following storage in Pond E and/or prior to direct discharge through Outfall 005, Pond D Comingled Water will receive further polishing/treatment, as required, to ensure compliance with the VPDES permit and to protect receiving water quality. This decanting process will precede final dewatering and closure of Ash Pond D. Refer to Table 3 for a comparison of the Outfall 005 data reported in the Station's 2013 Permit Reissuance Application and the measured quality of Ash Pond D Comingled Water.

Dominion would like to have flexibility in the management of wastewaters generated throughout the closure process. Therefore, alternates to the "Interim Configuration" have been evaluated as follows. For alternate discharge to Outfall 004, the projected presumed quality of the blended Pond D Comingled Water, Low Volume Waste Settling Ponds (Outfall 004), and Outfall 502 Water is provided in Table 4. For alternate discharge to Outfall 001/002, the projected presumed quality of the blended Pond D Comingled Water and Outfall 001/002 Water is included in Table 5. An alternate is also considered for the Pond D Comingled Water and includes pretreatment (where required) and discharge to the Prince William County Service Authority (PWCSA) sanitary sewer collection system on Possum Point Road. This alternate is being evaluated separately with the PWCSA.

2.3 Ash Dewatering and Contact Waters

During pond closure activities and dredging of Ash Ponds A, B, C, and E, Ash Dewatering Water, as well as Contact Water will be collected and pumped to Pond D. Stormwater runoff will be regulated under a separate VA Stormwater Management Program (VSMP) Permit and will be diverted around the construction site to limit production of Contact Water. After closure of Ponds A, B, C, and E are completed, the areas will have been completely reclaimed, and stormwater will be non-contact and allowed to flow naturally overland.

During pond closure activities of Ash Pond D, Ash Dewatering Water, as well as Contact Water, will be collected, treated as necessary to ensure compliance with permit limits and to protect receiving water quality, and subsequently discharged to Outfall 005, or alternately, Outfall 001/002 (via the Seal Pit), Outfall 004, or the PWCSA sanitary sewer collection system.

Stormwater runoff will be diverted around the construction site to limit production of Contact Water. After closure of Pond D is completed, the ash will have been completely capped, and stormwater will be non-contact and allowed to flow naturally overland.

Waters from Ponds A, B, C, D, and E during active construction include:

- stormwater exposed to ash (i.e., Contact Water);
- subsurface dewatering via constructed groundwater wells (i.e., Dewatering Water); and
- open pits or trenches in exposed ash material that collect surface and subsurface drainage (i.e., Dewatering Water).

Refer to Table 6 for a comparison of the Outfall 005 data reported in the Station's 2013 Permit Reissuance Application and the projected presumed quality of the blended Ash Dewatering Water and Contact Water (Note the raw quality data is based on Ash Dewatering Water and Contact Water from Ash Pond E). The formulas presented in Section 2.1 are similarly used to project the presumed weighted average of the Ash Dewatering and Contact Waters. The weighted flows are based on a total of the Ash Dewatering Water rates of 333 gallons per minute (gpm) at Pond D and 203 gpm at Ponds A, B, and C, as well as Contact Water rates of 70 gpm at Pond D and 11 gpm Ponds A, B, and C. (Note the calculations for estimating the presumed Ash Dewatering and Contact Water rates are provided in Table 7.)

Dominion would like to have flexibility in the management of wastewaters generated throughout the closure process. Therefore, alternates to the "Interim Configuration" have been evaluated as follows. For alternate discharge to Outfall 004, the projected presumed quality of the blended Ash Dewatering Waters, Contact Waters, Low Volume Waste Settling Ponds (Outfall 004), and Outfall 502 Water is provided in Table 8. For alternate discharge to Outfall 001/002, the projected presumed quality of the blended Ash Dewatering Waters, Contact Waters, and Outfall 001/002 Water is included in Table 9. An alternate is also considered to discharge to the PWCSA sanitary sewer collection system and is being evaluated separately with the PWCSA.

2.4 Outfall 501 Water

As presented in the Present conditions section, the metals cleaning wastewater discharge will continue to be routed through Pond D for additional polishing and settling, as needed, until such time the Pond D is dewatered for closure. At that time the metal washing discharge may receive interim polishing/treatment, as required, to comply with the VPDES permit.

3.0 Final Configuration

During the post-construction phase (i.e., "Final Configuration"), the following water and wastewaters will need to be addressed:

- Outfall 502 Water;
- Pond D Passive Underdrainage; and
- Outfall 501 Water.

The water and wastewaters flow streams and discharge points are presented schematically on Drawing C150132-00-047-00-P-A2-003, Final Configuration, and are further described in the following sections.

3.1 Outfall 502 Water

Post-construction, the Oil Water Treatment Basin effluent (i.e., Outfall 502 Water) will continue to be routed through the Low Volume Waste Ponds and discharged at Outfall 004 as described in Section 2.1 above.

3.2 Pond D Passive Underdrainage

During the closing and capping of Pond D, a subsurface dewatering system (i.e., underdrains) will be installed to remove excess water below the impermeable liner of Pond D. This residual water will be pumped to a treatment system with Outfall 501 Water, and, if required, will be further processed/ treated, as required, to comply with the VPDES permit.

An alternate "Final Configuration" for the Pond D Passive Underdrainage is also considered and includes pretreatment (where required) and discharge to the PWCSA sanitary sewer collection system on Possum Point Road. This alternate is being evaluated separately with the PWCSA.

3.3 Outfall 501 Water

The existing Metals Cleaning Waste Treatment Facility effluent (i.e., Outfall 501 Water) will be discharged to a treatment system with Pond D Passive Underdrainage, and, if required, will be further processed/treated, as required, to comply with the VPDES permit.

An alternate "Final Configuration" for the Outfall 501 Water is also considered and includes pretreatment (where required) and discharge to the PWCSA sanitary sewer collection system on Possum Point Road. This alternate is being evaluated separately with the PWCSA.

4.0 Conceptual Treatment Options

4.1 Conceptual Treatment Requirements

Potential treatment options to be utilized (if required) to comply with the VPDES permit and to protect receiving water quality include, but are not limited to:

- chemical additives;
- sedimentation;
- filtration;
- ion exchange/absorption; and/or
- packed bed biofilters.

4.1.1 Chemical Additives

Chemical additives can reduce the solubility of metals, and may include, but are not limited to, hydrated lime, sodium hydroxide, iron salts, and alum. Chemical additives can react with the dissolved metal directly to reduce its solubility, or indirectly by changing the solubility equilibrium.

Certain insoluble metal compounds do not have sufficient ionic attraction to provide adequate sedimentation. The use of chemical additives is typically required to neutralize the charges of the metal compound complexes and facilitate agglomeration into flocs. The weight of the floc allows for more efficient settling. Hydrated lime, iron salts, alum, and polymers are often utilized to facilitate floc agglomeration.

Chemical additives can also prepare collected sludge for dewatering.

Refer to Table 10 for a listing of potential commercial chemical additives that may be utilized and their purpose. Chemical precipitants, coagulants, flocculants, polymers, and water clarification additives may be injected prior to or at clarification or filtration unit processes to facilitate solids removals. Water clarification solids conditioners may be applied to sludge (i.e., collected solids) at clarification facilities to enhance dewatering for disposal. Dominion will provide DEQ with the final chemical additives proposed; and upon request, the respective Material Safety Data Sheets (MSDSs) for each chemical additive.

4.1.2 Sedimentation

Upon inducing chemical precipitation of dissolved constituents, and for constituents already out of solution, the targeted metals and TSS needs to be physically removed from the wastewater. This can be accomplished by sedimentation/clarification and/or filtration. Sedimentation utilizes a tank or clarifier to allow treated water to flow to the top and be discharged while the targeted metal particles settle to the bottom by gravity. Sludge accumulates in the bottom of the tank or clarifier, and when it collects to a sufficient quantity, it can be removed and

disposed. The use of a mechanical filter press or drying bed reduces the liquid content of the sludge to facilitate disposal.

4.1.3 Filtration

Bag and cartridge filters generally have nominal or absolute TSS capture ratings based on particle size and require change out and disposal of the spent bags and cartridges. Bag and cartridge filters are housed in pressurized vessels.

Media filters require periodic backwashing to keep media from "blinding" as well as preventing "breakthrough." Media can include silica sand, and for multimedia filters an additional top coarse layer of anthracite and/or a bottom fine layer garnet sand may be added. Media filters may be pressurized or function by gravity (via upflow filters or traditional gravity filters).

4.1.4 Ion Exchange

For certain dissolved metals (depending on oxidation state), removal from wastewater cannot be obtained by conventional water treatment technology, but are better facilitated with treatment options such ion exchange and adsorption systems. Both passive and active/pressurized ion exchange media systems are available and use various resins or other media technologies. The media in passive systems is disposed of and replaced when spent. Active systems utilize a regeneration step that retains the media for continued use. Ion exchange technologies can be expected to require pre-treatment of TSS.

4.1.5 Packed Bed Biofilters

Packed bed biofilters are a type of plug flow bioreactor that relies on a specialized mixture of microbes that thrive in an anaerobic environment. The microbes may be attached to activated carbon or silica sand media. The microbes digest/reduce target contaminants or convert their soluble forms to insoluble forms for removal. Periodic backwashing of the media is typically required; although required backwashes are infrequent unless necessitated by high TSS loadings. Packed bed biofilter technologies can be expected to require pre-treatment of TSS.

4.2 Mixing and Blending Systems

Mixing and blending can be provided in an existing or proposed basin or in a manufactured tank. In some cases, smaller flows may be mixed/blended by injection directly into the larger flow stream, especially when it is equipped with an in line static mixer. Mixing and blending systems are useful when combining much poorer quality waters with better quality waters; i.e., to provide a suitable quality for discharge that would otherwise be unacceptable for one or more of the flow streams and to provide some buffering for upsets. Manufactured tanks can be permanent or portable. Generally, manufactured tanks will hold less volume than an existing or proposed basin. Additional weirs, dynamic mixers, or static mixers may be suggested to further facilitate blending.

5.0 Recommendations

GAI anticipates that a treatment system for the "Interim Configuration," i.e., the Ash Dewatering, Contact Waters, Outfall 501 Water and Pond D Comingled Waters, could consist of one or a combination of the following technologies prior to discharge to Outfall 005:

- a clarifier with chemical additives for initial TSS/precipitated metals treatment,
- a bag, cartridge, or media filter system for additional TSS/precipitated metals treatment, and
- polishing of dissolved heavy metals, if necessary, may be provided by either the ion exchange or packed bed biofilter systems.

Alternate "Interim Configurations" for the Ash Dewatering, Contact Waters, Outfall 501 Water and Pond D Comingled Waters include discharge to Outfall 001/002, the Low Volume Waste Settling Ponds (Outfall 004), and/or pretreatment (where required) and discharge to the PWCSA sanitary sewer collection system.

For the "Final Configuration," a treatment system is anticipated for the Outfall 501 Water and the Pond D Passive Underdrainage prior to discharge to Outfall 005. An alternate "Final Configuration" for the Outfall 501 Water and Pond D Passive Underdrainage is also considered and includes pretreatment (where required) and discharge to the PWCSA sanitary sewer collection system.

The "Interim Configuration" and "Final Configuration" routing of the Outfall 502 Water to the Low Volume Waste Settling Ponds (Outfall 004) is presumed to be acceptable as-is since the quality of waters are similar.

TABLES

Table 1

Proposed Ponds A, B, C, D, and E Closure Schedule and Proposed Wastewater Average Flow Rates

No.	Activity	Approximate Start Date	Approximate End Date	Proposed Average Flow Rate (mgd)	Proposed Volume (mg)
1	Mechanically Dredge Ash from Pond E into Pond D	06/015	10/2015	-	-
2	Mechanically Dredge Ash from Ponds A, B, and C into Pond D	07/2015	10/2015	-	-
3[1]	**Decant Pond D Comingled Water to Begin Drying Pond D**	**08/2015**	**10/2015**	**2.53**	**137±**
4	Temporarily discharge Outfall 502 Water to Low Volume Waste Settling Ponds and Outfall 004 (pending Notice of Plan Change to DEQ)	08/2015	03/2016	-	-
5	Grade Ash in North Half of Pond D to Establish Subgrade	11/2015	03/2016	-	-
6	**Discharge Ash Dewatering Water and Contact Water**	**01/2016**	**06/2017[2]**	**0.72**	**107±**
7	**Discharge Outfall 501 Water[3]**	**01/2016**	**Not Applicable**	**1.04**	**3±**
8	**Discharge Outfall 502 Water to Low Volume Waste Settling Ponds and Outfall 004 (pending VPDES permit modification)**	**01/2016**	**Not Applicable**	**0.57**	**-**
9	Ponds A, B, C, and E Soil Amendments and Seeding; Construct Temporary Sediment Basins in Ponds A, B, C, and E for Discharge of Stormwater (pending County Site Plan and VSMP Permit)	03/2016	03/2017	-	-
10	Grade Ash and Import Fill from Borrow to Establish Subgrade (entire Pond D)	03/2016	08/2016	-	-
11	Construct Pond D Cap (geosynthetic liner and two feet of cover soil)	08/2016	06/2017	-	-
12	**Closed Ash Pond D Passive Underdrain[4]**	**06/2017**	**12/2018**	**0.15**	**68±**
13	Construct Storm Water Controls/Channel Linings	07/2017	08/2017	-	-
14	Pond D Soil Amendments and Seeding	09/2017	10/2017	-	-
15	CCR Regulations Closure Deadline For Inactive Surface Impoundments	04/17/2018	04/17/2018	-	-

Notes:

1. Bold text denotes wastewater flows/activities.
2. According to this schedule, Contact Water will no longer be generated after June 2017, when the Pond D cap will be complete. Dewatering Water may continue to be produced after capping of Pond D as needed to aid in the dewatering and stabilization.
3. Each event is estimated at three million gallons over a three-day duration.
4. Estimated duration of flow for passive underdrain system is 18 months.

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.082	< 0.09
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.08
Antimony, Total	mg/L	< 0.001		< 0.00033	< 0.001
Antimony, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Arsenic, Total	mg/L	< 0.003		< 0.0005	< 0.003
Arsenic, Dissolved	mg/L	< 0.003		< 0.001	< 0.003
Boron, Total	mg/L	0.03		< 0.016	< 0.03
Boron, Dissolved	mg/L			< 0.033	
Barium, Total	mg/L	0.044		0.036	0.043
Barium, Dissolved	mg/L	0.033		0.031	0.033
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0002
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0002
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.0003
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.0003
Calcium, Total	mg/L			28	
Calcium, Dissolved	mg/L			28.2	
Chromium, Total	mg/L	< 0.001		< 0.00033	< 0.001
Chromium, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Trivalent Chromium, Total	mg/L			< 0.01	
Trivalent Chromium, Dissolved	mg/L			< 0.01	
Hexavalent Chromium, Total	µg/L	< 5		< 0.052	< 4
Hexavalent Chromium, Dissolved	µg/L			< 0.052	
Cobalt, Total	mg/L	< 0.0006		< 0.00083	< 0.0007
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0009
Copper, Total	mg/L	0.007		0.015	0.009
Copper, Dissolved	mg/L	0.004		0.0073	0.005
Iron, Total	mg/L	7.00		0.69	5.7
Iron, Dissolved	mg/L	0.09		0.093	0.10
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.001
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Lithium, Total	mg/L			< 0.016	
Lithium, Dissolved	mg/L			< 0.033	
Manganese, Total	mg/L	0.04		0.14	0.07
Manganese, Dissolved	mg/L	0.02		0.023	0.03
Magnesium, Total	mg/L	8.36		9.7	8.7
Magnesium, Dissolved	mg/L	8.17		9.6	8.5
Molybdenum, Total	mg/L	0.002		0.0045	0.003

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average
Molybdenum, Dissolved	mg/L	0.002		0.0044	0.003
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.0002
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.0002
Nickel, Total	mg/L	< 0.005		0.032	< 0.011
Nickel, Dissolved	mg/L	< 0.005		0.021	< 0.009
Selenium, Total	mg/L	< 0.003		< 0.00066	< 0.003
Selenium, Dissolved	mg/L	< 0.003		< 0.0016	< 0.003
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.0002
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.0003
Thallium, Total	mg/L	0.0006		< 0.00016	< 0.0006
Thallium, Dissolved	mg/L	0.0005		< 0.00033	< 0.0005
Zinc, Total	mg/L	< 0.01		0.02	< 0.02
Zinc, Dissolved	mg/L	0.013		0.043	0.020
Potassium, Total	mg/L			4	
Potassium, Dissolved	mg/L			4	
Sodium, Total	mg/L			66	
Sodium, Dissolved	mg/L			66	
Sulfate	mg/L	44.22		37.2	42.7
pH	pH_Units	7.38		7.89	7.45
Specific Conductance	umhos/cm			568	
Turbidity	NTU			0.19	
Alkalinity, Total	mg/L			59	
Ammonia-N	mg/L	0.18	0.06	0.108	0.16
Nitrate-N	mg/L	2.25	1.02	< 0.092	< 1.80
Nitrite-N	mg/L			< 0.11	
Oil/Grease Hexane Extractable	mg/L	< 5	< 5	< 0.5	< 4
Total Kjeldahl Nitrogen	mg/L			< 0.4	
Total Nitrogen	mg/L			< 1.0	
Phosphorus, Total	mg/L	0.17	0.06	0.1	0.2
Chloride	mg/L	55.34		111	67.6
Fluoride	mg/L	0.171		< 0.12	< 0.16
Hardness	mg/L	104.31		110	106
Total Dissolved Solids	mg/L	272.5		310	281
Total Suspended Solids	mg/L	23.5	4.3	10	21
Biochemical Oxygen Demand	mg/L	< 3.0		3.4	< 3.1
Chlorine, Total Residual	mg/L	< 0.1	< 0.1	0.12	< 0.2
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.12
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.01

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average
Aldrin	µg/L	< 0.05		< 0.0006	< 0.04
alpha-BHC	µg/L	< 0.05		< 0.00013	< 0.04
beta-BHC	µg/L	< 0.05		< 0.00016	< 0.04
delta-BHC	µg/L	< 0.05		< 0.00024	< 0.04
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.04
Chlordane	µg/L	< 0.2		< 0.013	< 0.2
4,4'-DDD	µg/L	< 0.1		< 0.00016	< 0.1
4,4'-DDE	µg/L	< 0.1		< 0.00016	< 0.1
4,4'-DDT	µg/L	< 0.1		< 0.00023	< 0.1
Dieldrin	µg/L	< 0.1		< 0.00013	< 0.1
Endosulfan I	µg/L	< 0.1		< 0.00028	< 0.1
Endosulfan II	µg/L	< 0.1		< 0.00014	< 0.1
Endosulfan Sulfate	µg/L	< 0.1		< 0.0002	< 0.1
Endrin	µg/L	< 0.1		< 0.00015	< 0.1
Endrin Aldehyde	µg/L	< 0.1		< 0.00031	< 0.1
Heptachlor	µg/L	< 0.05		< 0.0003	< 0.04
Heptachlor Epoxide	µg/L	< 0.1		< 0.00016	< 0.1
Methoxychlor	µg/L	< 0.1		< 0.00026	< 0.1
Mirex	µg/L	< 0.1		< 0.00056	< 0.1
Total Polychlorinated Biphenyl	µg/L			0	
Toxaphene	µg/L	< 5		< 0.0098	< 4
Aroclor-1016	µg/L			< 0.041	
Aroclor-1221	µg/L			< 0.061	
Aroclor-1232	µg/L			< 0.076	
Aroclor-1242	µg/L			< 0.044	
Aroclor-1248	µg/L			< 0.035	
Aroclor-1254	µg/L			< 0.057	
Aroclor-1260	µg/L			< 0.041	
Azinphos Methyl	µg/L	< 1		< 0.34	< 1
Chlorpyrifos	µg/L	< 0.2		< 0.47	< 0.3
Demeton	µg/L	< 1		< 0.2	< 0.9
Diazinon	µg/L	< 1		< 0.27	< 0.9
Malathion	µg/L	< 1		< 0.21	< 0.9
Parathion	µg/L	< 1		< 0.31	< 0.9
Acrolein	µg/L	< 10		< 2.4	< 8.4
Acrylonitrile	µg/L	< 1.5		< 0.89	< 1.4
Benzene	µg/L	< 4.4		< 0.16	< 3.5
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 1.8

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average
Bromoform	µg/L	< 4.7		< 0.21	< 3.8
Bromomethane	µg/L	< 1.4		< 0.27	< 1.2
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	< 2.3
Chlorobenzene	µg/L	< 6		< 0.11	< 5
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 2.5
Chloroform	µg/L	16.82		< 0.15	< 14
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 4
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 4
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 4
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 2.3
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 2.3
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 1.3
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 5
cis-1,3-Dichloropropene	µg/L			< 0.12	
trans-1,3-Dichloropropene	µg/L			< 0.14	
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 4.7
Ethylbenzene	µg/L	< 7.2		< 0.16	< 5.7
Methylene Chloride	µg/L	< 2.8		< 0.32	< 2.3
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 5.5
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 3.3
Toluene	µg/L	< 6		< 0.12	< 5
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 4
Trichloroethene	µg/L	< 1.9		< 0.21	< 1.6
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 1.5
Acenaphthene	µg/L	< 5		< 0.33	< 4
Anthracene	µg/L	< 5		< 0.34	< 4
Benzidine	µg/L	< 5		< 22.5	< 9
Benzo(a)anthracene	µg/L	< 5		< 0.3	< 4
Benzo(a)pyrene	µg/L	< 5		< 0.36	< 4
Benzo(b)fluoranthene	µg/L	< 5		< 0.41	< 4
Benzo(k)fluoranthene	µg/L	< 5		< 0.38	< 4
Butylbenzylphthalate	µg/L	< 5		< 0.33	< 4
bis(2-Chloroethyl)ether	µg/L	< 5		< 0.35	< 4
bis(2-Chloroisopropyl)ether	µg/L	< 5		< 0.5	< 5
2-Chloronaphthalene	µg/L	< 5		< 0.34	< 4
2-Chlorophenol	µg/L	< 5		< 0.59	< 5
Chrysene	µg/L	< 5		< 0.35	< 4
Di-n-Butylphthalate	µg/L	< 5		< 0.31	< 4

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average
Dibenzo(a,h)anthracene	µg/L	< 5		< 0.29	< 4
3,3-Dichlorobenzidine	µg/L	< 5		< 2.8	< 5
2,4-Dichlorophenol	µg/L	< 5		< 0.46	< 5
Diethylphthalate	µg/L	< 5		< 0.3	< 4
2,4-Dimethylphenol	µg/L	< 5		< 2.9	< 5
Dimethylphthalate	µg/L	< 5		< 0.38	< 4
2,4-Dinitrophenol	µg/L	< 5		< 2.3	< 5
2,4-Dinitrotoluene	µg/L	< 5		< 0.38	< 4
1,2-Diphenylhydrazine	µg/L	< 0.1		< 0.32	< 0.2
bis(2-Ethylhexyl)phthalate	µg/L	< 5		< 0.35	< 4
Fluoranthene	µg/L	< 5		< 0.25	< 4
Fluorene	µg/L	< 5		< 0.37	< 4
Hexachlorobenzene	µg/L	< 5		< 0.3	< 4
Hexachlorobutadiene	µg/L	< 5		< 0.29	< 4
Hexachlorocyclopentadiene	µg/L	< 5		< 1	< 5
Hexachloroethane	µg/L	< 5		< 0.32	< 4
Indeno(1,2,3-cd)pyrene	µg/L	< 5		< 0.29	< 4
Isophorone	µg/L	< 5		< 0.38	< 4
2-Methyl-4,6-dinitrophenol	µg/L	< 50		< 1.3	< 40
Nitrobenzene	µg/L	< 5		< 0.61	< 5
N-Nitrosodimethylamine	µg/L	< 5		< 0.45	< 5
N-Nitroso-di-n-propylamine	µg/L	< 5		< 0.54	< 5
N-Nitrosodiphenylamine	µg/L	< 5		< 1	< 5
Pentachlorophenol	µg/L	< 5		< 1.8	< 5
Phenol	µg/L	< 5		< 0.23	< 4
Pyrene	µg/L	< 5		< 0.35	< 4
1,2,4-Trichlorobenzene	µg/L	< 5		< 0.26	< 4
2,4,6-Trichlorophenol	µg/L	< 5		< 0.36	< 4
Kepone	µg/L	< 0.1		< 1.8	< 0.5
FIELD PARAMETERS					
pH	pH_Units	7.38		8.52	7.48
Temperature	° C	34.6		22.38	32.0
Conductivity	µs/cm			566	
Dissolved Oxygen	%			102.5	
Dissolved Oxygen	mg/l			8.98	
ORP	mv			143.7	
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.00	< 0.1

Table 2
Blended Outfall 502 and Outfall 004

Parameters	Units	Outfall 004		Oil Water Internal Outfall 502	Outfall 004 + Outfall 502
		Presumed Maximum Day	Presumed Long Term Average	502 Discharge 5/7/2015	Presumed Weighted Average

Footnotes:

1) ND- Not detected above the laboratory detection limit.

2) NA- Not analyzed.

3) mg/L - milligrams per liter.

4) µg/L- micrograms per liter.

5) µS/cm - microsiemens/centimeter.

6) mv- millivolts.

7) ppm- parts per million.

8) ORP- Oxidation Reduction Potential.

9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.

10) Presumed weighted average of Outfall 004 and Outfall 502 is based on long term avg & 30-day max flow of 0.567-MGD for the oil water basin (Outfall 502) & long term avg flow of 2.02-MGD for Outfall 004 in 2013 Permit Reissuance Application.

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Aluminum, Total	mg/L	< 0.09		0.11	0.095	0.075	0.10
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.026	< 0.026	< 0.026
Antimony, Total	mg/L	0.001		0.0034	0.0036	0.0035	0.0035
Antimony, Dissolved	mg/L	0.001		0.0034	0.0037	0.0036	0.0036
Arsenic, Total	mg/L	0.011		0.018	0.019	0.019	0.019
Arsenic, Dissolved	mg/L	0.01		0.017	0.018	0.018	0.018
Boron, Total	mg/L	0.06		0.45	0.48	0.48	0.47
Boron, Dissolved	mg/L			0.47	0.47	0.47	0.47
Barium, Total	mg/L	0.208		0.14	0.15	0.16	0.15
Barium, Dissolved	mg/L	0.19		0.14	0.15	0.15	0.15
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0001	< 0.0001	< 0.0001
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0001	< 0.0001	< 0.0001
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.00016	< 0.00016	< 0.00016
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.00033	< 0.00033	< 0.00033
Calcium, Total	mg/L			35.5	38.4	38.2	37.4
Calcium, Dissolved	mg/L			37.4	37.2	36.8	37.2
Chromium, Total	mg/L	< 0.02		< 0.00033	< 0.00033	< 0.00033	< 0.00033
Chromium, Dissolved	mg/L	< 0.001		< 0.00066	< 0.00066	< 0.00066	< 0.00066
Trivalent Chromium, Total	mg/L			< 0.01	< 0.01	< 0.01	< 0.01
Trivalent Chromium, Dissolved	mg/L			< 0.01	< 0.01	< 0.01	< 0.01
Hexavalent Chromium, Total	µg/L	< 5		< 0.052	< 0.052	< 0.052	< 0.052
Hexavalent Chromium, Dissolved	µg/L			< 0.052	< 0.052	< 0.052	< 0.052
Cobalt, Total	mg/L	< 0.0006		< 0.00083	< 0.00083	< 0.00083	< 0.00083
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0016	< 0.0016	< 0.0016
Copper, Total	mg/L	0.001		< 0.00083	< 0.00083	< 0.00083	< 0.00083
Copper, Dissolved	mg/L	< 0.001		< 0.0016	< 0.0016	< 0.0016	< 0.0016
Iron, Total	mg/L	0.26		0.054	0.072	0.057	0.061

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Iron, Dissolved	mg/L	0.06		< 0.02	< 0.02	< 0.02	< 0.02
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.00033	< 0.00033	< 0.00033
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.00066	< 0.00066	< 0.00066
Lithium, Total	mg/L			< 0.016	< 0.016	< 0.016	< 0.016
Lithium, Dissolved	mg/L			< 0.033	< 0.033	< 0.033	< 0.033
Manganese, Total	mg/L	0.08		0.026	0.044	0.041	0.037
Manganese, Dissolved	mg/L	0.06		0.0075	0.007	0.0073	0.008
Magnesium, Total	mg/L	15.1		13.4	14.9	15	15
Magnesium, Dissolved	mg/L	15.38		14.2	14.3	14.6	14.4
Molybdenum, Total	mg/L	0.006		0.049	0.051	0.05	0.05
Molybdenum, Dissolved	mg/L	0.006		0.046	0.048	0.049	0.048
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.00016	< 0.00016	< 0.00016
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.00016	< 0.00016	< 0.00016
Nickel, Total	mg/L	0.013		0.0029	0.0028	0.0027	0.0028
Nickel, Dissolved	mg/L	0.01		< 0.0016	< 0.0016	< 0.0016	< 0.0016
Selenium, Total	mg/L	< 0.003		0.0056	0.0052	0.0058	0.0056
Selenium, Dissolved	mg/L	<0.003		0.0062	0.0057	0.0054	0.0058
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.00033	< 0.00033	< 0.00033
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.00066	< 0.00066	< 0.00066
Thallium, Total	mg/L	0.0005		< 0.00016	< 0.00016	< 0.00016	< 0.00016
Thallium, Dissolved	mg/L	0.0004		< 0.00033	< 0.00033	< 0.00033	< 0.00033
Zinc, Total	mg/L	0.01		0.01	< 0.00083	< 0.00083	< 0.01
Zinc, Dissolved	mg/L	< 0.01		< 0.0016	< 0.0016	< 0.0016	< 0.0016
Potassium, Total	mg/L			6.2	6.9	6.7	6.6
Potassium, Dissolved	mg/L			6.6	6.6	6.4	6.6
Sodium, Total	mg/L			38.3	41.7	41.7	40.6
Sodium, Dissolved	mg/L			40.1	40.5	41	41

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Sulfate	mg/L	40.69		93.6	132	84.4	104
pH	pH_Units	7.4		7.9	8.01	7.98	8.0
Specific Conductance	umhos/cm			537	579	534	550
Turbidity	NTU			1.18	0.64	2.73	1.6
Alkalinity, Total	mg/L			61	IP	64	63
Ammonia-N	mg/L	< 0.05	< 0.05	< 0.03	< 0.03	< 0.03	< 0.03
Nitrate-N	mg/L	0.1	1.00	< 0.037	< 0.037	< 0.037	< 0.037
Nitrite-N	mg/L			< 0.044	< 0.044	< 0.044	< 0.044
Oil/Grease Hexane Extractable	mg/L	< 5	< 5	6.3	< 0.5	< 0.5	< 3
Total Kjeldahl Nitrogen	mg/L			< 0.4	< 0.4	< 0.4	< 0.4
Total Nitrogen	mg/L			< 1.0	< 1.0	<	< 1.0
Phosphorus, Total	mg/L	< 0.05	< 0.05	< 0.019	< 0.019	0.13	< 0.06
Chloride	mg/L	153.19		71.8	74.3	67.1	71.1
Fluoride	mg/L	0.142		0.5	0.5	0.36	0.5
Hardness	mg/L	129.96		144	157	157	153
Total Dissolved Solids	mg/L	452		367	362	334	355
Total Suspended Solids	mg/L	13.4	6.27	9	< 5	8	< 8
Biochemical Oxygen Demand	mg/L	< 12.6		< 0.8	< 0.8	< 0.8	< 0.8
Chlorine, Total Residual	mg/L	< 0.1	< 0.1	< 0.009	< 0.009	< 0.009	< 0.009
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.35	< 0.35	< 0.35
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.00058	< 0.00058	< 0.00058
Aldrin	µg/L	< 0.05		< 0.0006	< 0.0006	< 0.00062	< 0.0007
alpha-BHC	µg/L	< 0.05		< 0.00013	< 0.00013	< 0.00014	< 0.00014
beta-BHC	µg/L	< 0.05		< 0.00016	< 0.00016	< 0.00017	< 0.00017
delta-BHC	µg/L	< 0.05		< 0.00024	< 0.00024	< 0.00025	< 0.00025
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.00015	< 0.00015	< 0.00015
Chlordane	µg/L	< 0.2		< 0.013	< 0.013	< 0.013	< 0.013

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
4,4'-DDD	µg/L	< 0.1		< 0.00016	< 0.00016	< 0.00017	< 0.00017
4,4'-DDE	µg/L	< 0.1		< 0.00016	< 0.00016	< 0.00017	< 0.00017
4,4'-DDT	µg/L	< 0.1		< 0.00023	< 0.00023	< 0.00024	< 0.00024
Dieldrin	µg/L	< 0.1		< 0.00013	< 0.00013	< 0.00014	< 0.00014
Endosulfan I	µg/L	< 0.1		< 0.00028	< 0.00028	< 0.00029	< 0.00029
Endosulfan II	µg/L	< 0.1		< 0.00014	< 0.00014	< 0.00015	< 0.00015
Endosulfan Sulfate	µg/L	< 0.1		< 0.0002	< 0.0002	< 0.00021	< 0.0003
Endrin	µg/L	< 0.1		< 0.00015	< 0.00015	< 0.00015	< 0.00015
Endrin Aldehyde	µg/L			< 0.00031	< 0.00031	< 0.00032	< 0.00032
Heptachlor	µg/L	< 0.05		< 0.0003	< 0.0003	< 0.00031	< 0.0004
Heptachlor Epoxide	µg/L	< 0.1		< 0.00016	< 0.00016	< 0.00017	< 0.00017
Methoxychlor	µg/L	< 0.1		< 0.00026	< 0.00026	< 0.00027	< 0.00027
Mirex	µg/L	< 0.1		< 0.00056	< 0.00056	< 0.00058	< 0.00057
Total Polychlorinated Biphenyl	µg/L			0	0	0	0
Toxaphene	µg/L	< 5		< 0.0098	< 0.0098	< 0.01	< 0.01
Aroclor-1016	µg/L			< 0.041	< 0.041	< 0.042	< 0.042
Aroclor-1221	µg/L			< 0.061	< 0.061	< 0.063	< 0.062
Aroclor-1232	µg/L			< 0.076	< 0.076	< 0.079	< 0.077
Aroclor-1242	µg/L			< 0.044	< 0.044	< 0.046	< 0.045
Aroclor-1248	µg/L			< 0.035	< 0.035	< 0.037	< 0.036
Aroclor-1254	µg/L			< 0.057	< 0.057	< 0.06	< 0.06
Aroclor-1260	µg/L			< 0.041	< 0.041	< 0.042	< 0.042
Azinphos Methyl	µg/L	< 2		< 0.34	< 0.35	< 0.35	< 0.35
Chlorpyrifos	µg/L	< 0.2		< 0.46	< 0.47	< 0.47	< 0.47
Demeton	µg/L	< 1		< 0.2	< 0.21	< 0.21	< 0.3
Diazinon	µg/L	< 1		< 0.27	< 0.27	< 0.27	< 0.27
Malathion	µg/L	< 1		< 0.21	< 0.22	< 0.21	< 0.22

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Parathion	µg/L	< 1		< 0.31	< 0.31	< 0.31	< 0.31
Acrolein	µg/L	< 10		< 2.4	< 2.4	< 2.4	< 2.4
Acrylonitrile	µg/L	< 1.5		< 0.89	< 0.89	< 0.89	< 0.89
Benzene	µg/L	< 4.4		< 0.16	< 0.16	< 0.16	< 0.16
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 0.13	< 0.13	< 0.13
Bromoform	µg/L	< 4.7		< 0.21	< 0.21	< 0.21	< 0.21
Bromomethane	µg/L	< 1.4		< 0.27	< 0.27	< 0.27	< 0.27
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	< 0.24	< 0.24	< 0.24
Chlorobenzene	µg/L	< 6		< 0.11	< 0.11	< 0.11	< 0.11
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 0.22	< 0.22	< 0.22
Chloroform	µg/L	< 16		< 0.15	< 0.15	< 0.15	< 0.15
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 0.14	< 0.14	< 0.14
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 0.15	< 0.15	< 0.15
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 0.22	< 0.22	< 0.22
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 0.17	< 0.17	< 0.17
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 0.12	< 0.12	< 0.12
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 0.24	< 0.24	< 0.24
cis-1,3-Dichloropropene	µg/L			< 0.12	< 0.12	< 0.12	< 0.12
trans-1,3-Dichloropropene	µg/L			< 0.14	< 0.14	< 0.14	< 0.14
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 0.19	< 0.19	< 0.19
Ethylbenzene	µg/L	< 7.2		< 0.16	< 0.16	< 0.16	< 0.16
Methylene Chloride	µg/L	< 2.8		< 0.32	< 0.32	< 0.32	< 0.32
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 0.22	< 0.22	< 0.22
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 0.26	< 0.26	< 0.26
Toluene	µg/L	< 6		< 0.12	< 0.12	< 0.12	< 0.12
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 0.3	< 0.3	< 0.3

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Trichloroethene	µg/L	< 1.9		< 0.21	< 0.21	< 0.21	< 0.21
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 0.24	< 0.24	< 0.24
Acenaphthene	µg/L	< 5		< 0.33	< 0.33	< 0.32	< 0.33
Anthracene	µg/L	< 5		< 0.33	< 0.34	< 0.33	< 0.34
Benzidine	µg/L	< 5		< 22.3	< 22.5	< 22.2	< 22.4
Benzo(a)anthracene	µg/L	< 5		< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)pyrene	µg/L	< 5		< 0.35	< 0.36	< 0.35	< 0.36
Benzo(b)fluoranthene	µg/L	< 5		< 0.41	< 0.41	< 0.41	< 0.41
Benzo(k)fluoranthene	µg/L	< 5		< 0.37	< 0.38	< 0.37	< 0.38
Butylbenzylphthalate	µg/L	< 5		< 0.33	< 0.33	< 0.32	< 0.33
bis(2-Chloroethyl)ether	µg/L	< 5		< 0.34	< 0.35	< 0.34	< 0.35
bis(2-Chloroisopropyl)ether	µg/L	< 5		< 0.49	< 0.5	< 0.49	< 0.5
2-Chloronaphthalene	µg/L	< 5		< 0.33	< 0.34	< 0.33	< 0.34
2-Chlorophenol	µg/L	< 5		< 0.59	< 0.59	< 0.58	< 0.59
Chrysene	µg/L	< 5		< 0.34	< 0.35	< 0.34	< 0.35
Di-n-Butylphthalate	µg/L	< 5		< 0.31	< 0.31	< 0.31	< 0.31
Dibenzo(a,h)anthracene	µg/L	< 5		< 0.29	< 0.29	< 0.29	< 0.29
3,3-Dichlorobenzidine	µg/L	< 5		< 2.8	< 2.8	< 2.8	< 2.8
2,4-Dichlorophenol	µg/L	< 5		< 0.46	< 0.46	< 0.45	< 0.46
Diethylphthalate	µg/L	< 5		< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	µg/L	< 5		< 2.9	< 2.9	< 2.9	< 2.9
Dimethylphthalate	µg/L	< 5		< 0.37	< 0.38	< 0.37	< 0.38
2,4-Dinitrophenol	µg/L	< 5		< 2.3	< 2.3	< 2.3	< 2.3
2,4-Dinitrotoluene	µg/L	< 5		< 0.37	< 0.38	< 0.37	< 0.38
1,2-Diphenylhydrazine	µg/L	< 5		< 0.32	< 0.32	< 0.31	< 0.32
bis(2-Ethylhexyl)phthalate	µg/L	< 5		< 0.34	< 0.35	< 0.34	< 0.35
Fluoranthene	µg/L	< 5		< 0.25	< 0.25	< 0.25	< 0.25

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average
Fluorene	µg/L	< 5		< 0.36	< 0.37	< 0.36	< 0.37
Hexachlorobenzene	µg/L	< 5		< 0.3	< 0.3	< 0.3	< 0.3
Hexachlorobutadiene	µg/L	< 5		< 0.29	< 0.29	< 0.29	< 0.29
Hexachlorocyclopentadiene	µg/L	< 5		< 1	< 1	< 1	< 1
Hexachloroethane	µg/L	< 5		< 0.32	< 0.32	< 0.31	< 0.32
Indeno(1,2,3-cd)pyrene	µg/L	< 5		< 0.29	< 0.29	< 0.29	< 0.29
Isophorone	µg/L	< 5		< 0.38	< 0.38	< 0.38	< 0.38
2-Methyl-4,6-dinitrophenol	µg/L			< 1.3	< 1.3	< 1.3	< 1.3
Nitrobenzene	µg/L	< 5		< 0.6	< 0.61	< 0.6	< 0.7
N-Nitrosodimethylamine	µg/L	< 5		< 0.45	< 0.45	< 0.44	< 0.45
N-Nitroso-di-n-propylamine	µg/L	< 5		< 0.53	< 0.54	< 0.53	< 0.54
N-Nitrosodiphenylamine	µg/L	< 5		< 1	< 1	< 1	< 1
Pentachlorophenol	µg/L	< 5		< 1.8	< 1.8	< 1.8	< 1.8
Phenol	µg/L	< 5		< 0.22	< 0.23	< 0.22	< 0.23
Pyrene	µg/L	< 5		< 0.34	< 0.35	< 0.34	< 0.35
1,2,4-Trichlorobenzene	µg/L	< 5		< 0.26	< 0.26	< 0.26	< 0.26
2,4,6-Trichlorophenol	µg/L	< 5		< 0.35	< 0.36	< 0.35	< 0.36
Kepone	µg/L	< 0.1		< 1.8	< 1.8	< 1.8	< 1.8
FIELD PARAMETERS							
pH (Field)	pH_Units	7.4		8.07	8.1	7.97	8.05
Temperature	° C	29.2		29.98	31.8	32.5	31.43
Conductivity	µs/cm			565	1080	880	842
Dissolved Oxygen	%			127.7			127.70
Dissolved Oxygen	mg/l			10.25			10.25
ORP	mv			140.1			140.10
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0	0.09	0.11	0.07

Table 3
Pond D Comingled Water

Parameters	Units	Outfall 005		Pond D Surface Water			
		Presumed Maximum Day	Presumed Long Term Average	Pond D 2 6/9/2015	Pond D 3 6/15/2015	Pond D 4 6/16/2015	Presumed Average

Footnotes:

1) ND- Not detected above the laboratory detection limit.

2) NA- Not analyzed.

3) mg/L - milligrams per liter.

4) µg/L- micrograms per liter.

5) µS/cm - microsiemens/centimeter.

6) mv- millivolts.

7) ppm- parts per million.

8) ORP- Oxidation Reduction Potential.

9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.10	< 0.09	< 0.10
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.08	< 0.06
Antimony, Total	mg/L	< 0.001		0.0035	< 0.001	< 0.003
Antimony, Dissolved	mg/L	< 0.001		0.0036	< 0.001	< 0.003
Arsenic, Total	mg/L	< 0.003		0.019	< 0.003	< 0.011
Arsenic, Dissolved	mg/L	< 0.003		0.018	< 0.003	< 0.011
Boron, Total	mg/L	0.03		0.47	< 0.03	< 0.25
Boron, Dissolved	mg/L			0.47		
Barium, Total	mg/L	0.044		0.15	0.043	0.1
Barium, Dissolved	mg/L	0.033		0.15	0.033	0.1
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0002	< 0.0002
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0002	< 0.0002
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.0003	< 0.0003
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.0003	< 0.0004
Calcium, Total	mg/L			37.4		
Calcium, Dissolved	mg/L			37.2		
Chromium, Total	mg/L	< 0.001		< 0.00033	< 0.001	< 0.001
Chromium, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001	< 0.001
Trivalent Chromium, Total	mg/L			< 0.01		
Trivalent Chromium, Dissolved	mg/L			< 0.01		
Hexavalent Chromium, Total	µg/L	< 5		< 0.052	< 4	< 3
Hexavalent Chromium, Dissolved	µg/L			< 0.052		
Cobalt, Total	mg/L	< 0.0006		< 0.00083	< 0.0007	< 0.0008
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0009	< 0.0013
Copper, Total	mg/L	0.007		< 0.00083	0.009	< 0.005
Copper, Dissolved	mg/L	0.004		< 0.0016	0.005	< 0.004
Iron, Total	mg/L	7.00		0.061	5.7	3.0
Iron, Dissolved	mg/L	0.09		< 0.02	0.10	< 0.07
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.001	< 0.001
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001	< 0.001
Lithium, Total	mg/L			< 0.016		
Lithium, Dissolved	mg/L			< 0.033		
Manganese, Total	mg/L	0.04		0.037	0.07	0.06
Manganese, Dissolved	mg/L	0.02		0.008	0.03	0.02
Magnesium, Total	mg/L	8.36		15	8.7	12
Magnesium, Dissolved	mg/L	8.17		14.4	8.5	12
Molybdenum, Total	mg/L	0.002		0.05	0.003	0.03

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
Molybdenum, Dissolved	mg/L	0.002		0.048	0.003	0.026
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.0002	< 0.0002
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.0002	< 0.0002
Nickel, Total	mg/L	< 0.005		0.0028	< 0.011	< 0.007
Nickel, Dissolved	mg/L	< 0.005		< 0.0016	< 0.009	< 0.006
Selenium, Total	mg/L	< 0.003		0.0056	< 0.003	< 0.005
Selenium, Dissolved	mg/L	< 0.003		0.0058	< 0.003	< 0.005
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.0002	< 0.0003
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.0003	< 0.0005
Thallium, Total	mg/L	0.0006		< 0.00016	< 0.0006	< 0.0004
Thallium, Dissolved	mg/L	0.0005		< 0.00033	< 0.0005	< 0.0005
Zinc, Total	mg/L	< 0.01		< 0.01	< 0.02	< 0.02
Zinc, Dissolved	mg/L	0.013		< 0.0016	0.020	< 0.011
Potassium, Total	mg/L			6.6		
Potassium, Dissolved	mg/L			6.6		
Sodium, Total	mg/L			40.6		
Sodium, Dissolved	mg/L			41		
Sulfate	mg/L	44.22		104	42.7	73.0
pH	pH_Units	7.38		8.0	7.45	7.7
Specific Conductance	umhos/cm			550		
Turbidity	NTU			1.6		
Alkalinity, Total	mg/L			63		
Ammonia-N	mg/L	0.18	0.06	< 0.03	0.16	< 0.10
Nitrate-N	mg/L	2.25	1.02	< 0.037	< 1.80	< 1.35
Nitrite-N	mg/L			< 0.044		
Oil/Grease Hexane Extractable	mg/L	< 5	< 5	< 3	< 4	< 4
Total Kjeldahl Nitrogen	mg/L			< 0.4		
Total Nitrogen	mg/L			< 1.0		
Phosphorus, Total	mg/L	0.17	0.06	< 0.06	0.2	< 0.2
Chloride	mg/L	55.34		71.1	67.6	69.4
Fluoride	mg/L	0.171		0.5	< 0.16	< 0.4
Hardness	mg/L	104.31		153	106	130
Total Dissolved Solids	mg/L	272.5		355	281	318
Total Suspended Solids	mg/L	23.5	4.3	< 8	21	< 20
Biochemical Oxygen Demand	mg/L	< 3.0		< 0.8	< 3.1	< 2.0
Chlorine, Total Residual	mg/L	< 0.1	< 0.1	< 0.009	< 0.2	< 0.2
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.12	< 0.24

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.01	< 0.01
Aldrin	µg/L	< 0.05		< 0.0007	< 0.04	< 0.03
alpha-BHC	µg/L	< 0.05		< 0.00014	< 0.04	< 0.03
beta-BHC	µg/L	< 0.05		< 0.00017	< 0.04	< 0.03
delta-BHC	µg/L	< 0.05		< 0.00025	< 0.04	< 0.03
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.04	< 0.03
Chlordane	µg/L	< 0.2		< 0.013	< 0.2	< 0.2
4,4'-DDD	µg/L	< 0.1		< 0.00017	< 0.1	< 0.1
4,4'-DDE	µg/L	< 0.1		< 0.00017	< 0.1	< 0.1
4,4'-DDT	µg/L	< 0.1		< 0.00024	< 0.1	< 0.1
Dieldrin	µg/L	< 0.1		< 0.00014	< 0.1	< 0.1
Endosulfan I	µg/L	< 0.1		< 0.00029	< 0.1	< 0.1
Endosulfan II	µg/L	< 0.1		< 0.00015	< 0.1	< 0.1
Endosulfan Sulfate	µg/L	< 0.1		< 0.0003	< 0.1	< 0.1
Endrin	µg/L	< 0.1		< 0.00015	< 0.1	< 0.1
Endrin Aldehyde	µg/L	< 0.1		< 0.00032	< 0.1	< 0.1
Heptachlor	µg/L	< 0.05		< 0.0004	< 0.04	< 0.03
Heptachlor Epoxide	µg/L	< 0.1		< 0.00017	< 0.1	< 0.1
Methoxychlor	µg/L	< 0.1		< 0.00027	< 0.1	< 0.1
Mirex	µg/L	< 0.1		< 0.00057	< 0.1	< 0.1
Total Polychlorinated Biphenyl	µg/L			0		
Toxaphene	µg/L	< 5		< 0.01	< 4	< 3
Aroclor-1016	µg/L			< 0.042		
Aroclor-1221	µg/L			< 0.062		
Aroclor-1232	µg/L			< 0.077		
Aroclor-1242	µg/L			< 0.045		
Aroclor-1248	µg/L			< 0.036		
Aroclor-1254	µg/L			< 0.06		
Aroclor-1260	µg/L			< 0.042		
Azinphos Methyl	µg/L	< 1		< 0.35	< 1	< 0.7
Chlorpyrifos	µg/L	< 0.2		< 0.47	< 0.3	< 0.4
Demeton	µg/L	< 1		< 0.3	< 0.9	< 0.7
Diazinon	µg/L	< 1		< 0.27	< 0.9	< 0.6
Malathion	µg/L	< 1		< 0.22	< 0.9	< 0.6
Parathion	µg/L	< 1		< 0.31	< 0.9	< 0.7
Acrolein	µg/L	< 10		< 2.4	< 8.4	< 5.5
Acrylonitrile	µg/L	< 1.5		< 0.89	< 1.4	< 1.2

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
Benzene	µg/L	< 4.4		< 0.16	< 3.5	< 1.9
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 1.8	< 0.98
Bromoform	µg/L	< 4.7		< 0.21	< 3.8	< 2.1
Bromomethane	µg/L	< 1.4		< 0.27	< 1.2	< 0.75
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	< 2.3	< 1.3
Chlorobenzene	µg/L	< 6		< 0.11	< 5	< 3
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 2.5	< 1.4
Chloroform	µg/L	16.82		< 0.15	< 14	< 7.2
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 4	< 3
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 4	< 3
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 4	< 3
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 2.3	< 1.3
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 2.3	< 1.3
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 1.3	< 0.72
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 5	< 3
cis-1,3-Dichloropropene	µg/L			< 0.12		
trans-1,3-Dichloropropene	µg/L			< 0.14		
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 4.7	< 2.5
Ethylbenzene	µg/L	< 7.2		< 0.16	< 5.7	< 3.0
Methylene Chloride	µg/L	< 2.8		< 0.32	< 2.3	< 1.4
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 5.5	< 2.9
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 3.3	< 1.8
Toluene	µg/L	< 6		< 0.12	< 5	< 3
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 4	< 3
Trichloroethene	µg/L	< 1.9		< 0.21	< 1.6	< 0.92
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 1.5	< 0.88
Acenaphthene	µg/L	< 5		< 0.33	< 4	< 3
Anthracene	µg/L	< 5		< 0.34	< 4	< 3
Benzidine	µg/L	< 5		< 22.4	< 9	< 20
Benzo(a)anthracene	µg/L	< 5		< 0.3	< 4	< 3
Benzo(a)pyrene	µg/L	< 5		< 0.36	< 4	< 3
Benzo(b)fluoranthene	µg/L	< 5		< 0.41	< 4	< 3
Benzo(k)fluoranthene	µg/L	< 5		< 0.38	< 4	< 3
Butylbenzylphthalate	µg/L	< 5		< 0.33	< 4	< 3
bis(2-Chloroethyl)ether	µg/L	< 5		< 0.35	< 4	< 3
bis(2-Chloroisopropyl)ether	µg/L	< 5		< 0.5	< 5	< 3
2-Chloronaphthalene	µg/L	< 5		< 0.34	< 4	< 3

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
2-Chlorophenol	µg/L	< 5		< 0.59	< 5	< 3
Chrysene	µg/L	< 5		< 0.35	< 4	< 3
Di-n-Butylphthalate	µg/L	< 5		< 0.31	< 4	< 3
Dibenzo(a,h)anthracene	µg/L	< 5		< 0.29	< 4	< 3
3,3-Dichlorobenzidine	µg/L	< 5		< 2.8	< 5	< 4
2,4-Dichlorophenol	µg/L	< 5		< 0.46	< 5	< 3
Diethylphthalate	µg/L	< 5		< 0.3	< 4	< 3
2,4-Dimethylphenol	µg/L	< 5		< 2.9	< 5	< 4
Dimethylphthalate	µg/L	< 5		< 0.38	< 4	< 3
2,4-Dinitrophenol	µg/L	< 5		< 2.3	< 5	< 4
2,4-Dinitrotoluene	µg/L	< 5		< 0.38	< 4	< 3
1,2-Diphenylhydrazine	µg/L	< 0.1		< 0.32	< 0.2	< 0.3
bis(2-Ethylhexyl)phthalate	µg/L	< 5		< 0.35	< 4	< 3
Fluoranthene	µg/L	< 5		< 0.25	< 4	< 3
Fluorene	µg/L	< 5		< 0.37	< 4	< 3
Hexachlorobenzene	µg/L	< 5		< 0.3	< 4	< 3
Hexachlorobutadiene	µg/L	< 5		< 0.29	< 4	< 3
Hexachlorocyclopentadiene	µg/L	< 5		< 1	< 5	< 4
Hexachloroethane	µg/L	< 5		< 0.32	< 4	< 3
Indeno(1,2,3-cd)pyrene	µg/L	< 5		< 0.29	< 4	< 3
Isophorone	µg/L	< 5		< 0.38	< 4	< 3
2-Methyl-4,6-dinitrophenol	µg/L	< 50		< 1.3	< 40	< 21
Nitrobenzene	µg/L	< 5		< 0.7	< 5	< 3
N-Nitrosodimethylamine	µg/L	< 5		< 0.45	< 5	< 3
N-Nitroso-di-n-propylamine	µg/L	< 5		< 0.54	< 5	< 3
N-Nitrosodiphenylamine	µg/L	< 5		< 1	< 5	< 4
Pentachlorophenol	µg/L	< 5		< 1.8	< 5	< 4
Phenol	µg/L	< 5		< 0.23	< 4	< 3
Pyrene	µg/L	< 5		< 0.35	< 4	< 3
1,2,4-Trichlorobenzene	µg/L	< 5		< 0.26	< 4	< 3
2,4,6-Trichlorophenol	µg/L	< 5		< 0.36	< 4	< 3
Kepone	µg/L	< 0.1		< 1.8	< 0.5	< 2
FIELD PARAMETERS						
pH (Field)	pH_Units	7.38		8.05	7.48	7.68
Temperature	° C	34.6		31.43	32.0	31.8
Conductivity	µs/cm			842		
Dissolved Oxygen	%			127.70		

Table 4
Blended Pond D Comingled Water, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Pond D Surface Water	Outfall 004 + Outfall 502	Pond D Comingled Water + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average	Presumed Weighted Average
Dissolved Oxygen	mg/l			10.25		
ORP	mv			140.10		
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.07	< 0.1	< 0.1

Footnotes:

1) ND- Not detected above the laboratory detection limit.
2) NA- Not analyzed.
3) mg/L - milligrams per liter.
4) µg/L- micrograms per liter.
5) µS/cm - microsiemens/centimeter.
6) mv- millivolts.
7) ppm- parts per million.
8) ORP- Oxidation Reduction Potential.
9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.
10) Presumed weighted average of Pond D Comingled Water, Low Volume Settling Ponds (Outfall 004), and Outfall 502 Water is based on 2.53-mgd Pond D Comingled Water decant/pump rate (i.e., same as existing max 30-day flow for Outfall 005) and a sum of the long term average rates in the 2013 permit reissuance application for Outfall 004 + Outfall 502, or 2.59-MGD.

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.10	< 0.10
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.09
Antimony, Total	mg/L	< 0.001		0.0035	< 0.002
Antimony, Dissolved	mg/L	< 0.001		0.0036	< 0.002
Arsenic, Total	mg/L	< 0.003		0.019	< 0.004
Arsenic, Dissolved	mg/L	< 0.003		0.018	< 0.004
Boron, Total	mg/L	0.02		0.47	0.04
Boron, Dissolved	mg/L			0.47	
Barium, Total	mg/L	0.043		0.15	0.05
Barium, Dissolved	mg/L	0.038		0.15	0.05
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0002
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0002
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.0003
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.0004
Calcium, Total	mg/L			37.4	
Calcium, Dissolved	mg/L			37.2	
Chromium, Total	mg/L	< 0.001		< 0.00033	< 0.001
Chromium, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Trivalent Chromium, Total	mg/L			< 0.01	
Trivalent Chromium, Dissolved	mg/L			< 0.01	
Hexavalent Chromium, Total	µg/L	< 0.005		< 0.052	< 0.007
Hexavalent Chromium, Dissolved	µg/L			< 0.052	
Cobalt, Total	mg/L	0.0007		< 0.00083	< 0.0008
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0007
Copper, Total	mg/L	0.011		< 0.00083	< 0.011
Copper, Dissolved	mg/L	0.008		< 0.0016	< 0.008
Iron, Total	mg/L	0.42		0.061	0.41
Iron, Dissolved	mg/L	< 0.05		< 0.02	< 0.05
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.001
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Lithium, Total	mg/L			< 0.016	
Lithium, Dissolved	mg/L			< 0.033	
Manganese, Total	mg/L	0.12		0.037	0.12
Manganese, Dissolved	mg/L	0.04		0.008	0.04
Magnesium, Total	mg/L	8.04		15	8.3
Magnesium, Dissolved	mg/L	7.82		14.4	8.01
Molybdenum, Total	mg/L	< 0.001		0.05	< 0.01

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
Molybdenum, Dissolved	mg/L	< 0.001		0.048	< 0.003
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.0002
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.0002
Nickel, Total	mg/L	< 0.005		0.0028	< 0.005
Nickel, Dissolved	mg/L	< 0.005		< 0.0016	< 0.005
Selenium, Total	mg/L	< 0.003		0.0056	< 0.004
Selenium, Dissolved	mg/L	< 0.003		0.0058	< 0.004
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.0002
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.0002
Thallium, Total	mg/L	< 0.0002		< 0.00016	< 0.0002
Thallium, Dissolved	mg/L	0.0002		< 0.00033	< 0.0003
Zinc, Total	mg/L	< 0.01		< 0.01	< 0.01
Zinc, Dissolved	mg/L	< 0.01		< 0.0016	< 0.01
Potassium, Total	mg/L			6.6	
Potassium, Dissolved	mg/L			6.6	
Sodium, Total	mg/L			40.6	
Sodium, Dissolved	mg/L			41	
Sulfate	mg/L	28.06		104	30.3
pH	pH_Units			8.0	
Specific Conductance	umhos/cm			550	
Turbidity	NTU			1.6	
Alkalinity, Total	mg/L			63	
Ammonia-N	mg/L	0.07		< 0.03	< 0.07
Nitrate-N	mg/L	2.47		< 0.037	2.41
Nitrite-N	mg/L			< 0.044	
Oil/Grease Hexane Extractable	mg/L	< 5		< 3	< 5
Total Kjeldahl Nitrogen	mg/L			< 0.4	
Total Nitrogen	mg/L			< 1.0	
Phosphorus, Total	mg/L	< 0.32		< 0.06	< 0.32
Chloride	mg/L	23.08		71.1	24.5
Fluoride	mg/L	0.11		0.5	0.2
Hardness	mg/L	111.15		153	113
Total Dissolved Solids	mg/L	305.5		355	307
Total Suspended Solids	mg/L	12.4		< 8	< 13
Biochemical Oxygen Demand	mg/L	< 3.0		< 0.8	< 3.0
Chlorine, Total Residual	mg/L			< 0.009	
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.06

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.01
Aldrin	µg/L	< 0.05		< 0.0007	< 0.05
alpha-BHC	µg/L	< 0.05		< 0.00014	< 0.05
beta-BHC	µg/L	< 0.05		< 0.00017	< 0.05
delta-BHC	µg/L	< 0.05		< 0.00025	< 0.05
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.05
Chlordane	µg/L	< 0.2		< 0.013	< 0.2
4,4'-DDD	µg/L	< 0.1		< 0.00017	< 0.1
4,4'-DDE	µg/L	< 0.1		< 0.00017	< 0.1
4,4'-DDT	µg/L	< 0.1		< 0.00024	< 0.1
Dieldrin	µg/L	< 0.1		< 0.00014	< 0.1
Endosulfan I	µg/L	< 0.1		< 0.00029	< 0.1
Endosulfan II	µg/L	< 0.1		< 0.00015	< 0.1
Endosulfan Sulfate	µg/L	< 0.1		< 0.0003	< 0.1
Endrin	µg/L	< 0.1		< 0.00015	< 0.1
Endrin Aldehyde	µg/L	< 0.1		< 0.00032	< 0.1
Heptachlor	µg/L	< 0.05		< 0.0004	< 0.05
Heptachlor Epoxide	µg/L	< 0.1		< 0.00017	< 0.1
Methoxychlor	µg/L	< 0.1		< 0.00027	< 0.1
Mirex	µg/L	< 0.1		< 0.00057	< 0.1
Total Polychlorinated Biphenyl	µg/L			0	
Toxaphene	µg/L	< 5		< 0.01	< 5
Aroclor-1016	µg/L			< 0.042	
Aroclor-1221	µg/L			< 0.062	
Aroclor-1232	µg/L			< 0.077	
Aroclor-1242	µg/L			< 0.045	
Aroclor-1248	µg/L			< 0.036	
Aroclor-1254	µg/L			< 0.06	
Aroclor-1260	µg/L			< 0.042	
Azinphos Methyl	µg/L			< 0.35	
Chlorpyrifos	µg/L	< 0.2		< 0.47	< 0.3
Demeton	µg/L	< 1		< 0.3	< 1
Diazinon	µg/L	< 1		< 0.27	< 1
Malathion	µg/L	< 1		< 0.22	< 1
Parathion	µg/L	< 1		< 0.31	< 1
Acrolein	µg/L	< 10		< 2.4	< 10
Acrylonitrile	µg/L	< 1.5		< 0.89	< 1.5

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
Benzene	µg/L	< 4.4		< 0.16	< 4.3
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 2.2
Bromoform	µg/L	< 4.7		< 0.21	< 4.6
Bromomethane	µg/L	< 1.4		< 0.27	< 1.4
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	< 2.8
Chlorobenzene	µg/L	< 6		< 0.11	< 6
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 3.1
Chloroform	µg/L	< 1.6		< 0.15	< 1.6
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 5
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 5
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 5
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 2.8
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 2.8
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 1.6
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 6
cis-1,3-Dichloropropene	µg/L			< 0.12	
trans-1,3-Dichloropropene	µg/L			< 0.14	
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 5.8
Ethylbenzene	µg/L	< 7.2		< 0.16	< 7.0
Methylene Chloride	µg/L	< 2.8		< 0.32	< 2.8
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 6.8
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 4.0
Toluene	µg/L	< 6		< 0.12	< 6
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 5
Trichloroethene	µg/L	< 1.9		< 0.21	< 1.9
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 1.8
Acenaphthene	µg/L	< 10		< 0.33	< 10
Anthracene	µg/L	< 10		< 0.34	< 10
Benzidine	µg/L	< 6.3		< 22.4	< 6.8
Benzo(a)anthracene	µg/L	< 10		< 0.3	< 10
Benzo(a)pyrene	µg/L	< 10		< 0.36	< 10
Benzo(b)fluoranthene	µg/L	< 10		< 0.41	< 10
Benzo(k)fluoranthene	µg/L	< 10		< 0.38	< 10
Butylbenzylphthalate	µg/L	< 10		< 0.33	< 10
bis(2-Chloroethyl)ether	µg/L	< 10		< 0.35	< 10
bis(2-Chloroisopropyl)ether	µg/L	< 10		< 0.5	< 10
2-Chloronaphthalene	µg/L	< 10		< 0.34	< 10

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
2-Chlorophenol	µg/L	< 10		< 0.59	< 10
Chrysene	µg/L	< 10		< 0.35	< 10
Di-n-Butylphthalate	µg/L	< 10		< 0.31	< 10
Dibenzo(a,h)anthracene	µg/L	< 10		< 0.29	< 10
3,3-Dichlorobenzidine	µg/L	< 20		< 2.8	< 20
2,4-Dichlorophenol	µg/L	< 10		< 0.46	< 10
Diethylphthalate	µg/L	< 10		< 0.3	< 10
2,4-Dimethylphenol	µg/L	< 10		< 2.9	< 10
Dimethylphthalate	µg/L	< 10		< 0.38	< 10
2,4-Dinitrophenol	µg/L	< 10		< 2.3	< 10
2,4-Dinitrotoluene	µg/L	< 10		< 0.38	< 10
1,2-Diphenylhydrazine	µg/L	< 100		< 0.32	< 100
bis(2-Ethylhexyl)phthalate	µg/L	< 10		< 0.35	< 10
Fluoranthene	µg/L	< 10		< 0.25	< 10
Fluorene	µg/L	< 10		< 0.37	< 10
Hexachlorobenzene	µg/L	< 10		< 0.3	< 10
Hexachlorobutadiene	µg/L	< 10		< 0.29	< 10
Hexachlorocyclopentadiene	µg/L	< 10		< 1	< 10
Hexachloroethane	µg/L	< 10		< 0.32	< 10
Indeno(1,2,3-cd)pyrene	µg/L	< 10		< 0.29	< 10
Isophorone	µg/L	< 10		< 0.38	< 10
2-Methyl-4,6-dinitrophenol	µg/L	< 50		< 1.3	< 50
Nitrobenzene	µg/L	< 10		< 0.7	< 10
N-Nitrosodimethylamine	µg/L	< 10		< 0.45	< 10
N-Nitroso-di-n-propylamine	µg/L	< 10		< 0.54	< 10
N-Nitrosodiphenylamine	µg/L	< 10		< 1	< 10
Pentachlorophenol	µg/L	< 50		< 1.8	< 50
Phenol	µg/L	< 10		< 0.23	< 10
Pyrene	µg/L	< 10		< 0.35	< 10
1,2,4-Trichlorobenzene	µg/L	< 10		< 0.26	< 10
2,4,6-Trichlorophenol	µg/L	< 10		< 0.36	< 10
Kepone	µg/L	< 0.1		< 1.8	< 0.2
FIELD PARAMETERS					
pH (Field)	pH_Units	8.4		8.05	8.4
Temperature	° C	39.1		31.43	38.9
Conductivity	µs/cm			842	
Dissolved Oxygen	%			127.70	

Table 5
Blended Pond D Comingled Water and Outfall 001/002

Parameters	Units	Outfall 001/002		Pond D Surface Water	Pond D Comingled Water + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Average	Presumed Weighted Average
Dissolved Oxygen	mg/l			10.25	
ORP	mv			140.10	
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.07	< 0.1

Footnotes:

1) ND- Not detected above the laboratory detection limit.
2) NA- Not analyzed.
3) mg/L - milligrams per liter.
4) µg/L- micrograms per liter.
5) µS/cm - microsiemens/centimeter.
6) mv- millivolts.
7) ppm- parts per million.
8) ORP- Oxidation Reduction Potential.
9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.
10) Presumed weighted average of Pond D Comingled Water and Outfall 001/002 Water is based on 2.53-mgd Pond D Comingled Water decant/pump rate (i.e., same as existing max 30-day flow for Outfall 005) and a long term average flow in the 2013 permit reissuance application of 86.38-MGD for Outfall 001/002.

Table 6
Blended Ash Dewatering and Contact Waters

Parameters	Units	Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
		Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.11	NA	0.059	NA	0.059	0.07
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	NA	< 0.026	NA	< 0.026	< 0.026
Antimony, Total	mg/L	0.001		0.0034	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.0008
Antimony, Dissolved	mg/L	0.001		0.0034	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.0011
Arsenic, Total	mg/L	0.011		0.018	1.1	0.92	1.2	1.1	0.96
Arsenic, Dissolved	mg/L	0.01		0.017	0.88	0.81	0.9	0.4	0.4
Boron, Total	mg/L	0.06		0.45	NA	1.3	NA	1.3	1.2
Boron, Dissolved	mg/L			0.47	NA	1.4	NA	1.4	1.3
Barium, Total	mg/L	0.208		0.14	0.4	0.33	0.42	0.4	0.4
Barium, Dissolved	mg/L	0.19		0.14	0.37	0.36	0.38	0.37	0.34
Beryllium, Total	mg/L	< 0.0002		< 0.0001	NA	< 0.0001	NA	< 0.0001	< 0.0001
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	NA	< 0.0001	NA	< 0.0001	< 0.0001
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033
Calcium, Total	mg/L			35.5	NA	112	NA	66.8	62.7
Calcium, Dissolved	mg/L			37.4	NA	117	NA	64.7	61.2
Chromium, Total	mg/L	< 0.02		< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033
Chromium, Dissolved	mg/L	< 0.001		< 0.00066	0.0026	0.0024	0.0025	0.0025	0.0023
Trivalent Chromium, Total	mg/L			< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Trivalent Chromium, Dissolved	mg/L			< 0.01	NA	< 0.01	< 0.01	< 0.01	< 0.01
Hexavalent Chromium, Total	µg/L	< 5		< 0.052	< 0.052	< 0.052	< 0.052	< 0.052	< 0.052
Hexavalent Chromium, Dissolved	µg/L			< 0.052	NA	< 0.052	< 0.052	< 0.052	< 0.052
Cobalt, Total	mg/L	< 0.0006		< 0.00083	NA	< 0.00083	NA	0.016	< 0.015
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	NA	< 0.0016	NA	< 0.0016	< 0.0016
Copper, Total	mg/L	0.001		< 0.00083	< 0.00083	< 0.00083	< 0.00083	< 0.00083	< 0.00083

Table 6
Blended Ash Dewatering and Contact Waters

Parameters	Units	Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
		Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Copper, Dissolved	mg/L	< 0.001		< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016
Iron, Total	mg/L	0.26		0.054	11.2	10.3	11.8	6.2	5.5
Iron, Dissolved	mg/L	0.06		< 0.02	5.6	4.9	7.1	5.9	< 5.2
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066
Lithium, Total	mg/L			< 0.016	NA	0.27	NA	0.27	< 0.24
Lithium, Dissolved	mg/L			< 0.033	NA	0.27	NA	0.27	< 0.24
Manganese, Total	mg/L	0.08		0.026	0.81	0.67	0.88	0.79	0.69
Manganese, Dissolved	mg/L	0.06		0.0075	0.82	0.83	0.88	0.85	0.74
Magnesium, Total	mg/L	15.1		13.4	NA	29.3	NA	29.3	27.3
Magnesium, Dissolved	mg/L	15.38		14.2	NA	31.5	NA	31.5	29.3
Molybdenum, Total	mg/L	0.006		0.049	NA	0.097	NA	0.097	0.091
Molybdenum, Dissolved	mg/L	0.006		0.046	NA	0.08	NA	0.08	0.08
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016
Nickel, Total	mg/L	0.013		0.0029	0.0081	0.0064	0.0082	0.0076	0.0070
Nickel, Dissolved	mg/L	0.01		< 0.0016	0.008	0.0076	0.0076	0.008	< 0.008
Selenium, Total	mg/L	< 0.003		0.0056	< 0.00066	< 0.00066	< 0.00066	<0.00066	< 0.0014
Selenium, Dissolved	mg/L	<0.003		0.0062	< 0.0016	< 0.0016	< 0.0016	<0.0016	< 0.0023
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066
Thallium, Total	mg/L	0.0005		< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016	< 0.00016
Thallium, Dissolved	mg/L	0.0004		< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033	< 0.00033
Zinc, Total	mg/L	0.01		0.01	0.026	0.016	0.016	0.020	0.02
Zinc, Dissolved	mg/L	< 0.01		< 0.0016	0.012	0.19	0.011	0.08	< 0.07

Table 6
Blended Ash Dewatering and Contact Waters

Parameters	Units	Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
		Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Potassium, Total	mg/L			6.2	NA	9.8	NA	9.8	9.4
Potassium, Dissolved	mg/L			6.6	NA	10.1	NA	10.1	9.7
Sodium, Total	mg/L			38.3	NA	106	NA	106	97.2
Sodium, Dissolved	mg/L			40.1	NA	113	NA	113	104
Sulfate	mg/L	40.69		93.6	NA	16.2	NA	16.2	26.4
pH	pH_Units	7.4		7.9	7.77	7.88	7.76	7.81	7.9
Specific Conductance	umhos/cm			537	NA	1370	NA	1370	1270
Turbidity	NTU			1.18	NA	123	NA	123	108
Alkalinity, Total	mg/L			61	NA	395	NA	395	360
Ammonia-N	mg/L	< 0.05	< 0.05	< 0.03	0.306	0.322	0.287	0.305	< 0.27
Nitrate-N	mg/L	0.1	1.00	< 0.037	< 0.092	< 0.092	< 0.092	< 0.092	< 0.085
Nitrite-N	mg/L			< 0.044	NA	< 0.11	NA	< 0.11	< 0.11
Oil/Grease Hexane Extractable	mg/L	< 5	< 5	6.3	< 0.5	< 0.5	< 0.5	< 0.5	< 2
Total Kjeldahl Nitrogen	mg/L			< 0.4	NA	< 0.4	NA	< 0.4	< 0.4
Total Nitrogen	mg/L			< 1.0	NA	< 1.0	NA	< 1.0	< 1.0
Phosphorus, Total	mg/L	< 0.05	< 0.05	< 0.019	NA	0.37	NA	0.37	< 0.33
Chloride	mg/L	153.19		71.8	234	251	247	198	182
Fluoride	mg/L	0.142		0.5	NA	2.9	NA	2.9	3
Hardness	mg/L	129.96		144	463	401	417	427	390
Total Dissolved Solids	mg/L	452		367	NA	800	NA	800	744
Total Suspended Solids	mg/L	13.4	6.27	9	34	19	20	25	23
Biochemical Oxygen Demand	mg/L	< 12.6		< 0.8	NA	< 0.8	NA	<0.8	< 0.8
Chlorine, Total Residual	mg/L	< 0.1	< 0.1	< 0.009	NA	< 0.009	NA	< 0.009	< 0.009
Sulfide, Total	mg/L	< 0.05		< 0.35	NA	< 0.35	NA	< 0.35	< 0.35
Cyanide, Total	mg/L	< 0.01		< 0.00058	NA	< 0.00058	NA	< 0.00058	< 0.00058

Table 6
Blended Ash Dewatering and Contact Waters

		Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
Parameters	Units	Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Aldrin	µg/L	< 0.05		< 0.0006	NA	< 0.00061	NA	< 0.00061	< 0.0007
alpha-BHC	µg/L	< 0.05		< 0.00013	NA	< 0.00013	NA	< 0.00013	< 0.00013
beta-BHC	µg/L	< 0.05		< 0.00016	NA	< 0.00016	NA	< 0.00016	< 0.00016
delta-BHC	µg/L	< 0.05		< 0.00024	NA	< 0.00025	NA	< 0.00025	< 0.00025
gamma-BHC	µg/L	< 0.05		< 0.00015	NA	< 0.00015	NA	< 0.00015	< 0.00015
Chlordane	µg/L	< 0.2		< 0.013	NA	< 0.013	NA	< 0.013	< 0.013
4,4'-DDD	µg/L	< 0.1		< 0.00016	NA	< 0.00016	NA	< 0.00016	< 0.00016
4,4'-DDE	µg/L	< 0.1		< 0.00016	NA	< 0.00016	NA	< 0.00016	< 0.00016
4,4'-DDT	µg/L	< 0.1		< 0.00023	NA	< 0.00023	NA	< 0.00023	< 0.00023
Dieldrin	µg/L	< 0.1		< 0.00013	NA	< 0.00013	NA	< 0.00013	< 0.00013
Endosulfan I	µg/L	< 0.1		< 0.00028	NA	< 0.00028	NA	< 0.00028	< 0.00028
Endosulfan II	µg/L	< 0.1		< 0.00014	NA	< 0.00014	NA	< 0.00014	< 0.00014
Endosulfan Sulfate	µg/L	< 0.1		< 0.0002	NA	< 0.0002	NA	< 0.0002	< 0.0002
Endrin	µg/L	< 0.1		< 0.00015	NA	< 0.00015	NA	< 0.00015	< 0.00015
Endrin Aldehyde	µg/L			< 0.00031	NA	< 0.00031	NA	< 0.00031	< 0.00031
Heptachlor	µg/L	< 0.05		< 0.0003	NA	< 0.0003	NA	< 0.0003	< 0.0003
Heptachlor Epoxide	µg/L	< 0.1		< 0.00016	NA	< 0.00016	NA	< 0.00016	< 0.00016
Methoxychlor	µg/L	< 0.1		< 0.00026	NA	< 0.00026	NA	< 0.00026	< 0.00026
Mirex	µg/L	< 0.1		< 0.00056	NA	< 0.00056	NA	< 0.00056	< 0.00056
Total Polychlorinated Biphenyl	µg/L			0	NA	0	NA	0	0
Toxaphene	µg/L	< 5		< 0.0098	NA	< 0.0099	NA	< 0.0099	< 0.0099
Aroclor-1016	µg/L			< 0.041	NA	< 0.041	NA	< 0.041	< 0.041
Aroclor-1221	µg/L			< 0.061	NA	< 0.062	NA	< 0.062	< 0.062
Aroclor-1232	µg/L			< 0.076	NA	< 0.077	NA	< 0.077	< 0.077
Aroclor-1242	µg/L			< 0.044	NA	< 0.045	NA	< 0.045	< 0.045

Table 6
Blended Ash Dewatering and Contact Waters

Parameters	Units	Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
		Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Aroclor-1248	µg/L			< 0.035	NA	< 0.036	NA	< 0.036	< 0.036
Aroclor-1254	µg/L			< 0.057	NA	< 0.058	NA	< 0.058	< 0.058
Aroclor-1260	µg/L			< 0.041	NA	< 0.041	NA	< 0.041	< 0.041
Azinphos Methyl	µg/L	< 2		< 0.34	NA	< 0.35	NA	< 0.35	< 0.35
Chlorpyrifos	µg/L	< 0.2		< 0.46	NA	< 0.47	NA	< 0.47	< 0.47
Demeton	µg/L	< 1		< 0.2	NA	< 0.21	NA	< 0.21	< 0.3
Diazinon	µg/L	< 1		< 0.27	NA	< 0.27	NA	< 0.27	< 0.27
Malathion	µg/L	< 1		< 0.21	NA	< 0.21	NA	< 0.21	< 0.21
Parathion	µg/L	< 1		< 0.31	NA	< 0.31	NA	< 0.31	< 0.31
Acrolein	µg/L	< 10		< 2.4	NA	< 2.4	NA	< 2.4	< 2.4
Acrylonitrile	µg/L	< 1.5		< 0.89	NA	< 0.89	NA	< 0.89	< 0.89
Benzene	µg/L	< 4.4		< 0.16	NA	< 0.16	NA	< 0.16	< 0.16
Bromodichloromethane	µg/L	< 2.2		< 0.13	NA	< 0.13	NA	< 0.13	< 0.13
Bromoform	µg/L	< 4.7		< 0.21	NA	< 0.21	NA	< 0.21	< 0.21
Bromomethane	µg/L	< 1.4		< 0.27	NA	< 0.27	NA	< 0.27	< 0.27
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	NA	< 0.24	NA	< 0.24	< 0.24
Chlorobenzene	µg/L	< 6		< 0.11	NA	< 0.11	NA	< 0.11	< 0.11
Chlorodibromomethane	µg/L	< 3.1		< 0.22	NA	< 0.22	NA	< 0.22	< 0.22
Chloroform	µg/L	< 16		< 0.15	NA	< 0.15	NA	< 0.15	< 0.15
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	NA	< 0.2	NA	< 0.2	< 0.2
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	NA	< 0.14	NA	< 0.14	< 0.14
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	NA	< 0.15	NA	< 0.15	< 0.15
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	NA	< 0.22	NA	< 0.22	< 0.22
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	NA	< 0.17	NA	< 0.17	< 0.17
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	NA	< 0.12	NA	< 0.12	< 0.12

Table 6
Blended Ash Dewatering and Contact Waters

Parameters	Units	Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
		Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
1,2-Dichloropropane	µg/L	< 6		< 0.24	NA	< 0.24	NA	< 0.24	< 0.24
cis-1,3-Dichloropropene	µg/L			< 0.12	NA	< 0.12	NA	< 0.12	< 0.12
trans-1,3-Dichloropropene	µg/L			< 0.14	NA	< 0.14	NA	< 0.14	< 0.14
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	NA	< 0.19	NA	< 0.19	< 0.19
Ethylbenzene	µg/L	< 7.2		< 0.16	NA	< 0.16	NA	< 0.16	< 0.16
Methylene Chloride	µg/L	< 2.8		< 0.32	NA	< 0.32	NA	< 0.32	< 0.32
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	NA	< 0.22	NA	< 0.22	< 0.22
Tetrachloroethene	µg/L	< 4.1		< 0.26	NA	< 0.26	NA	< 0.26	< 0.26
Toluene	µg/L	< 6		< 0.12	NA	< 0.12	NA	< 0.12	< 0.12
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	NA	< 0.3	NA	< 0.3	< 0.3
Trichloroethene	µg/L	< 1.9		< 0.21	NA	< 0.21	NA	< 0.21	< 0.21
Vinyl Chloride	µg/L	< 1.8		< 0.24	NA	< 0.24	NA	< 0.24	< 0.24
Acenaphthene	µg/L	< 5		< 0.33	NA	< 0.33	NA	< 0.33	< 0.33
Anthracene	µg/L	< 5		< 0.33	NA	< 0.34	NA	< 0.34	< 0.34
Benzidine	µg/L	< 5		< 22.3	NA	< 22.4	NA	< 22.4	< 22.4
Benzo(a)anthracene	µg/L	< 5		< 0.3	NA	< 0.3	NA	< 0.3	< 0.3
Benzo(a)pyrene	µg/L	< 5		< 0.35	NA	< 0.36	NA	< 0.36	< 0.36
Benzo(b)fluoranthene	µg/L	< 5		< 0.41	NA	< 0.41	NA	< 0.41	< 0.41
Benzo(k)fluoranthene	µg/L	< 5		< 0.37	NA	< 0.37	NA	< 0.37	< 0.37
Butylbenzylphthalate	µg/L	< 5		< 0.33	NA	< 0.33	NA	< 0.33	< 0.33
bis(2-Chloroethyl)ether	µg/L	< 5		< 0.34	NA	< 0.35	NA	< 0.35	< 0.35
bis(2-Chloroisopropyl)ether	µg/L	< 5		< 0.49	NA	< 0.5	NA	< 0.5	< 0.5
2-Chloronaphthalene	µg/L	< 5		< 0.33	NA	< 0.34	NA	< 0.34	< 0.34
2-Chlorophenol	µg/L	< 5		< 0.59	NA	< 0.59	NA	< 0.59	< 0.59
Chrysene	µg/L	< 5		< 0.34	NA	< 0.35	NA	< 0.35	< 0.35

Table 6
Blended Ash Dewatering and Contact Waters

		Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
Parameters	Units	Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Di-n-Butylphthalate	µg/L	< 5		< 0.31	NA	< 0.31	NA	< 0.31	< 0.31
Dibenzo(a,h)anthracene	µg/L	< 5		< 0.29	NA	< 0.29	NA	< 0.29	< 0.29
3,3-Dichlorobenzidine	µg/L	< 5		< 2.8	NA	< 2.8	NA	< 2.8	< 2.8
2,4-Dichlorophenol	µg/L	< 5		< 0.46	NA	< 0.46	NA	< 0.46	< 0.46
Diethylphthalate	µg/L	< 5		< 0.3	NA	< 0.3	NA	< 0.3	< 0.3
2,4-Dimethylphenol	µg/L	< 5		< 2.9	NA	< 2.9	NA	< 2.9	< 2.9
Dimethylphthalate	µg/L	< 5		< 0.37	NA	< 0.37	NA	< 0.37	< 0.37
2,4-Dinitrophenol	µg/L	< 5		< 2.3	NA	< 2.3	NA	< 2.3	< 2.3
2,4-Dinitrotoluene	µg/L	< 5		< 0.37	NA	< 0.37	NA	< 0.37	< 0.37
1,2-Diphenylhydrazine	µg/L	< 5		< 0.32	NA	< 0.32	NA	< 0.32	< 0.32
bis(2-Ethylhexyl)phthalate	µg/L	< 5		< 0.34	NA	< 0.35	NA	< 0.35	< 0.35
Fluoranthene	µg/L	< 5		< 0.25	NA	< 0.25	NA	< 0.25	< 0.25
Fluorene	µg/L	< 5		< 0.36	NA	< 0.36	NA	< 0.36	< 0.36
Hexachlorobenzene	µg/L	< 5		< 0.3	NA	< 0.3	NA	< 0.3	< 0.3
Hexachlorobutadiene	µg/L	< 5		< 0.29	NA	< 0.29	NA	< 0.29	< 0.29
Hexachlorocyclopentadiene	µg/L	< 5		< 1	NA	< 1	NA	< 1	< 1
Hexachloroethane	µg/L	< 5		< 0.32	NA	< 0.32	NA	< 0.32	< 0.32
Indeno(1,2,3-cd)pyrene	µg/L	< 5		< 0.29	NA	< 0.29	NA	< 0.29	< 0.29
Isophorone	µg/L	< 5		< 0.38	NA	< 0.38	NA	< 0.38	< 0.38
2-Methyl-4,6-dinitrophenol	µg/L			< 1.3	NA	< 1.3	NA	< 1.3	< 1.3
Nitrobenzene	µg/L	< 5		< 0.62	NA	< 0.61	NA	< 0.61	< 0.62
N-Nitrosodimethylamine	µg/L	< 5		< 0.45	NA	< 0.45	NA	< 0.45	< 0.45
N-Nitroso-di-n-propylamine	µg/L	< 5		< 0.53	NA	< 0.53	NA	< 0.53	< 0.53
N-Nitrosodiphenylamine	µg/L	< 5		< 1	NA	< 1	NA	< 1	< 1
Pentachlorophenol	µg/L	< 5		< 1.8	NA	< 1.8	NA	< 1.8	< 1.8

Table 6
Blended Ash Dewatering and Contact Waters

		Outfall 005		Contact Waters	Pond E Well				Dewatering & Contact Waters
Parameters	Units	Presumed Maximum Day	Presumed Long Term Average	Pond E 5/5/2015	Well Discharge 1 5/11/2015	Well Discharge 2 5/12/2015	Well Discharge 3 5/13/2015	Presumed Average Dewatering	Presumed Weighted Average
Phenol	µg/L	< 5		< 0.22	NA	< 0.22	NA	< 0.22	< 0.22
Pyrene	µg/L	< 5		< 0.34	NA	< 0.35	NA	< 0.35	< 0.35
1,2,4-Trichlorobenzene	µg/L	< 5		< 0.26	NA	< 0.26	NA	< 0.26	< 0.26
2,4,6-Trichlorophenol	µg/L	< 5		< 0.35	NA	< 0.36	NA	< 0.36	< 0.36
Kepone	µg/L	< 0.1		< 1.8	NA	< 1.8	NA	< 1.8	< 1.8
FIELD PARAMETERS									
pH (Field)	pH_Units	7.4		8.07	7.63	7.5	7.24	7.5	7.6
Temperature	° C	29.2		29.98	18.16	18.65	16.36	17.73	19.34
Conductivity	µs/cm			565	1233	1236	1172	1214	1130
Dissolved Oxygen	%			127.7	81.8	79.1	72.3	77.8	84.4
Dissolved Oxygen	mg/l			10.25	7.66	7.33	7.03	7.34	7.73
ORP	mv			140.1	-147.1	-157.6	-152.9	-152.6	-114.2
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.06	0.00	0.00	0.00	0.00	0.01

Footnotes:

1) ND- Not detected above the laboratory detection limit.

2) NA- Not analyzed.

3) mg/L - milligrams per liter.

4) µg/L- micrograms per liter.

5) µS/cm - microsiemens/centimeter.

6) mv- millivolts.

7) ppm- parts per million.

8) ORP- Oxidation Reduction Potential.

9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.

10) Presumed weighted average of Dewatering & Contact Waters is based on projected 333-gpm Pond D and 203-gpm Ponds A, B, & C ash dewatering rates as well as projected 70-gpm Pond D and 11-gpm Ponds A, B, & C contact water rates.

Table 7
Ponds A, B, C, and D Dewatering and Contact Water Estimated Pumping Rates

Pond D

Ash Dewatering	Presumed Average Conditions	In-situ Ash Water					Stormwater Infiltration				Pump Rate	
		Porosity	Initial Degree of Saturation	Final Degree of Saturation	Estimated Ash Volume (CY)	In-Situ Volume to be Dewatered (million gallons)	Area of Ash (AC)	Off Ash Area Unable to be Diverted (AC)	Monthly Runoff Volume on Ash (million gallons)	Monthly Rainfall Volume from Off Ash Areas (million gallons)	Assumed Pump Time (Month)	Required Pumping Rate (GPM)
		0.3	1	0.2	468,900	22.73	28.9	22.9	2.8	0.2	2	**333**

Stormwater			Surface Water Runoff that May Contact Ash		Pump Rate	
		Presumed Average Conditions	Maximum Drainage Area (AC)	Monthly Runoff Volume (million gallons)	Assumed Pump Time (Month)	Required Pumping Rate (GPM)
			113	3.0	1	**70**
		Presumed Storm Conditions	Storm Event	Stormwater Runoff Volume (million gallons)	Assumed Pump Time (Week)	Required Pumping Rate (GPM)
			2-Year Storm	2.5	1	**253**
			10-year Storm	6.0	1	**594**

Ponds A, B, & C

Ash Dewatering	AVERAGE CONDITIONS	In-situ Ash Water					Stormwater Infiltration				Pump Rate	
		Porosity	Initial Degree of Saturation	Final Degree of Saturation	Estimated Ash Volume (CY)	In-Situ Volume to be Dewatered (million gallons)	Area of Ash (AC)	Off Ash Area Unable to be Diverted (AC)	Monthly Runoffl Volume on Ash (million gallons)	Monthly Rainfall Volume from Off Ash Areas (million gallons)	Assumed Pump Time (Month)	Required Pumping Rate (GPM)
		0.3	1	0.2	290,400	14.08	18	0	1.7	0.0	2	**203**

Stormwater			Surface Water Runoff that May Contact Ash		Pump Rate	
		Presumed Average Conditions	Maximum Drainage Area (AC)	Monthly Runoff Volume (million gallons)	Assumed Pump Time (Month)	Required Pumping Rate (GPM)
			18	0.5	1	**11**
		Presumed Storm Conditions	Storm Event	Stormwater Runoff Volume (million gallons)	Assumed Pump Time (Week)	Required Pumping Rate (GPM)
			2-Year Storm	0.4	1	**40**
			10-year Storm	1.0	1	**95**

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.07	< 0.09	< 0.09
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.08	< 0.07
Antimony, Total	mg/L	< 0.001		< 0.0008	< 0.001	< 0.001
Antimony, Dissolved	mg/L	< 0.001		< 0.0011	< 0.001	< 0.002
Arsenic, Total	mg/L	< 0.003		0.96	< 0.003	< 0.25
Arsenic, Dissolved	mg/L	< 0.003		0.4	< 0.003	< 0.2
Boron, Total	mg/L	0.03		1.2	< 0.03	< 0.33
Boron, Dissolved	mg/L			1.3		
Barium, Total	mg/L	0.044		0.4	0.043	0.2
Barium, Dissolved	mg/L	0.033		0.34	0.033	0.12
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0002	< 0.0002
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0002	< 0.0002
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.0003	< 0.0003
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.0003	< 0.0004
Calcium, Total	mg/L			62.7		
Calcium, Dissolved	mg/L			61.2		
Chromium, Total	mg/L	< 0.001		< 0.00033	< 0.001	< 0.001
Chromium, Dissolved	mg/L	< 0.001		0.0023	< 0.001	< 0.002
Trivalent Chromium, Total	mg/L			< 0.01		
Trivalent Chromium, Dissolved	mg/L			< 0.01		
Hexavalent Chromium, Total	µg/L	< 5		< 0.052	< 4	< 3
Hexavalent Chromium, Dissolved	µg/L			< 0.052		
Cobalt, Total	mg/L	< 0.0006		< 0.015	< 0.0007	<0.005
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0009	< 0.0011
Copper, Total	mg/L	0.007		< 0.00083	0.009	< 0.007
Copper, Dissolved	mg/L	0.004		< 0.0016	0.005	< 0.005
Iron, Total	mg/L	7.00		5.5	5.7	5.7
Iron, Dissolved	mg/L	0.09		< 5.2	0.10	< 1.5
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.001	< 0.001
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001	< 0.001
Lithium, Total	mg/L			< 0.24		
Lithium, Dissolved	mg/L			< 0.24		
Manganese, Total	mg/L	0.04		0.69	0.07	0.23
Manganese, Dissolved	mg/L	0.02		0.74	0.03	0.22
Magnesium, Total	mg/L	8.36		27.3	8.7	14
Magnesium, Dissolved	mg/L	8.17		29.3	8.5	14

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
Molybdenum, Total	mg/L	0.002		0.091	0.003	0.026
Molybdenum, Dissolved	mg/L	0.002		0.08	0.003	0.03
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.0002	< 0.0002
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.0002	< 0.0002
Nickel, Total	mg/L	< 0.005		0.0070	< 0.011	< 0.010
Nickel, Dissolved	mg/L	< 0.005		< 0.008	< 0.009	< 0.009
Selenium, Total	mg/L	< 0.003		< 0.0014	< 0.003	< 0.003
Selenium, Dissolved	mg/L	< 0.003		< 0.0023	< 0.003	< 0.003
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.0002	< 0.0003
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.0003	< 0.0004
Thallium, Total	mg/L	0.0006		< 0.00016	< 0.0006	< 0.0005
Thallium, Dissolved	mg/L	0.0005		< 0.00033	< 0.0005	< 0.0005
Zinc, Total	mg/L	< 0.01		0.02	< 0.02	< 0.02
Zinc, Dissolved	mg/L	0.013		< 0.07	0.020	< 0.04
Potassium, Total	mg/L			9.4		
Potassium, Dissolved	mg/L			9.7		
Sodium, Total	mg/L			97.2		
Sodium, Dissolved	mg/L			104		
Sulfate	mg/L	44.22		26.4	42.7	38.6
pH	pH_Units	7.38		7.9	7.45	7.6
Specific Conductance	umhos/cm			1270		
Turbidity	NTU			108		
Alkalinity, Total	mg/L			360		
Ammonia-N	mg/L	0.18	0.06	< 0.27	0.16	< 0.19
Nitrate-N	mg/L	2.25	1.02	< 0.085	< 1.80	< 1.4
Nitrite-N	mg/L			< 0.11		
Oil/Grease Hexane Extractable	mg/L	< 5	< 5	< 2	< 4	< 4
Total Kjeldahl Nitrogen	mg/L			< 0.4		
Total Nitrogen	mg/L			< 1.0		
Phosphorus, Total	mg/L	0.17	0.06	< 0.33	0.2	< 0.3
Chloride	mg/L	55.34		182	67.6	96.9
Fluoride	mg/L	0.171		3	< 0.16	< 0.9
Hardness	mg/L	104.31		390	106	179
Total Dissolved Solids	mg/L	272.5		744	281	400
Total Suspended Solids	mg/L	23.5	4.3	23	21	22
Biochemical Oxygen Demand	mg/L	< 3.0		< 0.8	< 3.1	< 3

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
Chlorine, Total Residual	mg/L	< 0.1	< 0.1	< 0.009	< 0.2	< 0.2
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.12	< 0.18
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.01	< 0.01
Aldrin	µg/L	< 0.05		< 0.0007	< 0.04	< 0.03
alpha-BHC	µg/L	< 0.05		< 0.00013	< 0.04	< 0.03
beta-BHC	µg/L	< 0.05		< 0.00016	< 0.04	< 0.03
delta-BHC	µg/L	< 0.05		< 0.00025	< 0.04	< 0.03
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.04	< 0.03
Chlordane	µg/L	< 0.2		< 0.013	< 0.2	< 0.2
4,4'-DDD	µg/L	< 0.1		< 0.00016	< 0.1	< 0.1
4,4'-DDE	µg/L	< 0.1		< 0.00016	< 0.1	< 0.1
4,4'-DDT	µg/L	< 0.1		< 0.00023	< 0.1	< 0.1
Dieldrin	µg/L	< 0.1		< 0.00013	< 0.1	< 0.1
Endosulfan I	µg/L	< 0.1		< 0.00028	< 0.1	< 0.1
Endosulfan II	µg/L	< 0.1		< 0.00014	< 0.1	< 0.1
Endosulfan Sulfate	µg/L	< 0.1		< 0.0002	< 0.1	< 0.1
Endrin	µg/L	< 0.1		< 0.00015	< 0.1	< 0.1
Endrin Aldehyde	µg/L	< 0.1		< 0.00031	< 0.1	< 0.1
Heptachlor	µg/L	< 0.05		< 0.0003	< 0.04	< 0.03
Heptachlor Epoxide	µg/L	< 0.1		< 0.00016	< 0.1	< 0.1
Methoxychlor	µg/L	< 0.1		< 0.00026	< 0.1	< 0.1
Mirex	µg/L	< 0.1		< 0.00056	< 0.1	< 0.1
Total Polychlorinated Biphenyl	µg/L			0		
Toxaphene	µg/L	< 5		< 0.0099	< 4	< 3
Aroclor-1016	µg/L			< 0.041		
Aroclor-1221	µg/L			< 0.062		
Aroclor-1232	µg/L			< 0.077		
Aroclor-1242	µg/L			< 0.045		
Aroclor-1248	µg/L			< 0.036		
Aroclor-1254	µg/L			< 0.058		
Aroclor-1260	µg/L			< 0.041		
Azinphos Methyl	µg/L	< 1		< 0.35	< 1	< 0.9
Chlorpyrifos	µg/L	< 0.2		< 0.47	< 0.3	< 0.4
Demeton	µg/L	< 1		< 0.3	< 0.9	< 0.8
Diazinon	µg/L	< 1		< 0.27	< 0.9	< 0.8
Malathion	µg/L	< 1		< 0.21	< 0.9	< 0.8

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
Parathion	µg/L	< 1		< 0.31	< 0.9	< 0.8
Acrolein	µg/L	< 10		< 2.4	< 8.4	< 6.9
Acrylonitrile	µg/L	< 1.5		< 0.89	< 1.4	< 1.3
Benzene	µg/L	< 4.4		< 0.16	< 3.5	< 2.7
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 1.8	< 1.4
Bromoform	µg/L	< 4.7		< 0.21	< 3.8	< 2.9
Bromomethane	µg/L	< 1.4		< 0.27	< 1.2	< 0.97
Carbon Tetrachloride	µg/L	< 2.8		< 0.24	< 2.3	< 1.8
Chlorobenzene	µg/L	< 6		< 0.11	< 5	< 4
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 2.5	< 2.0
Chloroform	µg/L	16.82		< 0.15	< 14	< 11
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 4	< 4
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 4	< 4
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 4	< 4
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 2.3	< 1.8
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 2.3	< 1.8
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 1.3	< 1.0
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 5	< 4
cis-1,3-Dichloropropene	µg/L			< 0.12		
trans-1,3-Dichloropropene	µg/L			< 0.14		
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 4.7	< 3.6
Ethylbenzene	µg/L	< 7.2		< 0.16	< 5.7	< 4.3
Methylene Chloride	µg/L	< 2.8		< 0.32	< 2.3	< 1.8
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 5.5	< 4.2
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 3.3	< 2.6
Toluene	µg/L	< 6		< 0.12	< 5	< 4
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 4	< 4
Trichloroethene	µg/L	< 1.9		< 0.21	< 1.6	< 1.3
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 1.5	< 1.2
Acenaphthene	µg/L	< 5		< 0.33	< 4	< 4
Anthracene	µg/L	< 5		< 0.34	< 4	< 4
Benzidine	µg/L	< 5		< 22.4	< 9	< 20
Benzo(a)anthracene	µg/L	< 5		< 0.3	< 4	< 4
Benzo(a)pyrene	µg/L	< 5		< 0.36	< 4	< 4
Benzo(b)fluoranthene	µg/L	< 5		< 0.41	< 4	< 4
Benzo(k)fluoranthene	µg/L	< 5		< 0.37	< 4	< 4

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
Butylbenzylphthalate	µg/L	< 5		< 0.33	< 4	< 4
bis(2-Chloroethyl)ether	µg/L	< 5		< 0.35	< 4	< 4
bis(2-Chloroisopropyl)ether	µg/L	< 5		< 0.5	< 5	< 4
2-Chloronaphthalene	µg/L	< 5		< 0.34	< 4	< 4
2-Chlorophenol	µg/L	< 5		< 0.59	< 5	< 4
Chrysene	µg/L	< 5		< 0.35	< 4	< 4
Di-n-Butylphthalate	µg/L	< 5		< 0.31	< 4	< 4
Dibenzo(a,h)anthracene	µg/L	< 5		< 0.29	< 4	< 4
3,3-Dichlorobenzidine	µg/L	< 5		< 2.8	< 5	< 5
2,4-Dichlorophenol	µg/L	< 5		< 0.46	< 5	< 4
Diethylphthalate	µg/L	< 5		< 0.3	< 4	< 4
2,4-Dimethylphenol	µg/L	< 5		< 2.9	< 5	< 5
Dimethylphthalate	µg/L	< 5		< 0.37	< 4	< 4
2,4-Dinitrophenol	µg/L	< 5		< 2.3	< 5	< 5
2,4-Dinitrotoluene	µg/L	< 5		< 0.37	< 4	< 4
1,2-Diphenylhydrazine	µg/L	< 0.1		< 0.32	< 0.2	< 0.3
bis(2-Ethylhexyl)phthalate	µg/L	< 5		< 0.35	< 4	< 4
Fluoranthene	µg/L	< 5		< 0.25	< 4	< 4
Fluorene	µg/L	< 5		< 0.36	< 4	< 4
Hexachlorobenzene	µg/L	< 5		< 0.3	< 4	< 4
Hexachlorobutadiene	µg/L	< 5		< 0.29	< 4	< 4
Hexachlorocyclopentadiene	µg/L	< 5		< 1	< 5	< 4
Hexachloroethane	µg/L	< 5		< 0.32	< 4	< 4
Indeno(1,2,3-cd)pyrene	µg/L	< 5		< 0.29	< 4	< 4
Isophorone	µg/L	< 5		< 0.38	< 4	< 4
2-Methyl-4,6-dinitrophenol	µg/L	< 50		< 1.3	< 40	<31
Nitrobenzene	µg/L	< 5		< 0.62	< 5	< 4
N-Nitrosodimethylamine	µg/L	< 5		< 0.45	< 5	< 4
N-Nitroso-di-n-propylamine	µg/L	< 5		< 0.53	< 5	< 4
N-Nitrosodiphenylamine	µg/L	< 5		< 1	< 5	< 4
Pentachlorophenol	µg/L	< 5		< 1.8	< 5	< 5
Phenol	µg/L	< 5		< 0.22	< 4	< 4
Pyrene	µg/L	< 5		< 0.35	< 4	< 4
1,2,4-Trichlorobenzene	µg/L	< 5		< 0.26	< 4	< 4
2,4,6-Trichlorophenol	µg/L	< 5		< 0.36	< 4	< 4
Kepone	µg/L	< 0.1		< 1.8	< 0.5	< 0.9

Table 8
Blended Ash Dewatering Waters, Contact Waters, Outfall 502, and Outfall 004

Parameters	Units	Outfall 004		Dewatering & Contact Waters	Outfall 004 + Outfall 502	Dewatering & Contact Waters + 004 + 502
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average	Presumed Weighted Average
FIELD PARAMETERS						
pH (Field)	pH_Units	7.38		7.6	7.48	7.6
Temperature	° C	34.6		19.34	32.0	28.8
Conductivity	µs/cm			1130		
Dissolved Oxygen	%			84.4		
Dissolved Oxygen	mg/l			7.73		
ORP	mv			-114.2		
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.01	< 0.1	< 0.1

Notes:

1) ND- Not detected above the laboratory detection limit.

2) NA- Not analyzed.

3) mg/L - milligrams per liter.

4) µg/L- micrograms per liter.

5) µS/cm - microsiemens/centimeter.

6) mv- millivolts.

7) ppm- parts per million.

8) ORP- Oxidation Reduction Potential.

9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.

10) Presumed weighted average of Dewatering Waters, Contact Waters, Low Volume Settling Ponds (Outfall 004), and Outfall 502 Water is based on projected 617-gpm Dewatering & Contact Waters rate and a sum of the long term average rates in the 2013 permit reissuance application for Outfall 004 + Outfall 502, or 2.59-MGD.

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average
Aluminum, Total	mg/L	< 0.09		0.07	< 0.09
Aluminum, Dissolved	mg/L	< 0.09		< 0.026	< 0.09
Antimony, Total	mg/L	< 0.001		< 0.0008	< 0.001
Antimony, Dissolved	mg/L	< 0.001		< 0.0011	< 0.002
Arsenic, Total	mg/L	< 0.003		0.96	< 0.02
Arsenic, Dissolved	mg/L	< 0.003		0.4	< 0.1
Boron, Total	mg/L	0.02		1.2	0.04
Boron, Dissolved	mg/L			1.3	
Barium, Total	mg/L	0.043		0.4	0.1
Barium, Dissolved	mg/L	0.038		0.34	0.05
Beryllium, Total	mg/L	< 0.0002		< 0.0001	< 0.0002
Beryllium, Dissolved	mg/L	< 0.0002		< 0.0001	< 0.0002
Cadmium, Total	mg/L	< 0.0003		< 0.00016	< 0.0003
Cadmium, Dissolved	mg/L	< 0.0003		< 0.00033	< 0.0004
Calcium, Total	mg/L			62.7	
Calcium, Dissolved	mg/L			61.2	
Chromium, Total	mg/L	< 0.001		< 0.00033	< 0.001
Chromium, Dissolved	mg/L	< 0.001		0.0023	< 0.002
Trivalent Chromium, Total	mg/L			< 0.01	
Trivalent Chromium, Dissolved	mg/L			< 0.01	
Hexavalent Chromium, Total	µg/L	< 0.005		< 0.052	< 0.006
Hexavalent Chromium, Dissolved	µg/L			< 0.052	
Cobalt, Total	mg/L	0.0007		< 0.015	< 0.001
Cobalt, Dissolved	mg/L	< 0.0006		< 0.0016	< 0.0007
Copper, Total	mg/L	0.011		< 0.00083	< 0.011
Copper, Dissolved	mg/L	0.008		< 0.0016	< 0.008
Iron, Total	mg/L	0.42		5.5	0.48
Iron, Dissolved	mg/L	< 0.05		< 5.2	< 0.11
Lead, Total	mg/L	< 0.001		< 0.00033	< 0.001
Lead, Dissolved	mg/L	< 0.001		< 0.00066	< 0.001
Lithium, Total	mg/L			< 0.24	
Lithium, Dissolved	mg/L			< 0.24	
Manganese, Total	mg/L	0.12		0.69	0.13
Manganese, Dissolved	mg/L	0.04		0.74	0.05
Magnesium, Total	mg/L	8.04		27.3	8.24
Magnesium, Dissolved	mg/L	7.82		29.3	8.04
Molybdenum, Total	mg/L	<0.001		0.091	< 0.002
Molybdenum, Dissolved	mg/L	<0.001		0.08	< 0.01

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average
Mercury, Total	mg/L	< 0.0002		< 0.00016	< 0.0002
Mercury, Dissolved	mg/L	< 0.0002		< 0.00016	< 0.0002
Nickel, Total	mg/L	< 0.005		0.0070	< 0.006
Nickel, Dissolved	mg/L	< 0.005		< 0.008	< 0.006
Selenium, Total	mg/L	< 0.003		< 0.0014	< 0.003
Selenium, Dissolved	mg/L	< 0.003		< 0.0023	< 0.003
Silver, Total	mg/L	< 0.0001		< 0.00033	< 0.0002
Silver, Dissolved	mg/L	< 0.0001		< 0.00066	< 0.0002
Thallium, Total	mg/L	< 0.0002		< 0.00016	< 0.0002
Thallium, Dissolved	mg/L	0.0002		< 0.00033	< 0.0003
Zinc, Total	mg/L	< 0.01		0.02	< 0.02
Zinc, Dissolved	mg/L	< 0.01		< 0.07	< 0.02
Potassium, Total	mg/L			9.4	
Potassium, Dissolved	mg/L			9.7	
Sodium, Total	mg/L			97.2	
Sodium, Dissolved	mg/L			104	
Sulfate	mg/L	28.06		26.4	28.1
pH	pH_Units			7.9	
Specific Conductance	umhos/cm			1270	
Turbidity	NTU			108	
Alkalinity, Total	mg/L			360	
Ammonia-N	mg/L	0.07		< 0.27	< 0.08
Nitrate-N	mg/L	2.47		< 0.085	< 2.5
Nitrite-N	mg/L			< 0.11	
Oil/Grease Hexane Extractable	mg/L	< 5		< 2	< 5
Total Kjeldahl Nitrogen	mg/L			< 0.4	
Total Nitrogen	mg/L			< 1.0	
Phosphorus, Total	mg/L	< 0.32		< 0.33	< 0.33
Chloride	mg/L	23.08		182	24.7
Fluoride	mg/L	0.11		3	0.2
Hardness	mg/L	111.15		390	114
Total Dissolved Solids	mg/L	305.5		744	310
Total Suspended Solids	mg/L	12.4		23	13
Biochemical Oxygen Demand	mg/L	< 3.0		< 0.8	< 3
Chlorine, Total Residual	mg/L			< 0.009	
Sulfide, Total	mg/L	< 0.05		< 0.35	< 0.06
Cyanide, Total	mg/L	< 0.01		< 0.00058	< 0.01
Aldrin	µg/L	< 0.05		< 0.0007	< 0.05

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average
alpha-BHC	µg/L	< 0.05		< 0.00013	< 0.05
beta-BHC	µg/L	< 0.05		< 0.00016	< 0.05
delta-BHC	µg/L	< 0.05		< 0.00025	< 0.05
gamma-BHC	µg/L	< 0.05		< 0.00015	< 0.05
Chlordane	µg/L	< 0.2		< 0.013	< 0.2
4,4'-DDD	µg/L	< 0.1		< 0.00016	< 0.1
4,4'-DDE	µg/L	< 0.1		< 0.00016	< 0.1
4,4'-DDT	µg/L	< 0.1		< 0.00023	< 0.1
Dieldrin	µg/L	< 0.1		< 0.00013	< 0.1
Endosulfan I	µg/L	< 0.1		< 0.00028	< 0.1
Endosulfan II	µg/L	< 0.1		< 0.00014	< 0.1
Endosulfan Sulfate	µg/L	< 0.1		< 0.0002	< 0.1
Endrin	µg/L	< 0.1		< 0.00015	< 0.1
Endrin Aldehyde	µg/L	< 0.1		< 0.00031	< 0.1
Heptachlor	µg/L	< 0.05		< 0.0003	< 0.05
Heptachlor Epoxide	µg/L	< 0.1		< 0.00016	< 0.1
Methoxychlor	µg/L	< 0.1		< 0.00026	< 0.1
Mirex	µg/L	< 0.1		< 0.00056	< 0.1
Total Polychlorinated Biphenyl	µg/L			0	
Toxaphene	µg/L	< 5		< 0.0099	< 5
Aroclor-1016	µg/L			< 0.041	
Aroclor-1221	µg/L			< 0.062	
Aroclor-1232	µg/L			< 0.077	
Aroclor-1242	µg/L			< 0.045	
Aroclor-1248	µg/L			< 0.036	
Aroclor-1254	µg/L			< 0.058	
Aroclor-1260	µg/L			< 0.041	
Azinphos Methyl	µg/L			< 0.35	
Chlorpyrifos	µg/L	< 0.2		< 0.47	< 0.3
Demeton	µg/L	< 1		< 0.3	< 1
Diazinon	µg/L	< 1		< 0.27	< 1
Malathion	µg/L	< 1		< 0.21	< 1
Parathion	µg/L	< 1		< 0.31	< 1
Acrolein	µg/L	< 10		< 2.4	< 10
Acrylonitrile	µg/L	< 1.5		< 0.89	< 1.5
Benzene	µg/L	< 4.4		< 0.16	< 4.4
Bromodichloromethane	µg/L	< 2.2		< 0.13	< 2.2
Bromoform	µg/L	< 4.7		< 0.21	< 4.7

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average
Bromomethane	µg/L	< 1.4		< 0.27	< 1.4
Carbon Tetrachloride	µg/L	<2.8		< 0.24	<2.8
Chlorobenzene	µg/L	< 6		< 0.11	< 6
Chlorodibromomethane	µg/L	< 3.1		< 0.22	< 3.1
Chloroform	µg/L	< 1.6		< 0.15	< 1.6
1,2-Dichlorobenzene	µg/L	< 5		< 0.2	< 5
1,3-Dichlorobenzene	µg/L	< 5		< 0.14	< 5
1,4-Dichlorobenzene	µg/L	< 5		< 0.15	< 5
1,2-Dichloroethane	µg/L	< 2.8		< 0.22	< 2.8
1,1-Dichloroethene	µg/L	< 2.8		< 0.17	< 2.8
trans-1,2-Dichloroethene	µg/L	< 1.6		< 0.12	< 1.6
1,2-Dichloropropane	µg/L	< 6		< 0.24	< 6
cis-1,3-Dichloropropene	µg/L			< 0.12	
trans-1,3-Dichloropropene	µg/L			< 0.14	
1,3-Dichloropropene, Total	µg/L	< 5.9		< 0.19	< 5.9
Ethylbenzene	µg/L	< 7.2		< 0.16	< 7.2
Methylene Chloride	µg/L	< 2.8		< 0.32	< 2.8
1,1,2,2-Tetrachloroethane	µg/L	< 6.9		< 0.22	< 6.9
Tetrachloroethene	µg/L	< 4.1		< 0.26	< 4.1
Toluene	µg/L	< 6		< 0.12	< 6
1,1,2-Trichloroethane	µg/L	< 5		< 0.3	< 5
Trichloroethene	µg/L	< 1.9		< 0.21	< 1.9
Vinyl Chloride	µg/L	< 1.8		< 0.24	< 1.8
Acenaphthene	µg/L	< 10		< 0.33	< 10
Anthracene	µg/L	< 10		< 0.34	< 10
Benzidine	µg/L	< 6.3		< 22.4	< 6.5
Benzo(a)anthracene	µg/L	< 10		< 0.3	< 10
Benzo(a)pyrene	µg/L	< 10		< 0.36	< 10
Benzo(b)fluoranthene	µg/L	< 10		< 0.41	< 10
Benzo(k)fluoranthene	µg/L	< 10		< 0.37	< 10
Butylbenzylphthalate	µg/L	< 10		< 0.33	< 10
bis(2-Chloroethyl)ether	µg/L	< 10		< 0.35	< 10
bis(2-Chloroisopropyl)ether	µg/L	< 10		< 0.5	< 10
2-Chloronaphthalene	µg/L	< 10		< 0.34	< 10
2-Chlorophenol	µg/L	< 10		< 0.59	< 10
Chrysene	µg/L	< 10		< 0.35	< 10
Di-n-Butylphthalate	µg/L	< 10		< 0.31	< 10
Dibenzo(a,h)anthracene	µg/L	< 10		< 0.29	< 10

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average
3,3-Dichlorobenzidine	µg/L	< 20		< 2.8	< 20
2,4-Dichlorophenol	µg/L	< 10		< 0.46	< 10
Diethylphthalate	µg/L	< 10		< 0.3	< 10
2,4-Dimethylphenol	µg/L	< 10		< 2.9	< 10
Dimethylphthalate	µg/L	< 10		< 0.37	< 10
2,4-Dinitrophenol	µg/L	< 10		< 2.3	< 10
2,4-Dinitrotoluene	µg/L	< 10		< 0.37	< 10
1,2-Diphenylhydrazine	µg/L	< 100		< 0.32	< 100
bis(2-Ethylhexyl)phthalate	µg/L	< 10		< 0.35	< 10
Fluoranthene	µg/L	< 10		< 0.25	< 10
Fluorene	µg/L	< 10		< 0.36	< 10
Hexachlorobenzene	µg/L	< 10		< 0.3	< 10
Hexachlorobutadiene	µg/L	< 10		< 0.29	< 10
Hexachlorocyclopentadiene	µg/L	< 10		< 1	< 10
Hexachloroethane	µg/L	< 10		< 0.32	< 10
Indeno(1,2,3-cd)pyrene	µg/L	< 10		< 0.29	< 10
Isophorone	µg/L	< 10		< 0.38	< 10
2-Methyl-4,6-dinitrophenol	µg/L	< 50		< 1.3	< 50
Nitrobenzene	µg/L	< 10		< 0.62	< 10
N-Nitrosodimethylamine	µg/L	< 10		< 0.45	< 10
N-Nitroso-di-n-propylamine	µg/L	< 10		< 0.53	< 10
N-Nitrosodiphenylamine	µg/L	< 10		< 1	< 10
Pentachlorophenol	µg/L	< 50		< 1.8	< 50
Phenol	µg/L	< 10		< 0.22	< 10
Pyrene	µg/L	< 10		< 0.35	< 10
1,2,4-Trichlorobenzene	µg/L	< 10		< 0.26	< 10
2,4,6-Trichlorophenol	µg/L	< 10		< 0.36	< 10
Kepone	µg/L	< 0.1		< 1.8	< 0.2
FIELD PARAMETERS					
pH (Field)	pH_Units	8.4		7.6	8.4
Temperature	° C	39.1		19.34	38.9
Conductivity	µs/cm			1130	
Dissolved Oxygen	%			84.4	
Dissolved Oxygen	mg/l			7.73	
ORP	mv			-114.2	
Chlorine, Total Residual	ppm	< 0.1	< 0.1	0.01	< 0.1

Table 9
Blended Ash Dewatering, Contact Waters, and Outfall 001/002

Parameters	Units	Outfall 001/002		Dewatering & Contact Waters	Dewatering & Contact Waters + 001/002
		Presumed Maximum Day	Presumed Long Term Average	Presumed Weighted Average	Presumed Weighted Average

Notes:

1) ND- Not detected above the laboratory detection limit.

2) NA- Not analyzed.

3) mg/L - milligrams per liter.

4) µg/L- micrograms per liter.

5) µS/cm - microsiemens/centimeter.

6) mv- millivolts.

7) ppm- parts per million.

8) ORP- Oxidation Reduction Potential.

9) Outfall maximum and long term average data is from the 2013 permit application for reissuance of Possum Point's VPDES Permit.

10) Presumed weighted average of Dewatering & Contact Waters + Outfall 001/002 is based on projected 617-gpm Dewatering & Contact Waters rate and a long term average rate in the 2013 permit reissuance application of 86.38-MGD for Outfall 001/002.

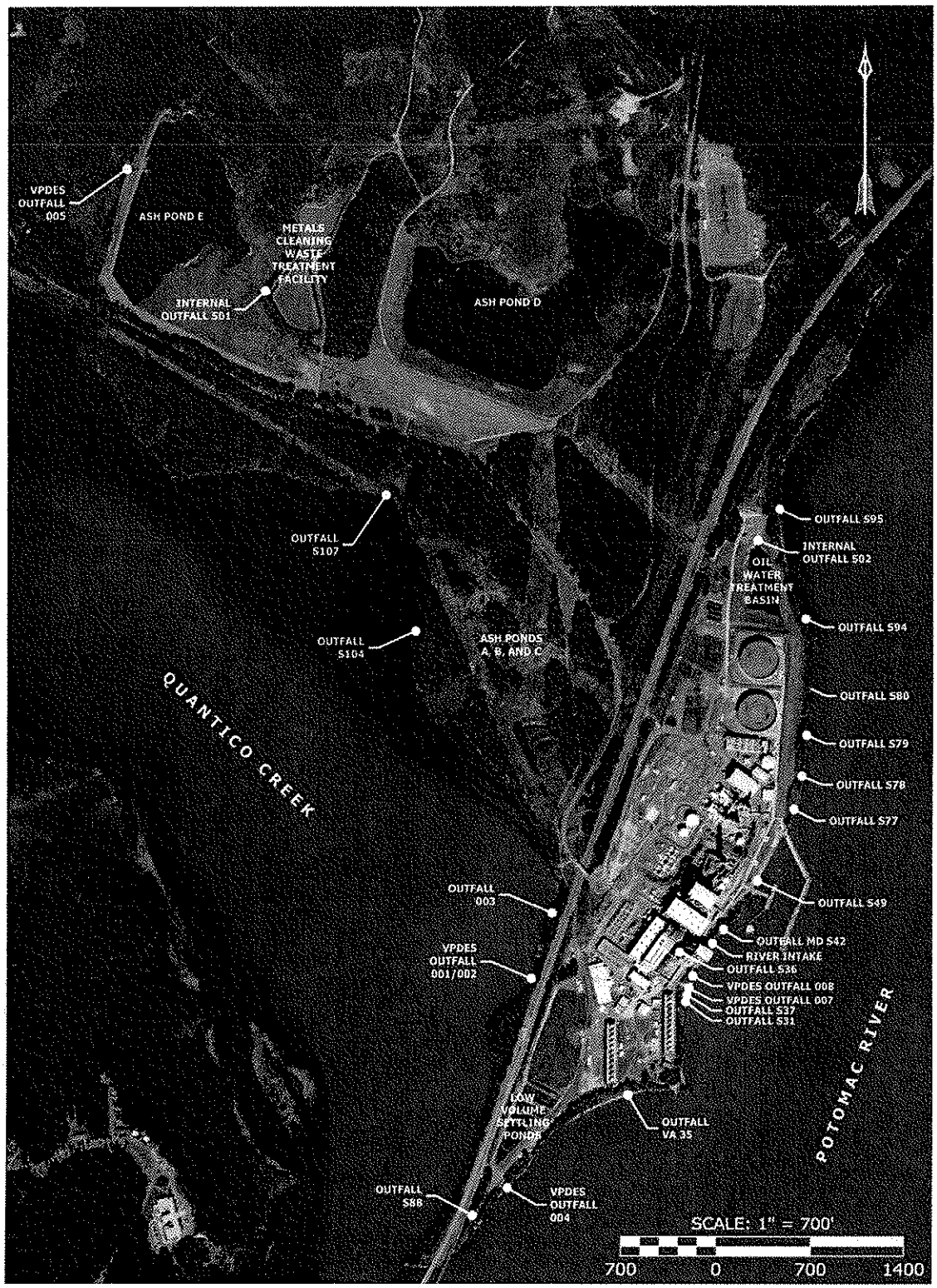
Table 10
Chemical Additives List

Chemical Additive Name	Manufacturer	Purpose(s)
CAT-FLOC 8799 PLUS	NALCO	Coagulant
GWT2215	Guardian CSC	Coagulant
Klaraid CDP1314	GE Betz, Inc.	Coagulant
Klaraid CDP1346	GE Betz, Inc.	Coagulant
Klaraid IC1172	GE Betz, Inc.	Coagulant
Klaraid PC1192	GE Betz, Inc.	Coagulant
Klaraid PC2700	GE Betz, Inc.	Coagulant
Klaraid PC2705	GE Betz, Inc.	Coagulant
Nalcolyte 8100	NALCO	Coagulant
Nalkat 2020	NALCO	Coagulant
Unifloc 800	Aqua Kinetics, Inc.	Coagulant
AK178	Aqua Kinetics, Inc.	Flocculant
Aries 1668	Aries Chemical Inc.	Flocculant
Aries 1674	Aries Chemical Inc.	Flocculant
AS 1430PW	Applied Specialties, Inc.	Flocculant
Brennfloc BIID	Kemira	Flocculant
Cationic Polymer Gel Logs	Water Treatment Services	Flocculant
ChemTreat P812	ChemTreat, Inc.	Flocculant
ChemTreat P823L	ChemTreat, Inc.	Flocculant
Clarifloc N-6310	SNF/Polydyne Inc.	Flocculant
Core Shell 71301	NALCO	Flocculant
Core Shell 71303	NALCO	Flocculant
Magnafloc LT340	BASF	Flocculant
NALCLEAR 7768	NALCO	Flocculant
Nalco 1404	NALCO	Flocculant
Nalco 2706	NALCO	Flocculant
Nalco 71306	NALCO	Flocculant
Nalco GR-201	NALCO	Flocculant
Novus CE2688	GE Betz, Inc.	Flocculant
Optimer 7193 Plus	NALCO	Flocculant
Optimer 7194 Plus	NALCO	Flocculant
PL-1419	Athlon Solutions	Flocculant
Pollu-Treat CL416	Solenis LLC	Flocculant
Polyfloc AE1115	GE Betz, Inc.	Flocculant
Polyfloc AE1115P	GE Betz, Inc.	Flocculant
Polyfloc AE1125	GE Betz, Inc.	Flocculant
Polyfloc AE1138	GE Betz, Inc.	Flocculant
Polyfloc AE1147	GE Betz, Inc.	Flocculant
Polyfloc AE1700	GE Betz, Inc.	Flocculant
Polyfloc AE1701	GE Betz, Inc.	Flocculant
Polyfloc AE1702	GE Betz, Inc.	Flocculant
Polyfloc AE1703	GE Betz, Inc.	Flocculant

Table 10
Chemical Additives List

Chemical Additive Name	Manufacturer	Purpose(s)
Polyfloc AP1100	GE Betz, Inc.	Flocculant
Polyfloc AP1120	GE Betz, Inc.	Flocculant
Polyfloc AP1720	GE Betz, Inc.	Flocculant
Polyfloc AS1002	GE Betz, Inc.	Flocculant
Polyfloc CP1158	GE Betz, Inc.	Flocculant
Polyfloc CP1644	GE Betz, Inc.	Flocculant
Polymer 1110	GE Betz, Inc.	Flocculant
Polymer 1125L	GE Betz, Inc.	Flocculant
Solisep MPT100	GE Betz, Inc.	Flocculant
Spectrafloc 675	Baker Petrolite	Flocculant
Spectrafloc 680	Baker Petrolite	Flocculant
Spectrafloc 692	Baker Petrolite	Flocculant
Superfloc A-1820	Univar	Flocculant
Superfloc N-1986	Kemira	Flocculant
Unifloc 155P	Aqua Kinetics, Inc.	Flocculant
WTSWW 513AE	Water Treatment Services	Flocculant
WTSWW 526AE	Water Treatment Services	Flocculant
WTSWW-AGL605	Water Treatment Services	Flocculant
Y9BH1351	Baker Petrolite	Flocculant
Zetag 7565	Ciba Corp	Flocculant
BPW 76001	Baker Petrolite	Inorganic Coagulant
PL-900	Athlon Solutions	Polymer
TR-50	Water Specialist Tech.	Precipitant
ChemTreat P873L	ChemTreat, Inc.	Water Clarification
ChemTreat P899L	ChemTreat, Inc.	Water Clarification
Nalco GR-204	NALCO	Water Clarification
ChemTreat P801E	ChemTreat, Inc.	Water Clarification Solids Conditioning
ChemTreat P817E	ChemTreat, Inc.	Water Clarification Solids Conditioning
ChemTreat P8305E	ChemTreat, Inc.	Water Clarification Solids Conditioning
ChemTreat P846E	ChemTreat, Inc.	Water Clarification Solids Conditioning

DRAWINGS



DRAWING TITLE		
STATION OUTFALLS & TREATMENT FACILITIES		
PROJECT		CLIENT
POSSUM POINT POWER STATION 19000 POSSUM POINT ROAD DUMFRIES, PRINCE WILLIAM COUNTY VIRGINIA 22026	gai consultants	DOMINION RESOURCES SERVICE, INC. 5000 DOMINION BOULEVARD GLEN ALLEN, VIRGINIA 23060

DRAWN BY:	CHECKED BY:	APPROVED BY:
VASKOAJ	DEBARJD	QUINLSC
DWG TYPE:	SCALE:	ISSUE DATE:
	1" = 700'	07/29/2015
SHEET NO.:	1 OF 1	
GAI FILE NUMBER:		
C150132.00 - AERIAL Outfall Exhibit		
GAI DRAWING NUMBER:		
11x17 VDEQ		

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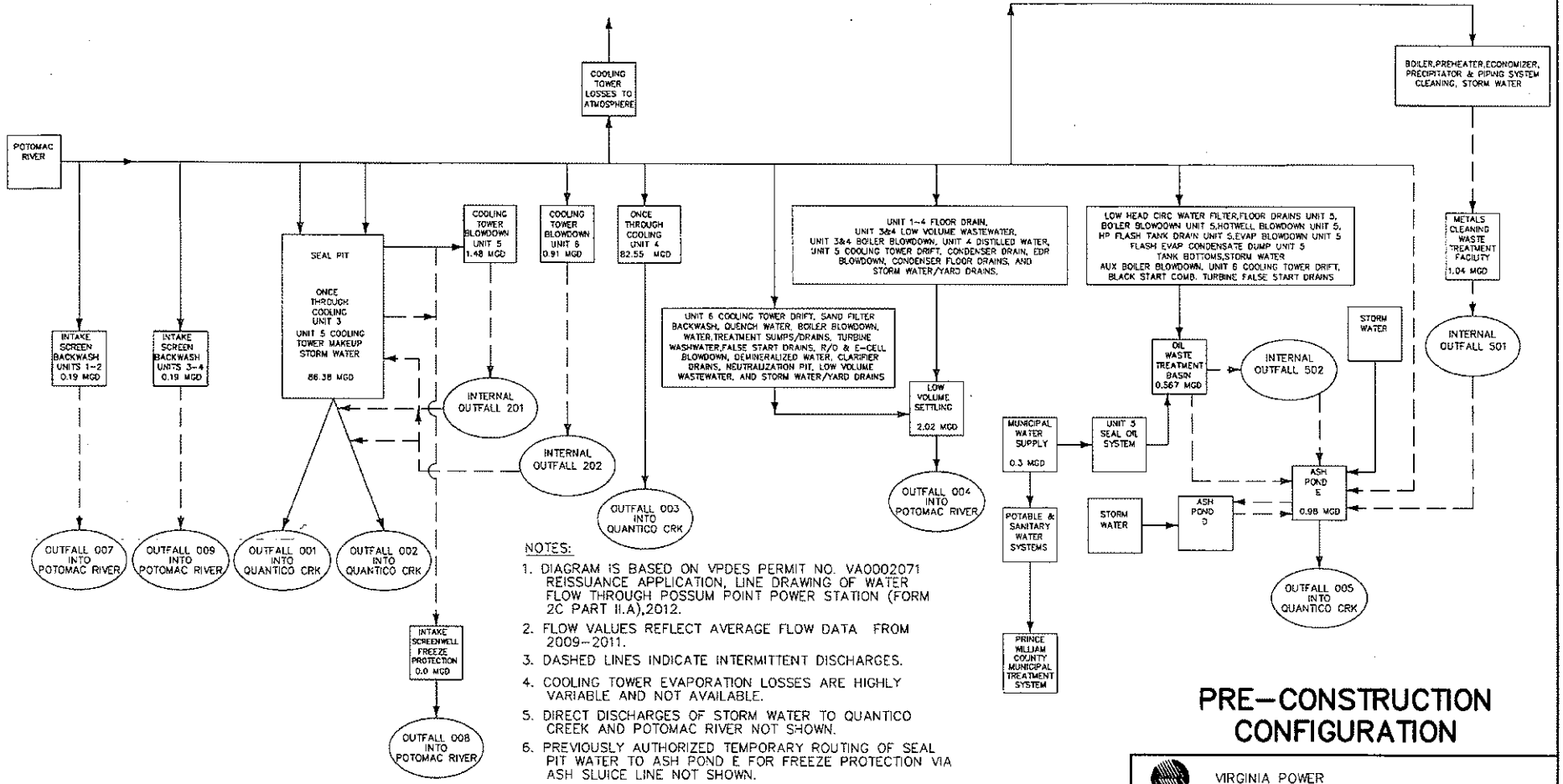

NOTES:

1. DIAGRAM IS BASED ON VPDES PERMIT NO. VA0002071 REISSUANCE APPLICATION, LINE DRAWING OF WATER FLOW THROUGH POSSUM POINT POWER STATION (FORM 2C PART II.A),2012.
2. FLOW VALUES REFLECT AVERAGE FLOW DATA FROM 2009-2011.
3. DASHED LINES INDICATE INTERMITTENT DISCHARGES.
4. COOLING TOWER EVAPORATION LOSSES ARE HIGHLY VARIABLE AND NOT AVAILABLE.
5. DIRECT DISCHARGES OF STORM WATER TO QUANTICO CREEK AND POTOMAC RIVER NOT SHOWN.
6. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF SEAL PIT WATER TO ASH POND E FOR FREEZE PROTECTION VIA ASH SLUICE LINE NOT SHOWN.
7. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF UNIT 5 LIFT STATION FLOW TO OILY WASTE POND TO LOW VOLUME SETTLING PONDS NOT SHOWN.

PRE-CONSTRUCTION CONFIGURATION

VIRGINIA POWER
NORTH CAROLINA POWER

FOSSIL & HYDRO ENGINEERING
RICHMOND,VIRGINIA

WATER FLOW BALANCE LINE DIAGRAM

POSSUM POINT POWER STATION

CAD FILE: DGNSPEC FOR FILE VERIFICATION DATE$$$$$$$

DRAWING NO. PP-0-SP-STA-600 REV. 1

APPROVAL OF THE SUPT OF TECH SERVICES IS REQ'D PRIOR TO ISSUE OF THIS DWG

REV	DATE	DRWN	CHKD	APPD	ENGR	REV	DATE	DRWN	CHKD	APPD	ENGR	REV	DATE	DRWN	CHKD	APPD	ENGR
	8/5/15	LITZIJ	DEBARJD	QUINLSC		1	5/31/12	KTC	OD-D	RWM		0	3/6/12	KTC	OD-D	RWM	— —
							REVISED PER ENVIRONMENTAL REDLINE TO INCORPORATE STATION REVIEW.						ORIG. ISSUE FOR 600 SERIES ACAD CONVERSION. REV PER ENVIRONMENTAL REDLINE.				

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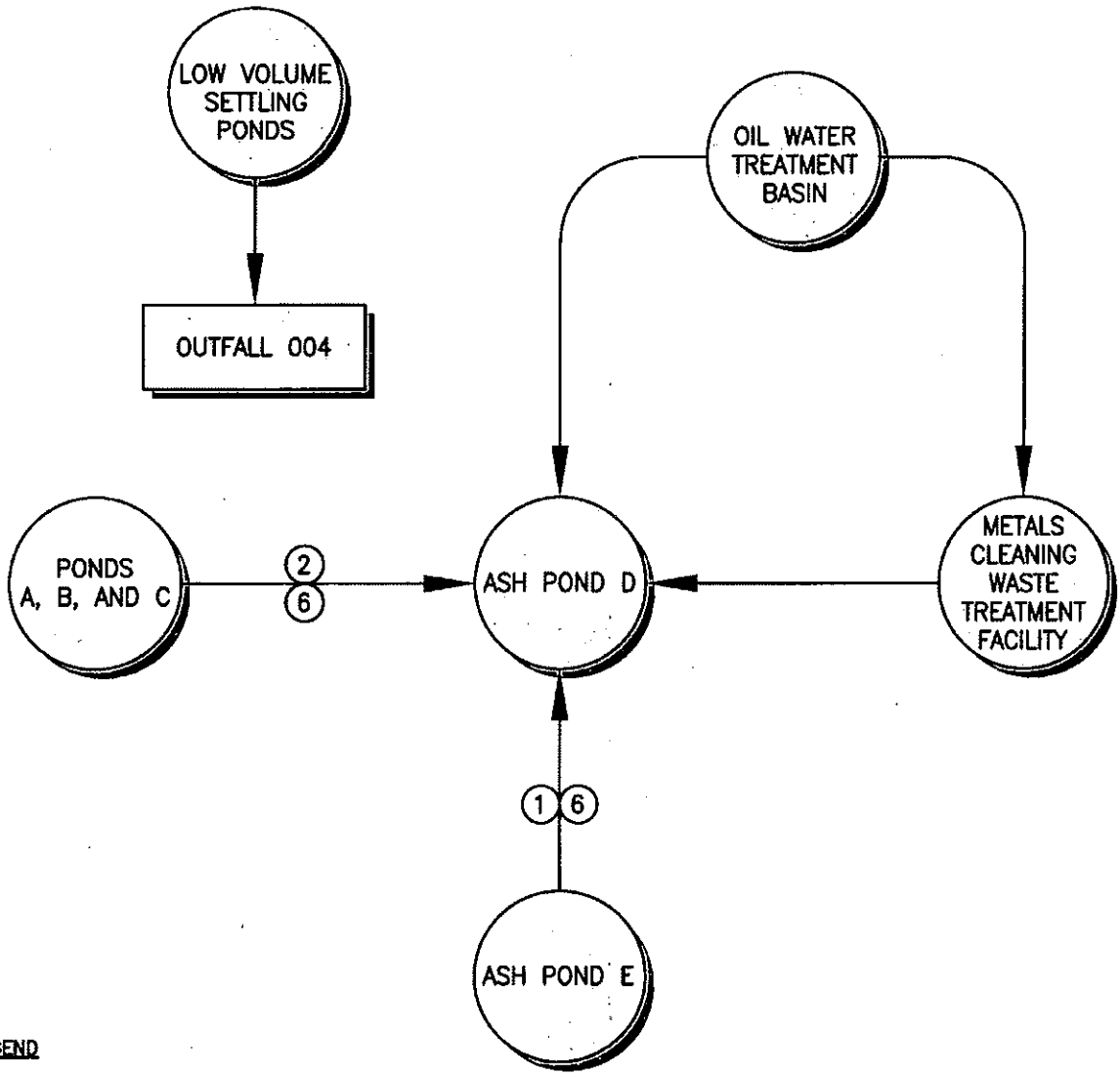

LEGEND

FLOW PATH

1 MECHANICALLY DREDGE ASH FROM POND E INTO POND D

2 MECHANICALLY DREDGE ASH FROM PONDS A, B, AND C INTO POND D

6 ASH DEWATERING WATER AND CONTACT WATER

OUTFALL 005

NOTES:

ALSO, REFER TO TABLE 1 FOR ACTIVITY/FLOW PATH NUMBER DESCRIPTIONS.

DRAWING TITLE		GAI DRAWING NUMBER:	
PRESENT CONDITIONS (DURING CONSTRUCTION)		**C150132-00-047-00-P-A2-001**	
PROJECT	gai consultants	GAI FILE NUMBER:	
POSSUM POINT POWER STATION 19000 POSSUM POINT ROAD DUMFRIES, PRINCE WILLIAM CO., VA 22026		**C150132-00-047-00-P-A2-001**	
		DRAWN BY:	CHECKED BY: / APPROVED BY:
		HULTBGC	**DEBARJD** / **QUINLSC**
CLIENT		SHEET NO.:	SCALE: / ISSUE DATE:
DOMINION RESOURCES SERVICE, INC. 5000 DOMINION BOULEVARD GLEN ALLEN, VIRGINIA 23060		1 OF 3	**AS SHOWN** / **07/15/2015**
		© 2015 GAI Consultants, Inc.	

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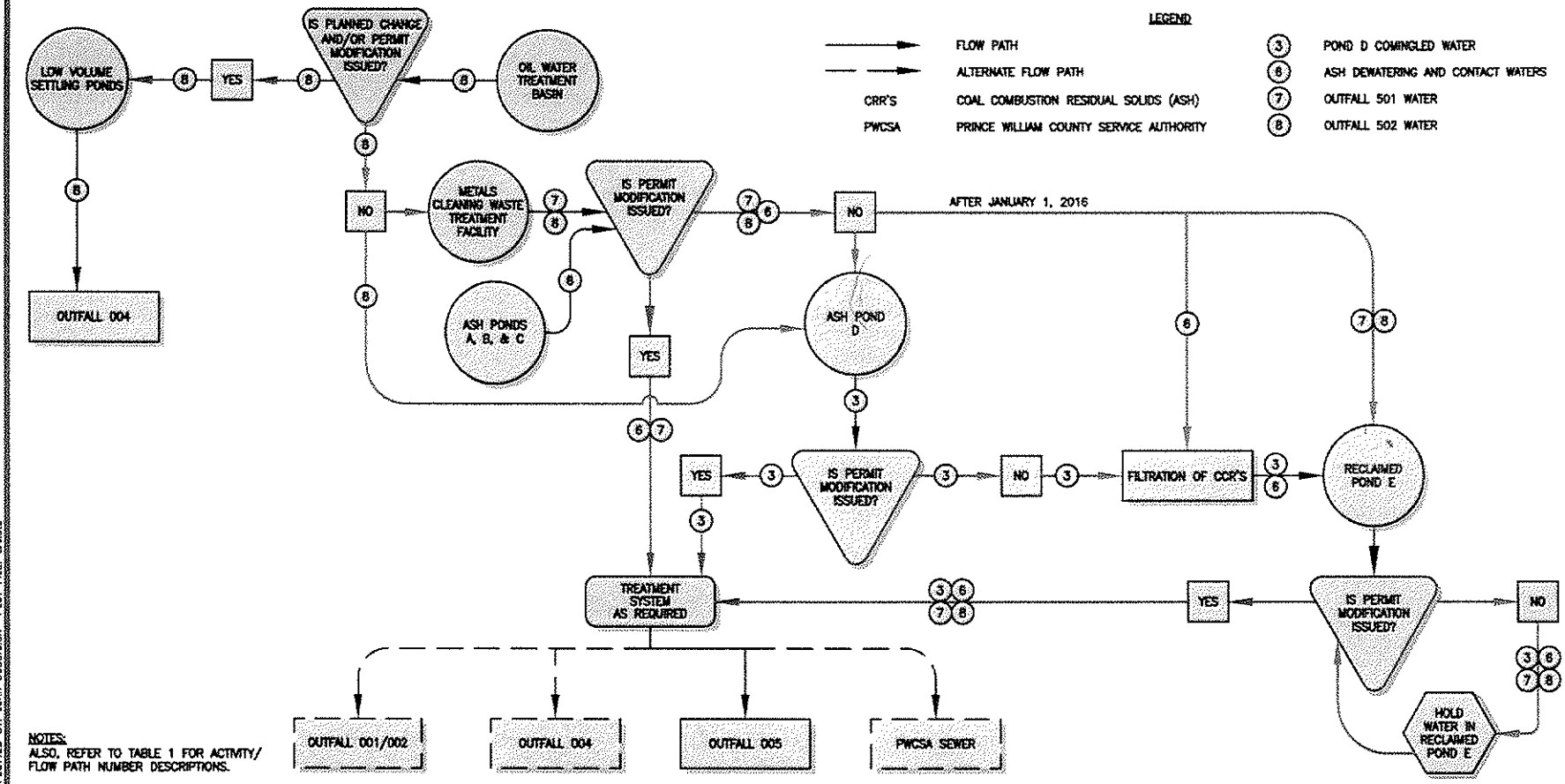

NO.:	DATE:	DWN:	CHK:	APV:	DESCRIPTION:

REVISION RECORD

DRAWING TITLE: INTERIM CONFIGURATION (DURING CONSTRUCTION)

PROJECT: POSSUM POINT POWER STATION, 19000 POSSUM POINT ROAD, DUMFRIES, PRINCE WILLIAM COUNTY, VIRGINIA 22026

gai consultants

CLIENT: DOMINION RESOURCES SERVICE, INC., 5000 DOMINION BOULEVARD, GLEN ALLEN, VIRGINIA 23060

DRAWN BY:	CHECKED BY:	APPROVED BY:
LITZIJ	DEBARJD	QUINLSC

REVISION: A/0

SCALE:	ISSUE DATE:
AS SHOWN	08/14/2015

SHEET NO.: 2 OF 3

GAI FILE NUMBER: C150132-00-047-00-P-B2-002

GAI DRAWING NUMBER: C150132-00-047-00-P-B2-002

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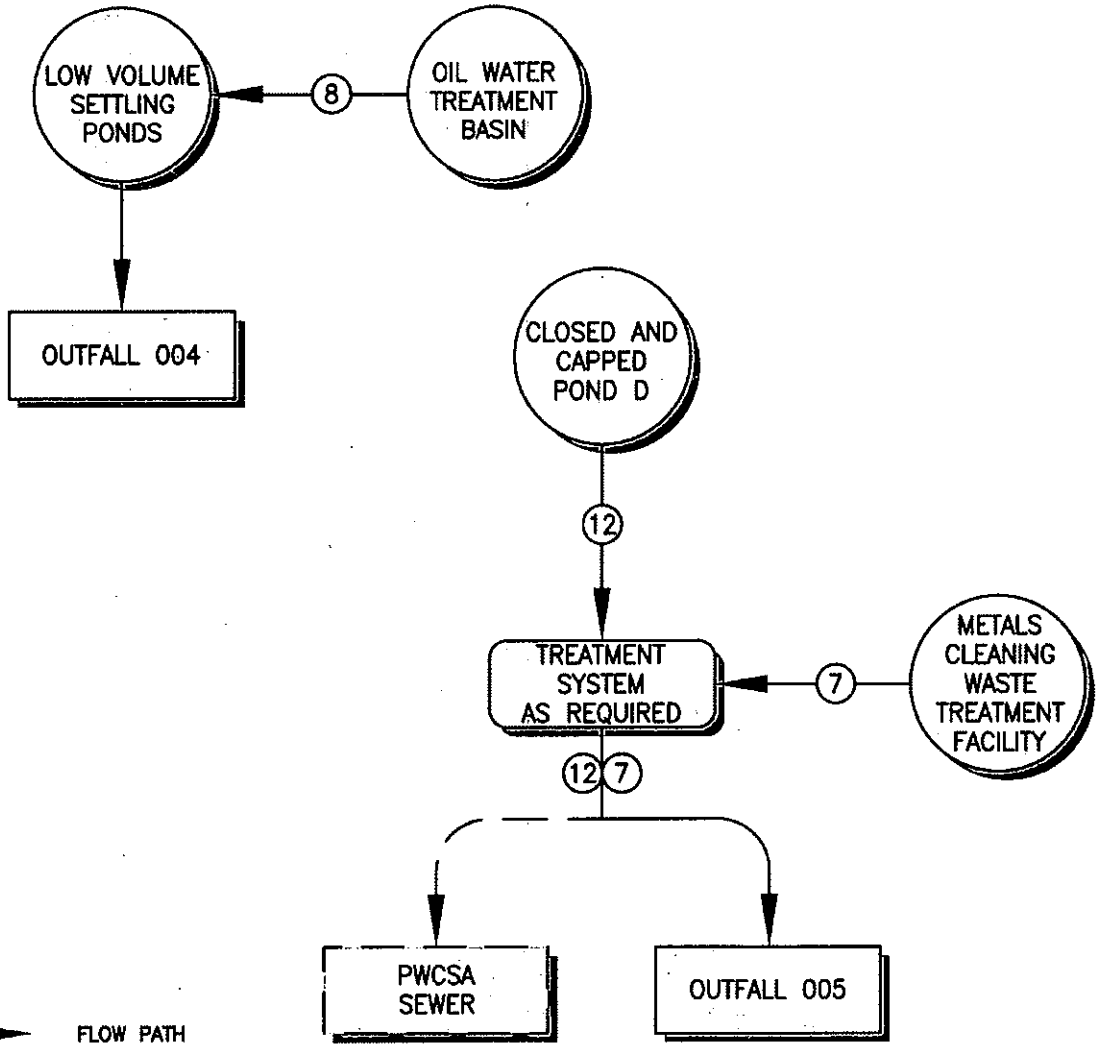

LEGEND

FLOW PATH

ALTERNATE FLOW PATH

PWCSA PRINCE WILLIAM COUNTY SERVICE AUTHORITY

(7) OUTFALL 501 WATER

(8) OUTFALL 502 WATER

(12) CLOSED ASH POND D PASSIVE UNDERDRAINAGE

NOTES:

ALSO, REFER TO TABLE 1 FOR ACTIVITY/FLOW PATH NUMBER DESCRIPTIONS.

DRAWING TITLE	GAI DRAWING NUMBER:
FINAL CONFIGURATION (POST CONSTRUCTION)	**C150132-00-047-00-P-A2-003**

PROJECT

POSSUM POINT POWER STATION
19000 POSSUM POINT ROAD
DUMFRIES, PRINCE WILLIAM CO., VA 22026

CLIENT

DOMINION RESOURCES SERVICE, INC.
5000 DOMINION BOULEVARD
GLEN ALLEN, VIRGINIA 23060

gai consultants

GAI FILE NUMBER: **C150132-00-047-00-P-A2-003**

DRAWN BY:	CHECKED BY:	APPROVED BY:
HULTBGC	DEBARJD	QUINLSC
SHEET NO.:	SCALE:	ISSUE DATE:
3 OF 3	AS SHOWN	07/06/2015

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Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
Web Address: www.dom.com

Dominion®

BY U.S. MAIL
RETURN RECEIPT REQUESTED

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN
DEC 24 2014
REGIONAL OFFICE
WOODBRIDGE, VA

December 22, 2014

Ms. Susan Mackert
Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

RE: Dominion Possum Point Power Station VPDES Permit No. VA0002071
Permit Modification Request-Addendum

Dear Ms. Mackert:

Virginia Electric & Power Company d/b/a Dominion Virginia Power (Dominion) is submitting the enclosed addendum to our June 30, 2014 request to modify the subject permit. Our addendum includes an application Form 2F for coverage of a number of new industrial storm water outfalls including: Outfall S35 that receives runoff from a small area at the north end of the Unit 5 cooling tower, Outfall S105 that receives runoff from the area between the railroad and the embankment of Pond A, and two new proposed stormwater outfalls S108 and S109, which will drain the toe of the dam areas south and west of Pond E respectively. We are also requesting that permit condition I.A.12 be modified to recognize that industrially influenced storm water may be discharged through existing storm water outfall S107. In addition, we are providing information to supplement Attachment A of the Form 2F that was submitted with our earlier application, and we are also including proposed changes to a number of permit conditions for clarification.

Should you have any questions and/or require additional information, please contact Oula Shehab-Dandan at 804-273-2697 or via email at oula.k.shehab-dandan@dom.com.

Sincerely,

Cathy C. Taylor

Cathy C. Taylor
Director, Electric Environmental Services

CERTIFICATION

I certify under penalty of law that this document 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.

NAME: Edward H. Baine

OFFICIAL TITLE: V.P. Power Generation System Operations

PHONE NO: (804) 273-3592

SIGNATURE: Edward H. Baine

DATE SIGNED: 12/22/14

Please print or type in the unshaded areas	EPA ID Number *(copy from item 1 of Form 1)* ***110000340774***	Form Approved. OMB No. 2040-0086

Form **2F** NPDES

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
S035	**38**	**32**	**10**	**77**	**16**	**46**	**Potomac River**
S105	**38**	**32**	**28.53**	**77**	**17**	**2.05**	**Quantico Creek**
S107	**38**	**32**	**43.8**	**77**	**16**	**37**	**Quantico Creek**
S108	**38**	**32**	**59.25**	**77**	**17**	**36.52**	**Unnamed Tributary to Quantico Creek**
S109	**38**	**33**	**11.32**	**77**	**17**	**36.13**	**Unnamed Tributary to Quantico Creek**

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Not Applicable					

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structure control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each are not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
S35	**0.135 acre**	**0.15 acre**			
S105	**2.4 acres**	**34.9 acres**			
S107	**0 acres**	**14.4 acres**			
S108	**0 acres**	**1.8 acre**			
S109	**0 acres**	**0.5 acre**			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

The drainage area associated with Outfall S35 receives runoff from the north end of Unit #5 Cooling Tower B and drains approximately 0.15 acres consisting of approximately 90% impervious (building, roads) and 10% pervious (grass, gravel) surfaces. The drainage area is similar in nature to that associated with existing Outfall S5, and consequently, Dominion requests that Outfall S5 to be considered representative of Outfall S35. Intake structure maintenance activities may occur in the drainage area.

The drainage area associated with Outfall S105 originates from an area located on the east side of the railroad tracks and just west of the station's laydown area (see attached Site Plan). The drainage area consists of approximately 93% pervious and 7% impervious surfaces. Runoff contributing to Outfall S105 flows westward through culverts under the railroad and Possum Point Road, enters a drainage channel located to the south of the inactive Ash Pond A, and is eventually discharged to Quantico Creek.

Outfall S107 collects storm water from the berm of Ash Pond D via two drop inlets which is discharged to Quantico Creek southeast of Pond D. This outfall is designed to collect groundwater infiltration from the ash pond's berm for stabilization. The area is approximately 14.4 acres and estimated to be 100% pervious (grass, vegetative slopes).

In 2012, Dominion cleared the trees and brush from within 25 feet of the limits of the Ash Pond E embankment as required by Virginia Impounding Structure Regulations. As a result of this clearing, Dominion observed two areas along the downstream toe of the south embankment and west embankment that had poor surface drainage characteristics. Standing water is present in these areas during the wetter months of the year. Consequently, Dominion is undertaking a project to improve the surface drainage at the downstream toe portions of the south and west embankments of Ash Pond E by constructing grass-lined ditches. It is expected that the project will be completed during the first quarter of 2015. Outfalls S108 and S109 are proposed storm water outfalls originating from the south and west drainage areas, respectively. The drainage areas associated with theses outfalls are considered to be 100% pervious and will receive runoff from the areas south and west of Pond E, respectively. They are expected to be constructed in the first quarter of 2015. The drainage areas consist of 100% pervious surfaces.

The drainage areas for Outfalls S105, S107, S108, and S109 are located in close proximity to the station's ash ponds. The Possum Point Power Station does not currently generate coal ash, and none of the existing ponds has received ash for at least 10 years. Even so, out of an abundance of caution, given the location of these drainage areas Dominion is requesting that the associated discharges be permitted as storm water outfalls associated with industrial activity.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
S35 **S105** **S107** **S108** **S109**	**Discharge to Surface Water**	**4-A**

Continued on Page 3

V. Non Stormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name of Official Title *(type or print)*	Signature	Date Signed
Edward H. Baine **VP Power Generation System Operations**	Edward H. Baine	12/22/14

B. provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Outfall S035 was visually inspected on 11/12/ 2014 during dry weather and no discharge was observed.

Outfall S105 – the drainage channel for this outfall was visually inspected on November 3, 2014 during dry weather and no flow was observed.

Outfall S107- there is a continuous discharge from this outfall due to groundwater contribution.

Oufall S108 & S109 – the improvements leading to the creation of these outfalls have yet to be realized. These outfalls will be inspected for non-storm water flows once they exist.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

No spills or leaks of toxic or hazardous pollutants have occurred within the last three years within the drainage areas associated with S35, S105, S107, S108, and S109.

Continued on Page 3

Continued from Page 2

EPA ID Number *(copy from Item I of Form 1)*
110000340774

VII. Discharge Information

A,B,C, & D: See instruction before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

--

IX. Contact analysis Information

Were any of the analysis reported in item VII performed by a contact laboratory or consulting firm?

☐ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☒ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

X. Certification

I certify under penalty of law that this document 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.

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
Edward H. Baine **VP Power Generation System Operations**	**(804) 273-3592**
C. Signature Edward H. Baine	D. Date Signed 12/22/14

Continued on Page 3

Information to Supplement June 30, 2014 Form 2F-ATTACHMENT A

The following information is provided as a supplement to ATTACHMENT A of our June 30, 2014 application and provides additional information relative to the decant structure associated with Ponds ABC at our Possum Point Power Station.

Decant Structure Description

Construction details for the Possum Point Power Station Ash Pond ABC decant structure are provided in the attached March 24, 1954 drawings. The decant structure is a concrete riser with internal dimensions of approximately 4 ft. by 4 ft. by 18-ft. high. The upstream side of the structure has a slot in which individual concrete members are placed one on top of the other to form a wall. These members are commonly referred to as stoplogs. The stoplogs are each approximately 12-inches high, 8-inches deep and 4 ft. - 6 inches long. The stoplogs extend from about 6 inches below the top of the structure to 14 ft. - 6 inches below the top of the structure (42 inches above the bottom of the structure). The outlet from the riser is a 30-inch diameter concrete pipe with the invert elevation about 1 ft. above the bottom of the structure. The top of structure elevation is approximately equal to the top of the earth dam. For safety purposes the top of the structure is fitted with a galvanized metal grating (this may be a source of zinc to the water).

Observations Related to Inflow to the Decant Structure

Since submittal of our June 30, 2014 application, Dominion has continued to perform weekly inspections of Ponds ABC and the associated decant structure. The inspections have been timed to coincide with storm events as they have been observed to occur throughout the period. During each inspection observations have included the depth of water pooled behind the decant structure, a description of the amount of water that was entering the decant structure, and the amount of rainfall that occurred prior to each inspection. Throughout the period of inspection water that was observed to enter the structure did so at an elevation at or above that of the pond surface. A summary of the information generated during the inspections is presented in Figure 1. A review of the observations indicates the following:

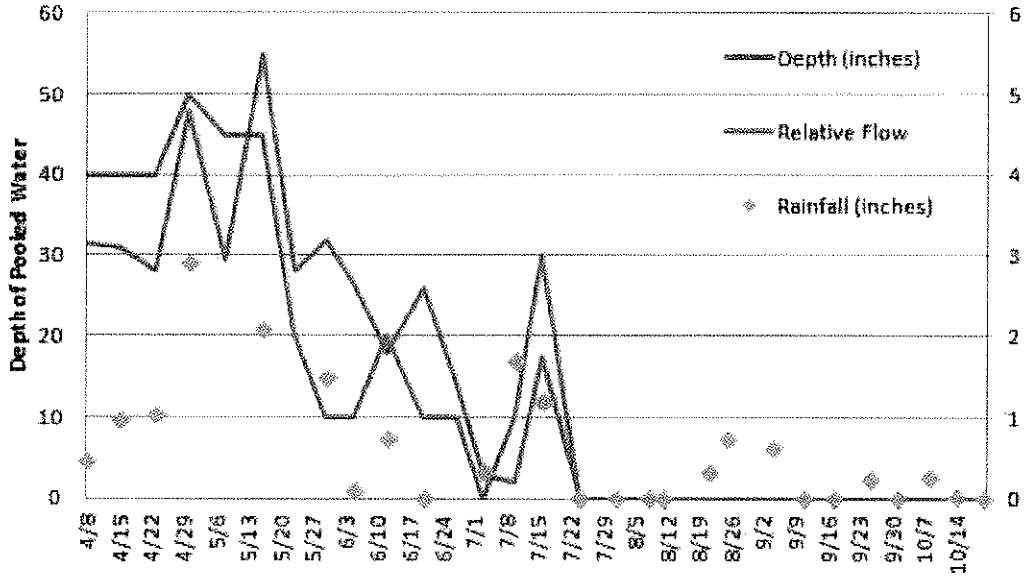
- The amount of water entering the decant structure has been directly related to the amount of precipitation prior to each inspection.
- During wetter periods (i.e., April – May) some flow into the decant structure was consistently observed; however, the amount of pooled water behind the structure (28 – 55 inches) and the degree of flow into the structure (e.g., no change, small flow, significant increase) varied in relation to the amount of rainfall that occurred between individual inspection events. It should be noted that the inspections were timed to correspond with precipitation events (i.e., periods when the in-flow to the structure would have been expected to increase) so the true change in pooled water elevation and the degree of flow between inspections could have been much more and less, respectively, than what was observed.
- During drier periods (i.e., June – November 17) no flow was observed entering the structure.
- As noted in the decant structure description above, there is some difference in elevation between the bottom of the discharge structure and the bottom elevation of the concrete discharge pipe (i.e., there is always some standing water in the bottom of the decant structure).

Implications for Permitting

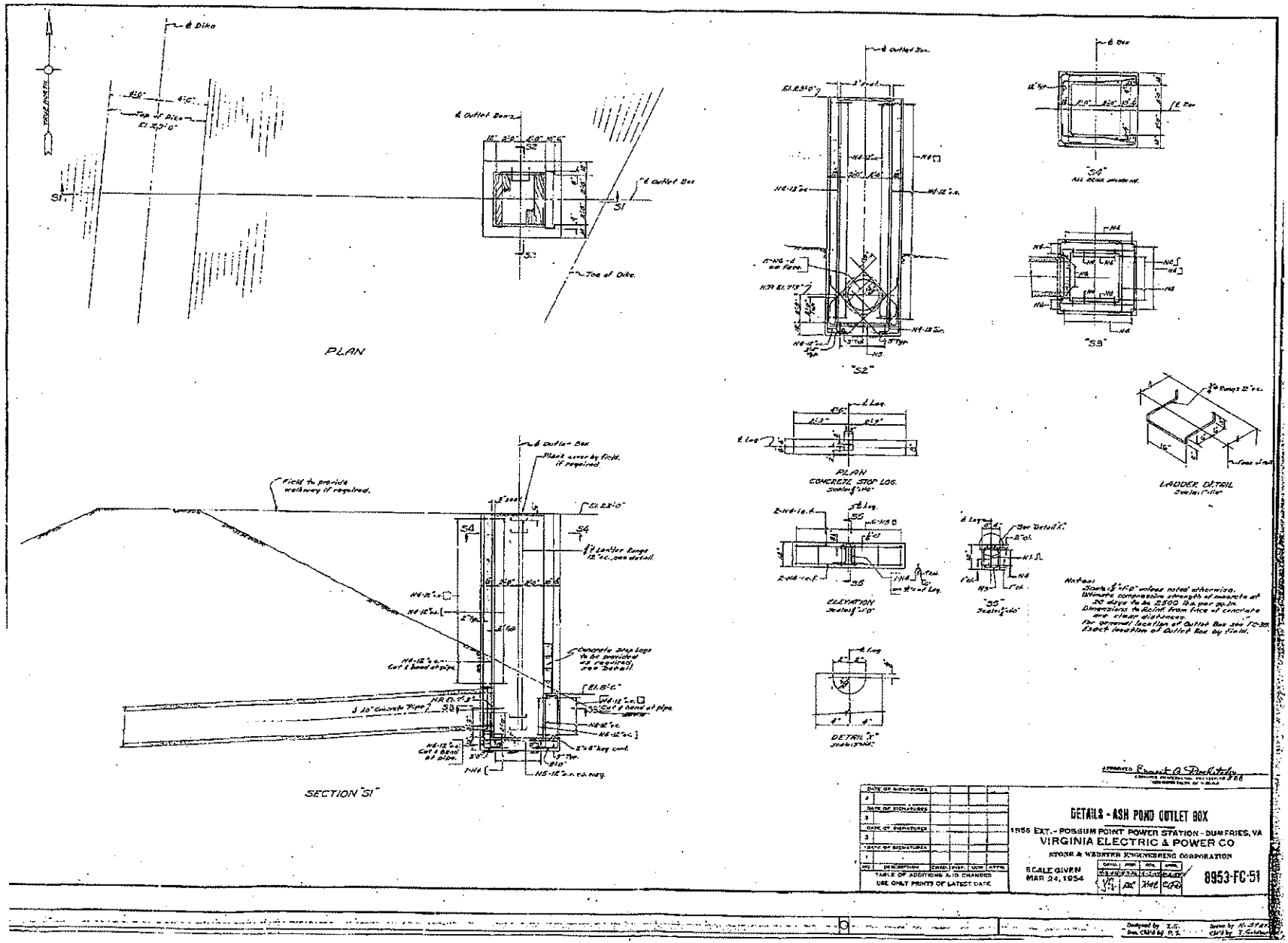
Based on discussions with DEQ staff and a review of preliminary permitting documents, Dominion understands that DEQ is considering permitting the discharge from Ponds ABC as a continuous discharge and, as such, is considering applying the same 2:1 chronic assimilative capacity approach that was applied to the Possum Point Power Station process wastewater discharges. Dominion does not believe that this approach is appropriate given the storm water nature of the ABC pond discharge. Even so, we had our consultant LimnoTech perform screening level modeling to evaluate the chronic mixing that would be

anticipated for such a discharge (see attached). The results of this analysis demonstrate that an assimilative capacity of considerably greater than 2:1 is appropriate for application of Virginia's chronic water quality criteria to the discharge from the Pond ABC decant structure. As such, we recommend that should DEQ continue with their water quality-based effluent limits approach that the evaluation be based on the acute water quality criteria, which we believe are the limiting criteria in this situation.

Figure 1. Weekly Inspection Observations: Depth of Water Pooled Behind the Decant Structure, Relative Flow of Pooled Water into Discharge Structure, and Amount of Rainfall Prior to Inspection



The actual flow into the decant structure was not determined during the weekly inspections. However, descriptive information was provided on each report and has been used to provide an indication of the relative amount of flow that was entering the structure on any given day.


PLAN
SECTION "S1"
"S2"
"S3"
"S4"
PLAN
CONCRETE STOP LOG.
LADDER DETAIL
ELEVATION
"S5"
DETAIL "X"
Notes:
DETAILS - ASH POND OUTLET BOX
1956 EXT. - POSSUM POINT POWER STATION - DUMFRIES, VA
VIRGINIA ELECTRIC & POWER CO
STONE & WEBSTER ENGINEERING CORPORATION
SCALE GIVEN
MAR 24, 1954
8953-FC-51
TABLE OF ADDITIONS & RE CHANGES
USE ONLY PRINTS OF LATEST DATE

LimnoTech
Water Environment | Scientists Engineers

1015 18th Street, NW
Suite 900
Washington, DC 20036
202.833.9140
www.limno.com

Memorandum

From: Virginia Breidenbach, PE
Dave Dilks, PhD
To: Dominion Environmental Services

Date: December 10, 2014
Project: TSDOM

SUBJECT: **Screening Level Dilution Evaluation for Pond C Discharge to Quantico Creek**

Summary

This memorandum presents a screening level evaluation of dilution for the Pond C decant structure discharge to Quantico Creek under chronic toxicity conditions.

The results of this assessment indicate that for chronic toxicity, dilution factors greater than two are likely achieved for Pond C discharge flow rates up to approximately 270 gpm.

A description of the Pond C decant structure discharge, approach to the dilution evaluation, assumptions and data inputs, and evaluation results are discussed below.

Discharge Description

The Pond C outfall is located on the northeast bank of Quantico Creek within the Virginia Electric and Power Company Possum Point Power Station. The discharge consists of a 30" concrete pipe leading from the decant structure at Pond C. The pipe outfall is located approximately 20 feet from the creek bank. A small channel leads from the outfall to the creek. The outfall does not appear to be submerged.

The only recorded flow rate available for the discharge is an estimate of 2 gpm made from visual observation by a VDEQ staff person on a field visit conducted on April 11, 2014 (Demers and Mackert, April 15, 2014). No flow was observed from the outfall on site visits made by LimnoTech staff on November 3, 5, and 6, 2014.

Approach

The approach used to determine chronic toxicity dilution factors for the Pond C decant structure outfall was patterned after the most commonly used approach for assessing chronic mixing zones in rivers. The approach allows a fraction of the total available flow to be used for dilution, with this fraction being set equal to the fraction of the water body's cross-sectional area allotted to the chronic mixing zone. For Quantico Creek, this fraction of total available flow to be used for dilution was assumed to be the more stringent case specified in Virginia rules for estuarine and transition zone waters as no more than "five times in any direction the average depth along a line extending 1/3 of the way across the receiving water from the discharge point to the opposite shore" (9VAC25-260-20). Because Quantico Creek is tidally influenced, it is appropriate to use

the total dilution flow available over a tidal cycle (rather than just the upstream freshwater flow). The chronic toxicity dilution factor equation therefore becomes:

$$S = (Q_w + Q_{dil}) / Q_w \quad (1)$$

Where,

S = dilution factor

Q_w = wastewater flow from Pond C

Q_{dil} = total dilution flow

Total dilution flow is calculated as:

$$Q_{dil} = a\,(Q_{up} + Q_{TID}) \quad (2)$$

Where,

a = fraction of total available flow to be used for dilution

Q_{up} = upstream Quantico Creek flow from stream gage data

Q_{TID} = tidal flow

The fraction of total available flow to be used for dilution calculated as:

$$a = (5 * \text{local water depth}) / (\text{width of embayment}) \quad (3)$$

Tidal flow is calculated as:

$$Q_{TID} = (\text{average change in water depth over a tidal cycle}) * (\text{embayment surface area})/12.5 \text{ hours} \quad (4)$$

The dilution factor is adjusted to account for the fraction of wastewater flow that is returned within the tidal cycle, thus limiting available mixing. The resulting effective dilution factor is calculated as:

$$S_{effective} = S * (1 - r_c) \quad (5)$$

Where,

r_c = return rate of mass discharged in the previous tidal cycle

In this instance, a return rate of 0.5 was selected as a highly conservative estimate based on U.S. EPA guidance (U.S. EPA 1992) that states:

> "the r_c factor can be expected to vary in the range of ≤0.1 to ≈0.5 (highly conservative estimate). It is very small (≤0.1) for deep water discharges in the open coastal zone that are often associated with internal trapping of buoyant surface layer formation....It may be reasonably high (up to 0.5) for shallow

> water, vertically mixed discharges to strongly restricted estuaries with weak flushing."

It is emphasized that this approach is a screening level estimation and not a rigorous assessment. Virginia regulations specify mixing zone dimensions that extend upstream, downstream, and across-stream from the point of discharge. Experience has shown that this approach provides a conservative estimate of dilution when assessing the across-stream mixing zone boundary. It is not as clear how protective this approach is of the up- or downstream boundary. It is worth noting that the approach above was accepted by U.S. EPA Region III for developing NPDES permits for the District of Columbia's Blue Plains Wastewater Treatment Plant discharge to the Potomac River.

It should also be noted that the VPDES Permit Manual (VDEQ, 2014) states that for storm water discharges and intermittent discharges (< 4 days duration), water quality-based effluent limitations can be established using acute toxicity only.

Data Inputs and Assumptions

The data and assumptions used to calculate chronic toxicity dilution factors for the Pond C decant structure discharge are given in Table 1.

Table 1: Data Inputs with Sources for Chronic Toxicity Dilution Calculations

Surface area of Quantico Creek embayment	31,210,000	ft^2	GIS from aerial photo
Average change in water depth over tidal cycle	1.5	ft	NOAA chart dated August 2013 (http://www.charts.noaa.gov/OnLineViewer/12288.shtml)
Average water depth in vicinity of discharge at MLLW	1	ft	NOAA chart dated Aug 2013 (http://www.charts.noaa.gov/OnLineViewer/12288.shtml)
Embayment width at outfall location	2,800	ft	GIS from aerial photo
Q_{up} (S.F. Quantico Creek)	0.004	cfs	7Q10 streamflow for 1951-2003 SF Quantico Creek (USGS 01658500) reported by VDEQ (www.deq.state.va.us/Portals/0/.../Virginia_Stream_Flow_Data_2005.xls)
Drainage area (DA) at gage	7.62	mi^2	USGS 01658500 (http://waterdata.usgs.gov/va/nwis/inventory/?site_no=01658500&agency_cd=USGS)
Drainage area at Quantico Creek pour point	30.8	mi^2	GIS from digital elevation model
DA ratio	4.0		Calculated
Q_{up}	0.016	cfs	DA ratio * Q_{up}(S.F. Quantico Creek)
Q_w	2	gpm	VDEQ staff 4-16-14 site visit memo
r_c	0.5		Conservative value from U.S. EPA, 1992

Results

Estimated chronic toxicity dilution factors were calculated using the approach described above for a range of Pond C discharge flow rates, as indicated in Figure 1. As mentioned above, the only recorded flow rate for the outfall is 2 gpm, which was an estimate made via observation.

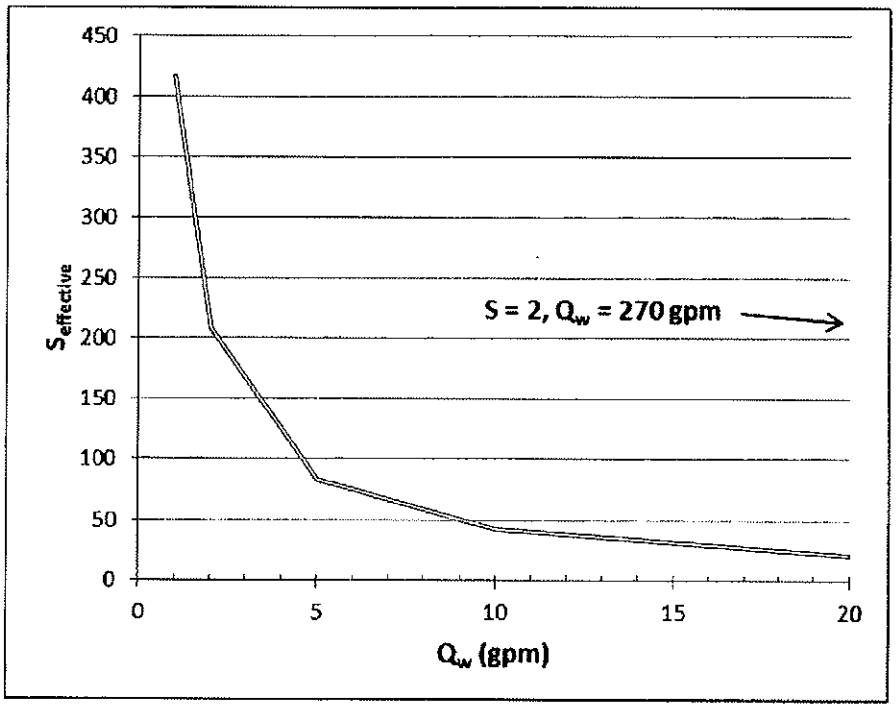


Figure 1: Chronic Toxicity Dilution Factors for Varying Pond C Decant Structure Discharge Rates

Dilution factors greater than two are estimated for discharge flow rates up to 270 gpm, while dilution factors greater than 50 are estimated for discharge flow rates up to approximately 8 gpm.

References

Commonwealth of Virginia Department of Environmental Quality Water Division (VDEQ). 2014. VPDES Permit Manual.

Demers, Dan and Susan Mackert to Tom Faha. Virginia Department of Environmental Quality Northern Regional Office. April 15, 2014. Updated April 16, 2014. Dominion – Possum Point Power Station VA0002071. [Memorandum]

United States Environmental Protection Agency Office of Water (U.S. EPA). 1992. Technical Guidance Manual for Performing Wasteload Allocations Book III: Estuaries, Part 3: Use Of Mixing Zone Models in Estuarine Waste Load Allocations. EPA-823-R-92-004.

Proposed Permit Modifications for Possum Point

I.F.1. Operation and Maintenance (O&M) Manual Requirement

The permittee shall maintain a current Operations and Maintenance (O&M) Manual for the facility and associated treatment infrastructure that is in accordance with Virginia Pollutant Discharge Elimination System Regulations, 9VAC25-31...

The O&M manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

...

c. Discussion of Best Management Practices ("BMPs") including any that may be applicable to storage areas for fossil fuel combustion byproducts described in Part 1.F.3~~, if applicable~~;

...

I.F.3. Materials Handling/Storage

Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in accordance with BMPs. For any active or inactive storage areas for fossil fuel combustion byproducts, these BMPs shall include, at a minimum, quarterly visual inspections of seeps or potential unanticipated releases such as leaks, spills, breaches or other releases. In the event that seeps are detected, then the permittee shall implement BMPs to minimize discharges of pollutants, if any, to surface waters. In the event that an unanticipated release is detected, then the permittee shall implement BMPs to minimize discharges of pollutants, if any, to surface waters and to implement corrective action to address the unanticipated release. All inspections and other BMPs that are implemented shall be documented and made available to DEQ upon request. No other

discharges of such product, materials, industrial wastes and/or other wastes to surface waters are permitted, ~~such a manner so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters,~~ except as expressly authorized.

Seek to replace I.F.10 (Debris Collection) with the analogous provision from the Chesterfield permit:

Discharge of Debris from Trash Racks
Debris collected on the intake trash racks shall not be returned to the waterway

II.R Disposal of Solids

Except in compliance with this permit, or another permit issued by the Board, s~~S~~olids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

I.A.12 Effluent Limitations and Monitoring Requirements (Stormwater)

Add S117 back into the permit.

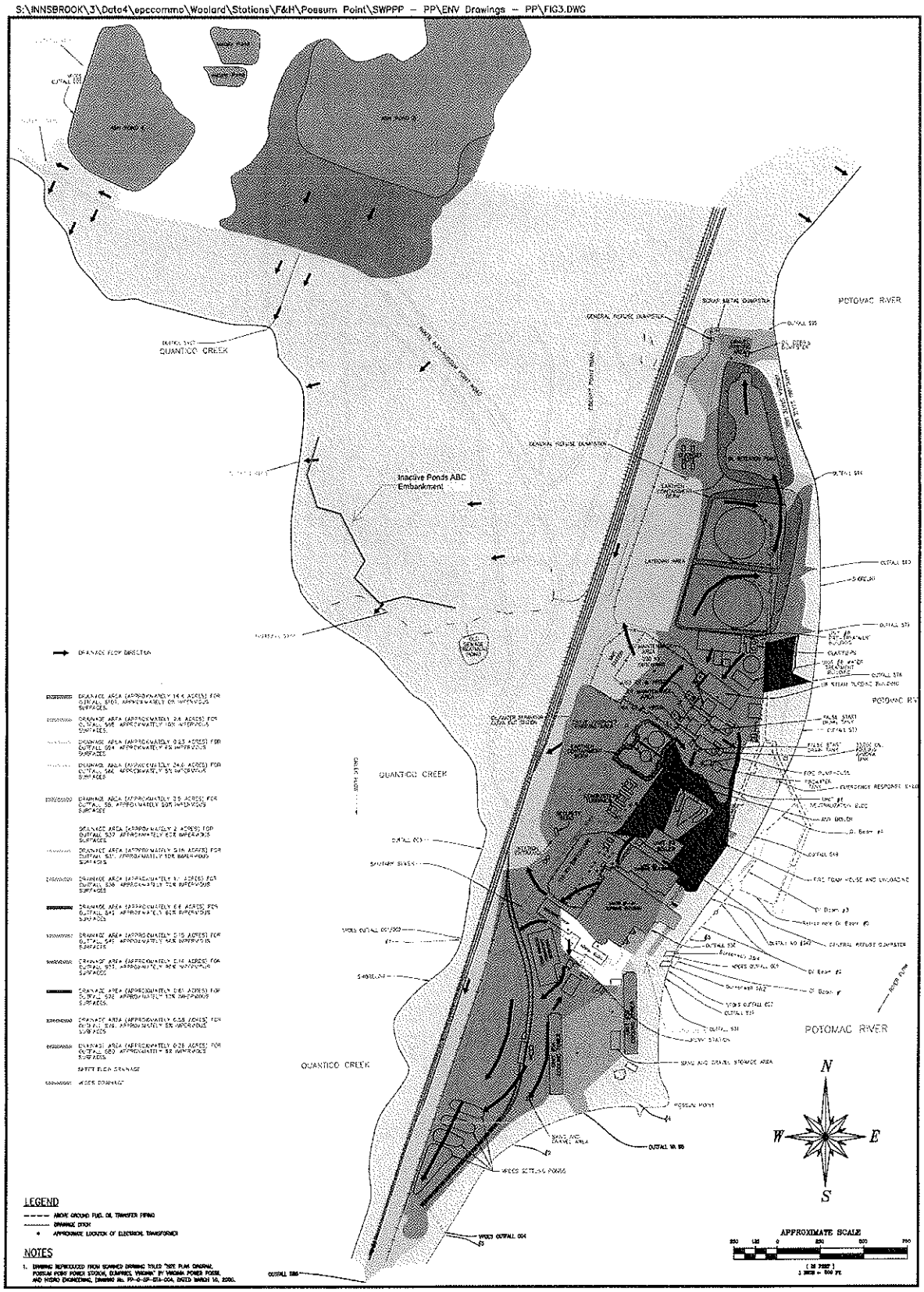
Add Ponds A/B swale.

Redesignate S107 as industrial given potential for seepage.

I.D.3.a Site Characterization

Should data warrant, DEQ may require a Site Characterization Report for Ash Ponds A, B, C, D, E or the Oily Waste Treatment Basin…

S:\INNSBROOK\3\Data4\epccommo\Woolard\Stations\F&H\Possum Point\SWPPP – PP\ENV Drawings – PP\FIG3.DWG



DOMINION ENERGY

SITE PLAN
DRAINAGE AREA
POSSUM POINT POWER STATIO

		0	ORIGINAL ISSUE	DSGN -----	DSGN SUPV------
				DRWN TTT	ENGR SUPV------
				CHKD RAW	PROJ ENGR

DRAWING NUMBER
PP-0-SP-STA

Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
Web Address: www.dom.com

Dominion®

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
JUL 07 2014
REGIONAL OFFICE
WOODBRIDGE, VA

BY U.S. MAIL
RETURN RECEIPT REQUESTED

June 30, 2014

Ms. Susan Mackert
Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

RE: Dominion Possum Point Power Station VPDES Permit No. VA0002071
Permit Modification Request

Dear Ms. Mackert:

Virginia Electric & Power Company d/b/a Dominion Virginia Power (Dominion) is submitting the enclosed application to modify the subject permit for the following reasons:

1) To incorporate stormwater discharges that may result from improvement activities which may disturb ash within the drainage area associated with the inactive Ash Ponds ABC;
2) To recognize the discharge from the Unit 6 Reverse Osmosis (RO) trailers as a permanent discharge; and
3) To incorporate several additional minor changes to permit language and update outfalls description in the permit.

The enclosed documents include the updated application forms, flow diagram, maps, public notice authorization, and copies of the permit application fee form and check.

Should you have any questions and/or require additional information, please contact Oula Shehab-Dandan at 804-273-2697 or via email at oula.k.shehab-dandan@dom.com.

Sincerely,

Cathy C. Taylor
Director, Electric Environmental Services

Dominion Possum Point Power Station
VPDES Permit No. VA0002071
Permit Modification

I certify under penalty of law that this document 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.

Edward H. Baine

Edward H. Baine
VP Power Generation System Operations
(804) 273-3592

EPA Form 2F

Please print or type in the unshaded areas	EPA ID Number *(copy from item I of Form 1)* ***110000340774***	Form Approved. OMB No. 2040-0086

Form **2F** NPDES

United States Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number *(list)*	B. Latitude			C. Longitude			D. Receiving Water *(name)*
S104	**38**	**32**	**38**	**77**	**17**	**09**	**Quantico Creek**

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Not Applicable					

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structure control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each are not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

Continued on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
S104	**3.5 acres**	**44 acres**			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

See Attachment A for description of the drainage area contributing to Outfall S104.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
S104	**Stormwater contributing to Outfall S104 originates from areas of the station where no industrial activities are currently located. If improvement activities require that ash is disturbed, then best management practices (e.g., straw bales, silt fences, check dams) will be utilized to reduce associated pollutants in storm water runoff.**	**1-O, 4-A**

V. Non Stormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name of Official Title *(type or print)*	Signature	Date Signed
Edward H. Baine **VP Power Generation System Operations**	Edward H. Baine	06/30/14

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

On 4/2/2014, a grab sample was collected from the discharge pipe associated with Outfall S104. The discharge resulted from stormwater that had ponded behind the discharge structure associated with Ponds ABC. The sample was analyzed by Dominion's Laboratory Services and the analyses are included in Section VII. of this form.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

No spills or leaks of toxic or hazardous pollutants have occurred within the drainage area associated with S104 in the last three years.

Continued on Page 3

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
110000340774

VII. Discharge Information

A,B,C, & D: See instruction before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis - is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes *(list all such pollutants below)* ☒ No *(go to Section IX)*

--

IX. Contact analysis Information

Were any of the analysis reported in item VII performed by a contact laboratory or consulting firm?

☒ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Dominion Laboratory Services (DLS)	**11201 Old Stage Road Chester, VA 23836**	**(804) 771-5905**	**The data for all parameters submitted with this application were generated by DLS.**

X. Certification

I certify under penalty of law that this document 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.

A. Name & Official Title *(type or print)*	B. Area Code and Phone No.
Edward H. Baine **VP Power Generation System Operations**	**(804) 273-3592**
C. Signature Edward H. Baine	D. Date Signed 06/30/14

Continue on Reverse

Outfall S104

EPA ID Number *(copy from Item 1 of Form 1)*
110000340774

Form Approved. OMB No. 2040-0086

VII. Discharge Information *(Continued from page 3 of Form 2F)*

Part A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details. **Outfall S104**

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil & Grease	--	--	--	--		--
Biological Oxygen Demand (BOD5)	--	--	--	--		--
Chemical Oxygen Demand (COD)	**17.80 ppm**	**N/A**	**17.80 ppm**	**N/A**	**1**	**General Site Runoff**
Total Suspended Solids (TSS)	**3.4 ppm**	**N/A**	**3.4 ppm**	**N/A**	**1**	**General Site Runoff**
Total Organic Nitrogen	**0.41 ppm**	**N/A**	**0.41 ppm**	**N/A**	**1**	**General Site Runoff**
Total Phosphorus	**0.05 ppm**	**N/A**	**0.05 ppm**	**N/A**	**1**	**General Site Runoff**
pH	**8.8 Minimum**	**8.8 Maximum**	**8.8 Minimum**	**8.8 Maximum**	**1**	**General Site Runoff**

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant And CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
pH	**See Part A**	**N/A**	**N/A**	**N/A**	**1**	--
Phosphorous Total	**See Part A**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Ammonia	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Nitrogen Total	**See Part A**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Nitrate-Nitrite N Total	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Copper Total	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Copper dissolved	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Chromium Total	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Zinc Total	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Iron Total	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
TPH	**See Part C**	**N/A**	**N/A**	**N/A**	**1**	**N/A**
Total Suspended Solids	**See Part A**	**N/A**	**N/A**	**N/A**	**1**	**General Site Runoff**
Oil & Grease	--	**N/A**	**N/A**	**N/A**	--	--
126 Priority Pollutants in cooling tower additives.	**None of the 126 priority pollutants are present in cooling tower additives**		**N/A**	**N/A**	**N/A**	**N/A**

Continue on Reverse

Part C - List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant And CAS Number (if available)	Maximum Values (mg/L unless otherwise noted)		Average Values (mg/L unless otherwise noted)		Number Of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Ammonia, Total	0.04	N/A	N/A	N/A	1	General Site Runoff
Fluoride	0.069	N/A	N/A	N/A	1	General Site Runoff
Nitrate + Nitrite	1.67	N/A	N/A	N/A	1	General Site Runoff
Nitrogen, Total Org. as N	0.41	N/A	N/A	N/A	1	General Site Runoff
Dissolved Solids, Total	187.0	N/A	N/A	N/A	1	General Site Runoff
Chloride as Cl	45.61	N/A	N/A	N/A	1	General Site Runoff
Phosphorus (as P), Total	0.05	N/A	N/A	N/A	1	General Site Runoff
Sulfate as SO4	22.93	N/A	N/A	N/A	1	General Site Runoff
Aluminum, Total	0.253	N/A	N/A	N/A	1	General Site Runoff
Barium, Total	0.262	N/A	N/A	N/A	1	General Site Runoff
Boron, Total	0.08	N/A	N/A	N/A	1	General Site Runoff
Cobalt, Total	0.002	N/A	N/A	N/A	1	General Site Runoff
Iron, Total	0.77	N/A	N/A	N/A	1	General Site Runoff
Magnesium, Total	7.32	N/A	N/A	N/A	1	General Site Runoff
Molybdenum, Total	0.003	N/A	N/A	N/A	1	General Site Runoff
Manganese, Total	0.04	N/A	N/A	N/A	1	General Site Runoff
Tin, Total	<0.005	N/A	N/A	N/A	1	N/A
Titanium, Total	<0.002	N/A	N/A	N/A	1	N/A
Antimony, Total	0.001	N/A	N/A	N/A	1	General Site Runoff
Arsenic, Total	0.002	N/A	N/A	N/A	1	General Site Runoff
Beryllium, Total	<0.0002	N/A	N/A	N/A	1	N/A
Cadmium, Total	<0.0003	N/A	N/A	N/A	1	N/A
Chromium, Total	0.001	N/A	N/A	N/A	1	General Site Runoff
Copper, Total	0.005	N/A	N/A	N/A	1	General Site Runoff
Lead, Total	<0.0001	N/A	N/A	N/A	1	N/A
Mercury, Total	<0.0001	N/A	N/A	N/A	1	N/A
Nickel, Total	0.027	N/A	N/A	N/A	1	General Site Runoff
Selenium, Total	0.004	N/A	N/A	N/A	1	General Site Runoff
Silver, Total	<0.0001	N/A	N/A	N/A	1	N/A
Thallium, Total	0.0004	N/A	N/A	N/A	1	General Site Runoff
Zinc, Total	0.072	N/A	N/A	N/A	1	General Site Runoff
Vanadium, Total	0.030	N/A	N/A	N/A	1	General Site Runoff
Phenol	<0.01	N/A	N/A	N/A	1	N/A
Hardness as CaCO3, Total	59.85	N/A	N/A	N/A	1	General Site Runoff
Vanadium (dissolved)	0.025	N/A	N/A	N/A	1	N/A
Tl (dissolved)	<0.0003	N/A	N/A	N/A	1	N/A
Ti (dissolved)	<0.002	N/A	N/A	N/A	1	N/A
Sn (dissolved)	<0.005	N/A	N/A	N/A	1	N/A
Se (dissolved)	0.004	N/A	N/A	N/A	1	General Site Runoff
Sb (dissolved)	0.001	N/A	N/A	N/A	1	General Site Runoff
Pb (dissolved)	<0.001	N/A	N/A	N/A	1	N/A
Ni (dissolved)	0.021	N/A	N/A	N/A	1	General Site Runoff
Mo (dissolved)	0.003	N/A	N/A	N/A	1	General Site Runoff
Hg (dissolved)	<0.0001	N/A	N/A	N/A	1	N/A
Cu (dissolved)	0.004	N/A	N/A	N/A	1	General Site Runoff
Cr (dissolved)	<0.001	N/A	N/A	N/A	1	N/A
Co (dissolved)	0.0013	N/A	N/A	N/A	1	General Site Runoff
Cd (dissolved)	<0.0003	N/A	N/A	N/A	1	N/A
Be (dissolved)	<0.0002	N/A	N/A	N/A	1	N/A
Ba (dissolved)	0.204	N/A	N/A	N/A	1	General Site Runoff
As (dissolved)	<0.002	N/A	N/A	N/A	1	N/A
Ag (dissolved)	<0.0001	N/A	N/A	N/A	1	N/A
Zn (dissolved)	0.027	N/A	N/A	N/A	1	General Site Runoff
Mn (dissolved)	<0.02	N/A	N/A	N/A	1	N/A
Mg (dissolved)	7.04	N/A	N/A	N/A	1	General Site Runoff
Fe (dissolved)	0.11	N/A	N/A	N/A	1	General Site Runoff
Al (dissolved)	0.074	N/A	N/A	N/A	1	General Site Runoff

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.						
OUTFALL	1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during event (gallons/minute)	6. Total flow from rain event (gallons)
N/A						

A grab sample was taken from Outfall S104 on 4/2/2014. The discharge is from stormwater accumulated in the pond from previous storms.

7. Provide a description of the method of flow measurement or estimate

N/A

FORM 2F- ATTACHMENT A

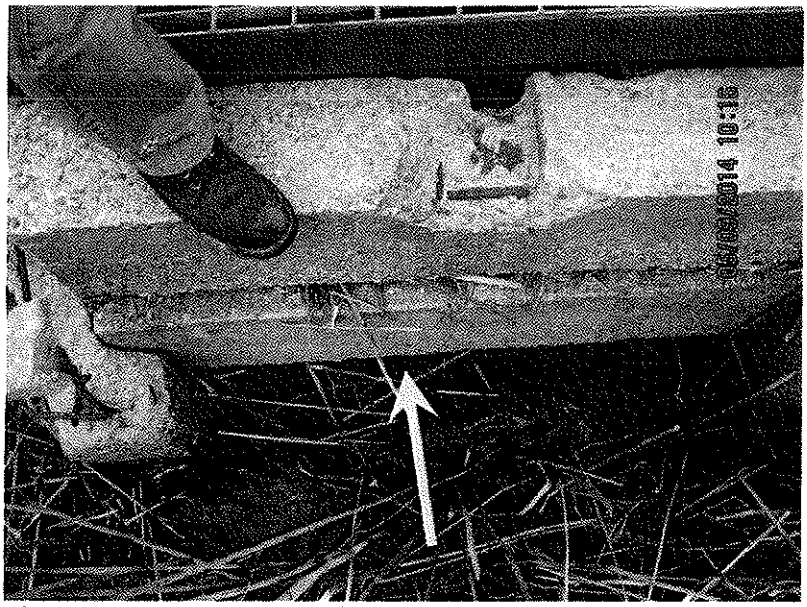
Stormwater Discharge from the Drainage Area Associated with Ash Ponds ABC

Ash ponds ABC were actively utilized during the period from 1955 through the early 1960s. Subsequently, the ponds have been reclaimed by a natural vegetative cover. The drainage area containing the inactive ash ponds and the associated storm water outfall (previously referred to as Outfall S104) have been addressed in Possum Point's VPDES permits. A summary of the permitting history associated with this area was provided to DEQ by letter dated May 2, 2014 (attached).

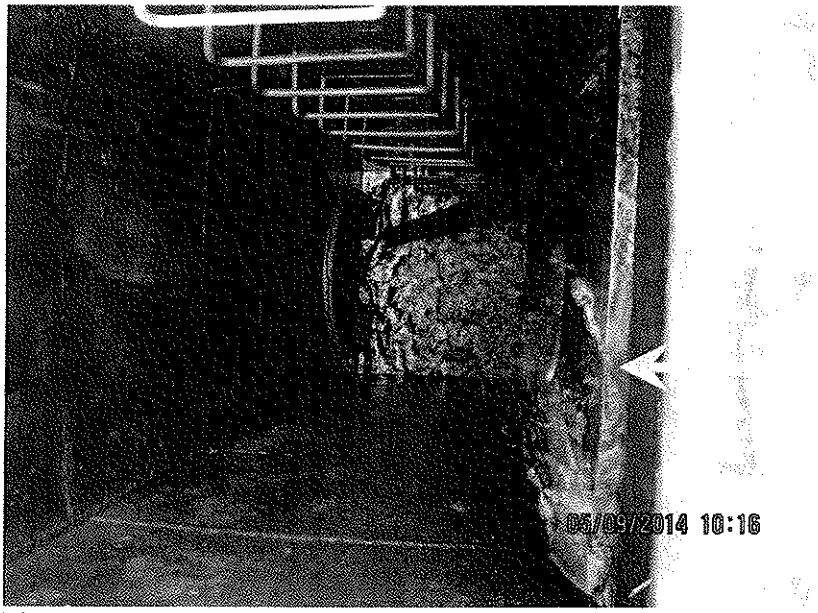
The ponds were originally constructed such that the natural drainage flowed from Pond A to Pond B to Pond C where the accumulated runoff was released to Quantico Creek through a discharge structure, which remains intact today. A recent site inspection conducted by Dominion staff revealed that the natural drainage within the area has been obstructed resulting in the erosion of a small portion of the berm associated with the ponds. Recent activities to restore the berm height to the original design have returned the stormwater flow to its natural path. However additional improvements within the area may be needed. These improvements may allow previously covered ash to come into contact with stormwater runoff. Consequently, Dominion wishes to permit the resulting discharge from Pond C as stormwater associated with industrial activity and we are providing the required Form 2F with this application.

A sample of the water released from the discharge structure associated with Pond C was collected on April 2, 2014 and was analyzed for parameters that have been detected in discharges from Ash Ponds D and E at the Possum Point Power Station. The results of these analyses are contained in Part VII of the attached Form 2F. Please note that the sample was not analyzed for Oil and Grease or Biological Oxygen Demand (BOD5). Data for these parameters will be generated and provided to DEQ to complete Section VII Part A of the application.

With respect to the Non-Stormwater Discharge certification submitted with this application, the area associated with Ponds ABC has been inspected weekly since March, 2014 and a discharge from Outfall S104 has been consistently observed throughout this period. The origin of all observed discharges has been stormwater, which had ponded behind the discharge structure associated with Pond C (Picture 1). Throughout the period of observation the discharge resulted from the leaking of ponded water through cracks between concrete stop logs associated with the discharge structure (Picture 2). No other sources of non-stormwater discharge are known to contribute to this outfall.



Picture 1. Stormwater ponding behind discharge structure



Picture 2. Stormwater discharging through cracks between concrete stop logs

DOMINION LABORATORY SERVICES

REPORT PRODUCED ON 04/07/2014

ANALYSIS TEST RESULTS BY SAMPLE

Location: POSSUM POINT

Submitter: KEN ROLLER

Dominion Laboratory Number: 421572
Description : DISCHARGE
Unit: 0

Sample Date: 04/02/2014

Parameter	Result
Ammonia as N, PPM	0.04
Boron as B, PPM	0.08
Chloride as Cl, PPM	45.61
Fluoride as F, PPM	0.069
Sulfate as SO4, PPM	22.93
Silver as Ag, ppb	< 0.1
Dis. Ag, ppb	< 0.1
Arsenic as As, ppb	2.
Dis. As, ppb	< 2.
Barium as Ba, ppb	262.
Dis. Ba, ppb	204.
Beryllium as Be, ppb	< 0.2
Dis. Be, ppb	< 0.2
Cadmium as Cd, ppb	< 0.3
Dis. Cd, ppb	< 0.3
Cobalt as Co, ppb	2.0
Dis. Co, ppb	1.3
Copper as Cu, ppb	5.
Dis. Cu, ppb	4.
Chromium as Cr, ppb	1.
Dis. Cr, ppb	< 1.
Mercury as Hg, ppb	< 0.10
Dis. Hg, ppb	< 0.10
Molybdenum as Mo,ppb	3.
Dis. Mo, ppb	3.
Nickel as Ni, ppb	27.
Dis. Ni, ppb	21.
Lead as Pb, ppb	< 1.
Dis. Pb, ppb	< 1.
Antimony as Sb, ppb	1.
Dis. Sb, ppb	1.
Selenium as Se, ppb	4.
Dis. Se, ppb	4.
Thallium as Tl, ppb	0.4
Dis. Tl, ppb	< 0.3
Titanium as Ti, ppb	< 2.
Dis. Ti, ppb	< 2.
Tin as Sn, ppb	< 5.
Dis. Sn, ppb	< 5.
Magnesium as Mg, PPM	7.32
Dis. Mg, PPM	7.04
Manganese as Mn, PPM	0.04
Dis. Mn, PPM	< 0.02
Iron as Fe, PPM	0.77
Dis. Fe, PPM	0.11
Zinc as Zn, PPM	0.072
Dis. Zn, PPM	0.027
COD, PPM	17.80
TOC, PPM	8.2
TSS, PPM	3.4
Total Phos. as P,PPM	0.05
T-Dis. Solids, PPM	187.0
T-Hard. as CaCO3,PPM	59.85
TK Nitrogen as N,PPM	0.41
NO3+NO2, PPM	1.67
Phenol, PPM	< 0.01

DOMINION LABORATORY SERVICES

REPORT PRODUCED ON 04/07/2014

ANALYSIS TEST RESULTS BY SAMPLE

Location: POSSUM POINT

Submitter: KEN ROLLER

Dominion Laboratory Number: 421572
Description : DISCHARGE
Unit: 0

Sample Date: 04/02/2014

Parameter	Result
Aluminum as Al, ppb	253.
Dis. AL, PPB	74.

DOMINION LABORATORY SERVICES

REPORT PRODUCED ON 04/07/2014

ANALYSIS TEST RESULTS BY SAMPLE

Location: POSSUM POINT

Submitter: KEN ROLLER

Dominion Laboratory Number: 421573
Description : EQUIP BLK
Unit: 0

Sample Date: 04/02/2014

Parameter	Result
Dis. Ag, ppb	< 0.1
Dis. As, ppb	< 2.
Dis. Ba, ppb	< 3.
Dis. Be, ppb	< 0.2
Dis. Cd, ppb	< 0.3
Dis. Co, ppb	< 0.6
Dis. Cu, ppb	< 1.
Dis. Cr, ppb	< 1.
Dis. Hg, ppb	< 0.10
Dis. Mo, ppb	< 1.
Dis. Ni, ppb	< 5.
Dis. Pb, ppb	< 1.
Dis. Sb, ppb	< 1.
Dis. Se, ppb	< 2.
Dis. Tl, ppb	< 0.3
Dis. Ti, ppb	< 2.
Dis. Sn, ppb	< 5.
Dis. Mg, PPM	< 0.01
Dis. Mn, PPM	< 0.02
Dis. Fe, PPM	< 0.05
Dis. Zn, PPM	< 0.010
Dis. AL, PPB	< 1.

423440

Immediate Assp

ON ICE
0.8°C

3 ft / 5 sec
depth 3"
width = 14"

Location:	Possum Point Discharge	Requested by:	KWR	Priority:	
Required Date:		Phone:		Date Analysis Complete:	
Comment:		Sampled by:	WGB	Date Approved Released:	

Bottle Types: O/G=Oil and Grease, PT=Phenols Total, V=Volatiles, M=Metals, A=[Ammonia,TKN,TP,COD,NO_3/NO_2], BOD=Biological Oxygen Demand
TOC=Total Organic Carbon, TSS=[Total Suspended Solids,B,F,NO_3/NO_2,SO_4,TDS,Chloride]
ABN=Acid Base Neutrals, PP=Pesticide/PCBs

Preservatives: HCl=Hydrochloric acid, CS=Cu Sulfate, S=Sulfuric acid, N=Nitric acid, ZA=Zinc acetate, SH=Sodium Hydroxide

Tests Required 1= Phenol total, [Ammonia, TKN, TP, COD, NO_3/NO_2], TOC
2= [TSS, TDS, B, F, NO_3/NO_2, Chlorides, SO_4]

3= TR and Diss Metals Ba, Co, Fe, Mg, Mo, Mn, Sn, Sb, As, Cd, Cu, Pb, Ni, Tl, Zn + Hardness

NOTE:

Consider:
Flow
Temp (W+S)
pH
TRC
Sulfite

pH = [redacted] 8.80
Cond = 270
Temp = 7.14°C

X - PLACE AN "X" IN THE BOX FOR SAMPLES TO BE SUBMITTED

System Lab Number	x	Sample ID	Sample Date	Sample Time	Comp	Grab	O/G (HCl)	PT (CS,S)	M (HCl)	A (N)	BOD (S)	TOC (HCl)	TSS	P/P	Test Required	Notes
421572		Possum PT Discharge	4/2/2014	1710		✓		1	2	1		1	1		1,2,3	
421573		Equip b	4/2/2014	1700		✓			1						3	

Relinquished by: (Signature) WWB	Date 4/3/14	Time 0905	Received by: (Signature) Karl Wolfe	Date 4/3/14	Time 0907
Relinquished by: (Signature) Karl Wolfe	Date 4/3/14	Time 0950	Received by: (Signature) Eric Baker	Date 4/3/14	Time 950

Dominion Resources
Laboratory Services
11202 Old Stage Road
Chester, VA 23836

coc Possum Point Discharge 2014.xlsx

Dominion Laboratory Login Checklist

Station/Study: PP		WO#: 423740	
Thermometer Used: 61951674 ☐ 61951693 ☐ 130565182 ☑		Temp: 0.8	
	Type of Ice: Wet	Blue	None
Chain of Custody Present	Yes	No	N/A
Chain of Custody Filled Out	Yes	No	N/A
Chain of Custody Relinquished	Yes	No	N/A
Sampler Name on COC	Yes	No	N/A
Samples Labels match COC	Yes	No	N/A
Includes date/time/ID/Analysis	Yes	No	N/A
All entries in Ink	Yes	No	N/A
Samples Arrived within Holding Time	Yes	No	N/A
Short Hold Time Analysis (<72hr)	Yes	No	N/A
Rush Turn Around Time Requested	Yes	No	N/A
Sufficient Volume	Yes	No	N/A
Correct Containers Used	Yes	No	N/A
Containers Used: (circle)	NH3	Solids	O&G
	TOC	OPO4	ABN
	IC	DRO	Phenol
	Hardness	Radioactivity	Volatiles
	Grain Size	Metals (Total or Dissolved)	
	Other:		
# of Bottles on COC correct	Yes	No	N/A
Filtered Volume received for Dissolved Tests	Yes	No	N/A
Custody Seal Intact	Yes	No	N/A
Date/Time Received: 4/3/14 830			
Received by: CD			
Due Date on COC match worksheet	Yes	No	N/A
Tests Required on COC match worksheet	Yes	No	N/A
Verified by: MC		Date: 4/3/14	

Additional Modification Requests

Additional Modification Requests

1. We request that the DEQ add uncontaminated river water to the Storm Water allowable discharges in Part I.E.1.b.1of the permit; similar requests have been granted for other Dominion stations.

2. We request that DEQ approve the use of water from the Seal Pit as back-up raw water supply for Unit 6. The updated flow diagram reflects the change, which should have no impact to Outfall 001/002 discharge.

3. Since Outfall 007 (Intake Screen Backwash Water) is the primary Outfall for the Units 3, 4, 5 and 6 intake screen backwash water, and Outfall 009 is an intermittent discharge and only includes discharges from Units 3&4 intake screen backwash, the station would only use Outfall 009 if the bridge and trough connecting the intakes fails. Outfall 007 and 009 would be separate until repairs are made to the bridge and trough. For this reasons, we request that the DEQ rewords the descriptions for Outfalls 007&009 in Part I A of the permit (pages 5 & 7) as follows:

Part 1A. Page 5

5. Outfall 007 – Intake Screen Backwash Water ~~(Units 5 and 6 formerly Units 1 and 2)~~ (Units 3, 4, 5, and 6)

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 007. Such discharges shall be limited and monitored by the permittee as specified below.

~~c. The permittee is authorized to discharge Intake Screen Backwash Water from Units 3 and 4 through Outfall 007 until such time that Outfall 009 is operational.~~

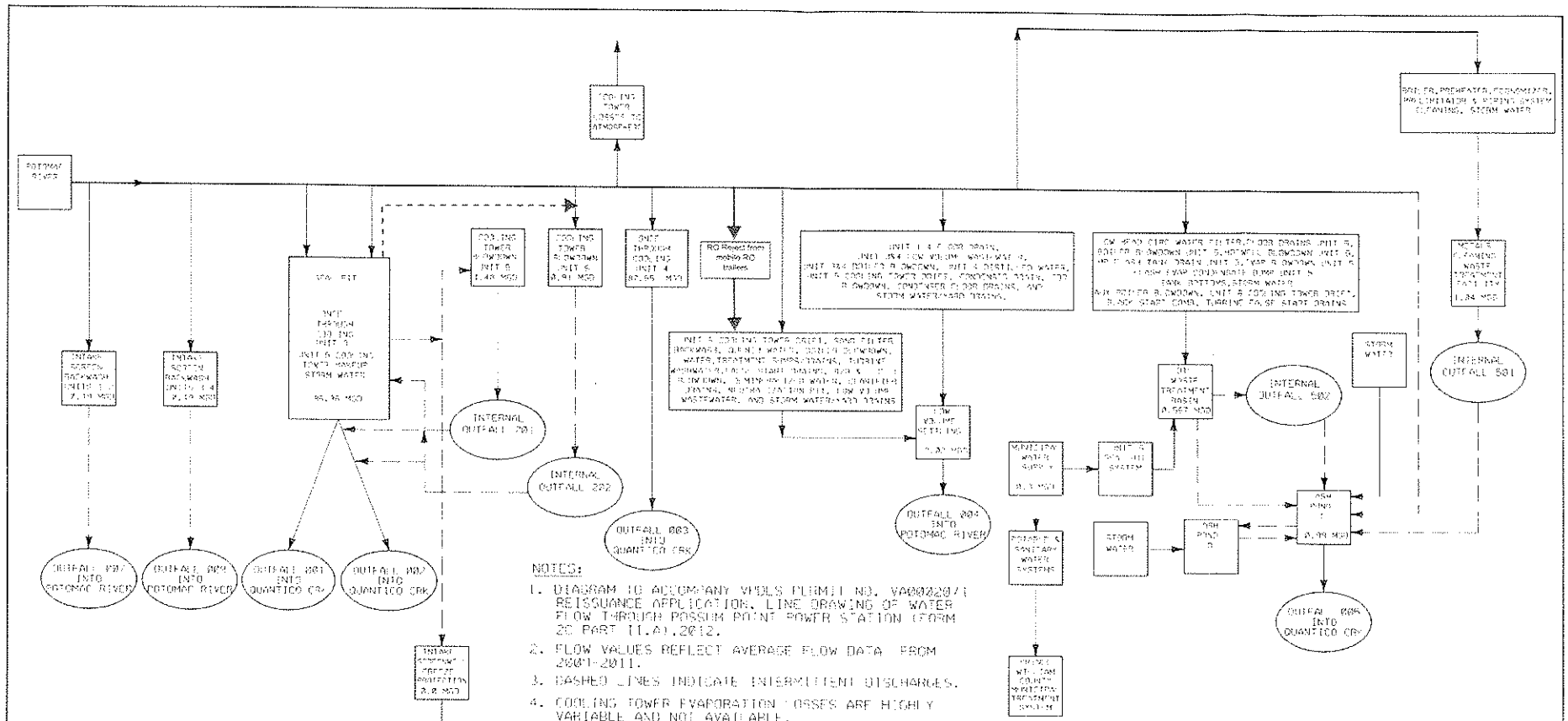
Part 1A. Page 7

7. Outfall 009 – Intake Screen Backwash Water (Units 3 and 4)

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

b. During the period beginning with the permit's effective date and lasting until the expiration date, the permittee is authorized to discharge from Outfall Number 009. Such discharges shall be limited and monitored by the permittee as specified below.

~~c. Until such time that Outfall 009 is operational, the permittee is authorized to discharge Intake Screen Backwash Water from Units 3 and 4 through Outfall 007~~



NOTES:

1. DIAGRAM TO ACCOMPANY VPDES PERMIT NO. VA00020/1 REISSUANCE APPLICATION, LINE DRAWING OF WATER FLOW THROUGH POSSUM POINT POWER STATION (FORM 2C PART II.A).2012.
2. FLOW VALUES REFLECT AVERAGE FLOW DATA FROM 2001-2011.
3. DASHED LINES INDICATE INTERMITTENT DISCHARGES.
4. COOLING TOWER EVAPORATION LOSSES ARE HIGHLY VARIABLE AND NOT AVAILABLE.
5. DIRECT DISCHARGES OF STORM WATER TO QUANTICO CREEK AND POTOMAC RIVER NOT SHOWN.
6. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF SEAL PIT WATER TO ASH POND E FOR FREEZE PROTECTION VIA ASH SLUICE LINE NOT SHOWN.
7. PREVIOUSLY AUTHORIZED TEMPORARY ROUTING OF UNIT 5 LIFT STATION FLOW TO OILY WASTE POND TO LOW VOLUME SETTLING PONDS NOT SHOWN.

APPROVAL OF THE SUPT OF TECH SERVICES IS REQ'D PRIOR TO ISSUE OF THIS DWG

REV	DATE	DRWN	CHKD	APPD	ENGR
1	REVISED PER ENVIRONMENTAL REDLINE TO INCORPORATE STATION REVIEW.				
	5/31/12	KTC	GD-D	RWM	
0	ORIG. ISSUE FOR 600 SERIES ACAD CONVERSION. REV PER ENVIRONMENTAL REDLINE.				
	3/6/12	KTC	GD-D	RWM	— —

VIRGINIA POWER
NORTH CAROLINA POWER

FOSSIL & HYDRO ENGINEERING
RICHMOND, VIRGINIA

WATER FLOW BALANCE LINE DIAGRAM

POSSUM POINT POWER STATION

CAD FILE: DGNSPEC FOR FILE VERIFICATION DATE$$$$$$

DRAWING NO. PP-0-SP-STA-600 REV. 2

Discharge from Unit 6 RO trailer
Updated Form 2C

Please type or print in the unshaded areas only

EPA ID Number *(Copy from Item 1 of Form 1)*
110000340774

Form Approved
OMB No. 2040-0086
Approval expires 3-31-98.

Form **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITIUDE			C. LONGITUDE			D. RECEIVING WATERS (*name*)
	1. Deg	2. Min	3. Sec	1. Deg	2. Min	3. Sec	
001	38	32	12	77	17	00	Quantico Creek
002	38	32	12	77	17	00	Quantico Creek
(201)	38	32	11	77	16	57	Internal discharge to Outfall 001/002
(202)	38	32	11	77	16	57	Internal discharge to Outfall 001/002
003	38	32	17	77	16	58	Quantico Creek
004	38	31	57	77	17	04	Mouth of Quantico Creek
005	38	32	10	77	12	36	Tributary to Quantico Creek
(501)	38	32	58	77	17	20	Internal discharge to Outfall 005
(502)	38	32	42	77	16	40	Internal discharge to Outfall 005
007	38	32	9	77	16	47	Potomac River
008	38	32	10	77	16	46	Potomac River
009	38	32	11	77	16	45	Potomac River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., *for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	**Condenser Cooling Water & Cooling Tower Blowdown** Sources: Unit 3 condenser Cooling Water, Outfall 201 (Unit 5 Blowdown), Outfall 202 (Unit 6 Blowdown), Storm Water	86.38 MGD	Mixing / Discharge to surface Water	1-O	4-A
002	**Condenser Cooling Water & Cooling Tower Blowdown** Sources: Unit 3 condenser Cooling Water, Outfall 201 (Unit 5 Blowdown), Outfall 202 (Unit 6 Blowdown)		Mixing / Discharge to surface Water	1-O	4-A
(201)	**Cooling Tower Blowdown** Source: Unit 6	1.48 MGD	Dechlorination/Sedimentation/ Mixing	2-E 1-O	1-U
(202)	**Cooling Tower Blowdown** Source: Unit 6	0.91 MGD	Dechlorination/Sedimentation/ Mixing	2-E 1-O	1-U
003	**Condenser Cooling Water** Source: Unit 4	82.55 MGD	Discharge to surface Water	4-A	--
004	**Low Volume Waste Settling Pond** Sources: Unit 5 Cooling Tower Drift, Yards Drains, Floor Drains, Unit 5 Circulating water, Units 1-4 Sand Filter Backwash, Filter Purge, Unit 6 Wash Water, EDR Backwash, Neutralization Sump, Storm Water, RO Reject	2.02 MGD	Sedimentation/ Flocculation/ Skimming/ Neutralization/ Chemical Precipitation/ Mixing/ Discharge to Surface Water	1-U X-X 2-C 4-A	1-G 2-K 1-O
005	**Ash Pond E** Source: Ash Pond D Discharge, Tank Bottoms, Storm Water, Potomac River Intake Water, Outfalls 501 and 502 discharges	0.98 MGD	Sedimentation/ Mixing/ Skimming/ Discharge to Surface Water	1-U 1-O	X-X 4-A
(501)	**Metals Cleaning Waste Treatment Basin** Source: Boiler Wash water, Air Preheater Rinse, Precipitator Rinse, Storm Water	1.04 MGD	Mixing/ Neutralization/ Chemical Precipitation/ Sedimentation/	1-O 2-C	2-K 1-U
(502)	**Oily Waste Treatment Basin** Source: Unit 5 wastewater from various operations, Oil Unloading and Handling System Wastewater, Tank Bottoms, Auxiliary Boiler blow down, Unit 6 Cooling Tower drift, False Start Drains, Storm Water	0.57 MGD	Mixing/ Sedimentation/ Skimming	1-O X-X	1-U
007	**Intake Screen Backwash Water** Source: Units 1-2 Cooling Water Intake Structures	0.19 MGD	Mixing / Discharge to surface Water	1-O	4-A
008	**Intake Screenwell Freeze Protection Water** Source: Non Contact Cooling Water	0.0 MGD	Mixing / Discharge to surface Water	1-O	4-A
009	**Intake Screen Backwash Water** Source: Units 3-4 Cooling Water Intake Structures	0.19MGD	Mixing / Discharge to surface Water	1-O	4-A

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

( )= internal outfall

Oula K Shehab-Dandan (Services - 6)

From: Mackert, Susan (DEQ) [Susan.Mackert@deq.virginia.gov]
Sent: Friday, April 25, 2014 2:18 PM
To: Oula K Shehab-Dandan (Services - 6)
Cc: Jeffrey R Marcell (Generation - 3); Kenneth Roller (Services - 6); Cathy C Taylor (Services - 6); Pamela Faggert (Services - 6)
Subject: RE: Possum Point Power Station- Portable RO Trailer

Hi Oula,

Staff has reviewed Dominion's request and has no objection to the use of the portable RO trailer. As always, Dominion shall take all necessary actions to insure that the discharge from Outfall 004 remains in compliance with established permit limitations. If exceedances of the established limitations occur, Dominion shall take all necessary actions to bring the discharge back in to compliance with the permit.

Please let me know if you require anything further.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

From: Oula K Shehab-Dandan (Services - 6) [mailto:oula.k.shehab-dandan@dom.com]
Sent: Monday, April 21, 2014 10:14 AM
To: Mackert, Susan (DEQ)
Cc: Jeffrey R Marcell (Generation - 3); Kenneth Roller (Services - 6); Cathy C Taylor (Services - 6); Pamela Faggert (Services - 6)
Subject: Possum Point Power Station- Portable RO Trailer

Hi Susan.

As discussed last week during your site visit at Possum Point Power Station, the station needs to add a potable RO (double pass) trailer to be able to operate all units (Units 3, 4 & 6A on gas, U5 operating and U6B operating on oil) when dispatched during hot summer weather. The portable RO trailer will be hooked up after the existing clarifier and the sand filter using service water. The station plans to bring the RO trailer from 05/01 through 09/30.

The RO product will be sent through a demin trailer and into the U6 demin tank. This will be used in parallel to the station's current demin plant. The RO reject from the RO trailer will be discharged through the same station's treatment system through Outfall 004 (roughly 120 gpm max).

In 2009 and in winter of 2014, the station received approval for a similar RO unit that was used in parallel to the station's treatment systems.

I attached here the station's flow diagram and indicated where the changes are anticipated.

Please let me know if you need additional information. Your quick review and approval will be greatly appreciated.

Thanks

Oula Shehab-Dandan
Environmental Consultant
Electric Environmental Services

Dominion Resources Inc.
5000 Dominion Boulevard
Glen Allen VA 23060
Phone: 804-273-2697
Tie line 8-730-2697
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Oula K Shehab-Dandan (Services - 6)

From: Mackert, Susan (DEQ) [Susan.Mackert@deq.virginia.gov]
Sent: Tuesday, January 21, 2014 3:15 PM
To: Oula K Shehab-Dandan (Services - 6)
Subject: RE: Possum Point Power Station-

Hi Oula,

DEQ has reviewed Dominion's request and has no objection to the use of a potable RO trailer. As always, Dominion will be responsible for the discharge from Outfall 004 and shall maintain compliance with all effluent limitations established for this outfall. Should any effluent limitation not be met, Dominion shall be responsible for bringing the discharge back in to compliance with all established limitations as soon as possible.

Please let me know if you require anything further.

Regards,
Susan

From: Oula K Shehab-Dandan (Services - 6) [oula.k.shehab-dandan@dom.com]
Sent: Tuesday, January 21, 2014 12:35 PM
To: Mackert, Susan (DEQ)
Cc: Kenneth Roller (Services - 6); Jeffrey R Marcell (Generation - 3); Cathy C Taylor (Services - 6); Pamela Faggert (Services - 6); Rick Woolard (Services - 6)
Subject: Possum Point Power Station-

Hi Susan,

As discussed this morning, due to the anticipated inclement weather, all units at Possum Point Power Station have been dispatched (Units 3, 4 & 6A on gas, U5 operating and U6B operating on oil). For this reason, the station needs to add a potable RO (single pass) trailer. It will be hooked up after the existing clarifier and the sand filter using service water.

The RO product will be sent through a demin trailer and into the U6 demin tank. This will be used in parallel to the station's current demin plant. The RO reject from the RO trailer will be discharged through the same station's treatment system through Outfall 004 (roughly 60gpm max).

In 2009 the station received approval for a similar RO unit that was used in parallel to the station's treatment systems.

I attached here the station's flow diagram and indicated where the changes are anticipated.

Please let me know if you need additional information. Your quick review and approval will be greatly appreciated.

Thanks

Oula Shehab-Dandan
Environmental Consultant
Electric Environmental Services

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Public Notice Authorization

AUTHORIZATION FOR PUBLIC NOTICE BILLING

TO

VPDES PERMIT APPLICANT

VA DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN
JUL 07 2014
REGIONAL OFFICE
WOODBRIDGE, VA

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in the ***News & Messenger***.

Authorizing Agent: Cathy C Taylor
Signature

Applicant's Address: Cathy C. Taylor
Dominion
5000 Dominion Blvd.
Glen Allen, VA 23060

Telephone Number: 804/273-2929

Permit No. VA0002071
Attn: Susan Mackert