



New York State Department of Environmental Conservation

Site Number 7-54-012

Tioga Casting Site Quarterly Report and Drilling Activities Summary

Third and Fourth Quarter 2014

January 2015



Rm R.)n

Bruce Nelson, CPG Principal Geologist \ Vice President

y lug

Jeremy Wyckoff Project Geologist

Tioga Castings Site Quarterly Report and Drilling Activities Summary

Third and Fourth Quarter 2014

Site Number 7-54-012

Prepared for: New York State Department of Environmental Conservation

Prepared by: Malcolm Pirnie, Inc. 855 Route 146 Suite 210 Clifton Park New York 12065 Tel 518 250 7300 Fax 518 250 7301

Our Ref.: 00266403.0000

Date: January 2015

Malcolm Pirnie, Inc. was acquired by ARCADIS in July 2009.

Table of Contents

| 1. | Introduction 1 | | |
|----|------------------|--|---|
| 2. | Site Description | | |
| 3. | Operat | ion and Maintenance | 3 |
| | 3.1 | Landfill Security | 3 |
| | 3.2 | Landfill Cap Maintenance | 3 |
| | 3.3 | Groundwater Monitoring Wells | 4 |
| 4. | Drilling | J Activities | 5 |
| | 4.1 | Well Decommissioning | 5 |
| | 4.2 | Groundwater Monitoring Well Installation | 6 |
| | | 4.2.1 Drilling | 6 |
| | | 4.2.2 Soil sampling | 6 |
| | | 4.2.3 Well construction | 6 |
| | 4.3 | IDW | 7 |
| | 4.4 | Monitoring Well Development | 7 |
| | 4.5 | Well Survey | 7 |
| 5. | Recom | mendations | 8 |
| 6. | References | | |

Figures

| 2-1 | Site Location |
|-----|---------------|
| 2-2 | Site Features |

Tables

4-1 Summary of Well Elevations

Table of Contents

Appendices

| A | Post-Closure | O | peration | and | Maintenance | Checklist |
|---|--------------|---|----------|-----|-------------|-----------|
| | | | | | | |

- B Photograph Log
- C Well Abandonment Logs
- D Soil Boring Log
- E Analytical Results IDW
- F Waste Profile and Shipping Documents
- G Well Development Log



Site Number 7-54-012

1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-8) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Tioga Castings Site (NYSDEC site number 7-54-012) in New York State. This report has been prepared to summarize third and fourth quarter 2014 operation and maintenance (O&M) and drilling activities.



Site Number 7-54-012

2. Site Description

The Tioga Castings site is located on Foundry Street, Owego, Broome County, New York (Figure 2-1). The former foundry buildings have been razed, leaving the concrete slabs in-place. A capped, closed landfill is present at the western end of the site. In August 2011, the boundaries of the site (originally encompassing approximately seven acres) were reduced by the NYSDEC to only include the approximately one acre landfill (Figure 2-2).



Site Number 7-54-012

3. Operation and Maintenance

Operation and Maintenance (O&M) activities were performed on October 1, 2014 in accordance with the NYSDEC-approved SMP. A Post Closure O&M Checklist (Appendix A) was used to document the current status of the landfill, including security and landfill cap maintenance and repairs. Site photographs taken during the landfill inspection are provided in Appendix B. The next O&M event is scheduled to be performed during the first quarter 2015.

3.1 Landfill Security

The landfill perimeter fence, entry gate, and locks were inspected for proper operation and signs of deterioration. As indicated in the O&M Checklist, no problems were observed with the operation or integrity of these components. In addition, the Foundry Street entry gate warning sign was in place and in acceptable condition.

3.2 Landfill Cap Maintenance

A visual inspection of the landfill cap was performed to assess the landfill for burrowing rodents, erosion, woody vegetation, and settlement.

As shown in the O&M Checklist (Appendix A), no burrowing rodent holes were observed in the landfill.

Brush was growing along the perimeter swales of the landfill, but was not encroaching on the landfill cap.

As indicated in Appendix A, the machine used by the NYSDEC to mow the landfill cap made ruts in the northeast corner of the landfill, but no damage to the liner was visible. Photographs of the damage are presented in Appendix B. The NYSDEC was notified of the damage on October 2, 2014. The landfill cap was repaired by Malcolm Pirnie on November 10, 2014 by restoring the perimeter rip-rap slope and placement of new topsoil to fill the ruts. Grass seed was spread in areas that received new topsoil. Photographs of the cap following the repair are provided in Appendix B. Grass in the repair area will inspected in 2015.



Site Number 7-54-012

3.3 Groundwater Monitoring Wells

Groundwater monitoring wells were inspected for security and signs of deterioration in accordance with the SMP during the fourth quarter 2013 groundwater monitoring event. Based on the inspection, the flush-mount protective casing for monitoring well MW-4 was damaged and could no longer be secured. The flush-mount protective casing and concrete pad was replaced by Parratt Wolff on September 30, 2014. Photographs of the repaired flush-mount and concrete pad are provided in Appendix B.



Site Number 7-54-012

4. Drilling Activities

Based on a review of historical groundwater data, and at the direction of the NYSDEC, six groundwater monitoring wells, generally located down-gradient of the landfill (Figure 2-2), were abandoned and replaced with one new down-gradient monitoring well. A summary of drilling activities is presented below.

4.1 Well Decommissioning

Six 2-inch PVC overburden groundwater monitoring wells (Figure 2-2) were decommissioned in accordance with NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy. A summary of well construction details is provided below:

| Well | Stickup / Flush-mount | Depth (feet bgs) |
|-------|-----------------------|------------------|
| MW-1R | S | 22 |
| MW-2 | S | 17 |
| MW-3 | S | 16 |
| MW-5 | F | 17 |
| MW-7 | F | 23 |
| MW-8 | S | 24 |

Decommissioning was completed by Parratt Wolff on September 30, 2014 and October 1, 2014. The wells were abandoned by filling the 2-inch PVC wells with a cement-bentonite grout using a tremie line. The surface completion (stickup or flush-mount) was removed and the PVC well riser pipe was cut and removed to a depth of approximately five feet below ground surface (bgs). However, due to the shallow depth to grout in the annular space at MW-5 when the well was originally completed, the riser pipe could not be cut and removed at the required depth. Therefore, the well was first filled with grout using a tremie pipe and then over-drilled to a depth of five feet



Site Number 7-54-012

(bgs). Following removal of the well riser pipes, the remainder of the borehole was filled with native soil and/or clean silica sand. All decommissioning debris was removed and disposed off-site by Parratt Wolff. Well decommissioning logs are provided in Appendix C.

4.2 Groundwater Monitoring Well Installation

One new groundwater monitoring well (MW-9) was installed along the eastern edge of the existing landfill (Figure 2-2) as described below.

4.2.1 Drilling

Groundwater monitoring well, MW-9, was installed by Parratt Wolff on September 29, 2014 and September 30, 2014. The monitoring well was drilled via hollow-stem auger (HSA) drilling techniques with 4.25-inch inside diameter drilling augers. The soil boring and well construction log is presented in Appendix D.

4.2.2 Soil sampling

Continuous split-spoon samples were collected to characterize subsurface soils from the ground surface to the final depth of the boring. The samples were characterized by the on-site geologist and generally consisted of gravel and sands. Soil was screened for evidence of contamination (staining, odors, and sheen) continuously from ground surface to the final depth of the boring. A photo ionization detector (PID) was also used to screen the soil. None of the PID readings were greater than 0.1 ppm.

Previous investigations at the site (Investigation Report, 2008; and Tioga Casting Site Quarterly Report, Second and Third Quarter, 2009) were performed to evaluate the horizontal and vertical distribution of soil contamination in the vicinity of the former foundry area and on-site landfill. Therefore, since this well was being drilled for purposes of long-term monitoring, and since no field evidence of contamination (staining, odors, sheen, or elevated PID readings) were observed in the soil, no analytical soil samples were collected from this boring location.

4.2.3 Well construction

Groundwater monitoring well MW-9 was drilled to a depth of 21 feet bgs. Groundwater was encountered at approximately 13 feet bgs. Ten feet of schedule 40, 0.010 inch slot PVC screen was placed from 11 feet to 21 feet bgs, with approximately 13 feet of



Site Number 7-54-012

PVC riser above the screen. Filter sand was placed in the annulus between the borehole and the well screen. A two foot bentonite seal was placed above the filter pack sand. The remainder of the borehole was filled with a Portland cement grout. The well was completed at the surface with a 4-inch, steel stick-up protective casing.

4.3 IDW

Investigation-derived waste (IDW) and decontamination fluids were contained in UNapproved 55-gallon drums for characterization and proper disposal.

One composite sample was collected from the IDW for Resource Conservation Recovery Act (RCRA) waste characterization (pH and flashpoint) and Toxicity Characteristic Leaching Procedure (TCLP) analysis for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals and pesticides. Laboratory analytical results are provided in Appendix E.

Based on the laboratory data and waste profile, the IDW was characterized as nonhazardous/non-DOT regulated. The three drums (two soil cuttings and one decontamination water) were transported for off-site disposal by Veolia Environmental Solutions (Veolia) on November 10, 2014. Copies of the waste profile and shipping documents are presented in Appendix F.

4.4 Monitoring Well Development

Monitoring well MW-9 was developed on October 1, 2014 to minimize turbidity to improve hydraulic properties. The monitoring well was developed using a surge block and a peristaltic pump. Approximately 15 gallons of water was purged from the well during development. The well development log is provided in Appendix G.

4.5 Well Survey

The location of groundwater monitoring well MW-9 was surveyed using a Trimble GPS.

The top of casing elevation for MW-9 was surveyed on November 10, 2014 using a Pentax automatic level and referenced from existing monitoring well MW-3D. A summary of well elevations is provided in Table 4-1.



Site Number 7-54-012

5. Recommendations

The SMP should be updated to reflect changes in the groundwater monitoring network.



Site Number 7-54-012

6. References

Malcolm Pirnie, 2008, Investigation Report, Tioga Casting Site, Malcolm Pirnie, Inc., August 2008.

Malcolm Pirnie, 2009, Tioga Casing Site Quarterly Report, Second and Third Quarter 2009, Malcolm Pirnie, Inc., December 2009.



Figure 2-1 Site Location

Tioga Castings Site NYSDEC Site Number 7-54-012 Owego, New York

0 _____ 2,000 ft



Source: USGS 7.5-minute Series Topographic Quadrangle, OWEGO (1990).



Approximate Parcel Boundary

2-2

Table 4-1 Summary of Well Elevations Tioga Casting Owego, New York NYSDEC Site No. 7-54-012

| Well | Measuring F Elevatio (feet) | Point n |
|-------|-----------------------------------|------------|
| MW-3D | 812.42 | (2) |
| MW-4 | 806.33 | (1) |
| MW-6 | 815.53 | (3) |
| MW-9 | 809.97 | (4) |

Notes:

- (1) Source: Monitoring Plan Tioga Casting (NYSDEC, April 25, 2005)
- (2) From Malcolm Pirnie, Inc. level survey performed 10/28/2010
- (3) From Malcolm Pirnie, Inc. level survey performed 2/28/2011
- (4) From Malcolm Pirnie, Inc. level survey performed 11/10/14

ARCADIS

Appendix A

Post-Closure Operation and Maintenance Checklist

TIOGA CASTINGS SITE LANDFILL Post-Closure Operation and Maintenance Checklist

| Inspected by: | Jeremy Wyckoff | | | | | |
|---------------------------|---|-------|----------|-----|----------|----|
| Date: 10/1/2014 | | Time: | 11:00 | | | |
| Weather Conditions: | Cloudy ~65°F | | | | | |
| | | | | | | |
| LANDFILL COVER SYST | EM | | | | | |
| Erosion | | | | YES | X | NO |
| Holes or Cra | cks in Cover | | | YES | X | NO |
| Cap Settlem | ent | | | YES | X | NO |
| Ponded Wate | er or Wet Areas | | | YES | Х | NO |
| Burrowing Ro | odents | | | YES | X | NO |
| Sparse Vege | etation/Bare Soil | | | YES | X | NO |
| Brush or Oth | er Woody Vegetation, | | | YES | X | NO |
| Excessive W | leeds in Grass | | | YES | X | NO |
| Grass Mowe | d | | <u> </u> | YES | | NO |
| DRAINAGE DITCHES | | | | | | |
| Erosion | | | | YES | <u> </u> | NO |
| Obstructions | | | | YES | X | NO |
| Sediment Ac | cumulation | | | YES | X | NO |
| Evidence of \$ | Surcharging | | | YES | X | NO |
| Presence of | Brush | | <u> </u> | YES | | NO |
| Comments: Brush growin | Comments: Brush growing in swales. Tractor used to mow made ruts on northeast corner of the landfill. | | | | | |
| Took pictures of the dama | ge, no liner visible is the ruts. | | | | | |

Continued

| FENCING | | | | | | | |
|--|-------------------|----------|-----|----------|-------|--|--|
| | Warning Signs | <u> </u> | ОК | | OTHER | | |
| | Gates and Locks | <u> </u> | ОК | | OTHER | | |
| | Posts | X | ОК | | OTHER | | |
| | Top Tension Wire | X | ОК | | OTHER | | |
| | Barbed Wire | X | ОК | | OTHER | | |
| Comments: | | | | | | | |
| | | | | | | | |
| MONITORI | NG WELLS | | | | | | |
| | Capped and Locked | X | YES | | NO | | |
| | Casing Damage | | YES | <u> </u> | NO | | |
| Comments: Abandoned MW-1R, MW-2, MW-3, MW-5, MW-7 and MW-8. Drilled and installed MW-9 | | | | | | | |
| along the East side of the landfill. Work performed 9/29/14-10/1/14. Generated three drums of IDW. | | | | | | | |
| | | | | | | | |
| | | | | | | | |

INSPECTOR'S SIGNATURE JRW DATE 10/1/2014

ARCADIS

Appendix B

Photograph Log





Northeast corner of landfill – facing east (10/1/14) Ruts visible from mower.



Northeast corner of landfill – facing east (11/10/14) following repairs



Northeast corner of landfill – facing west (10/1/14) Ruts visible from mower.



Northeast corner of landfill – facing west (11/10/14) following repairs





West side of landfill - facing south



East side of landfill - facing north



North side of landfill – facing east



South side of landfill - facing west





Center of landfill - facing southeast





Center of landfill - facing southwest



Center of landfill - facing northwest



Center of landfill - facing northeast





Landfill access gate



MW-4 new flush-mount and concrete pad



Parratt Wolff installing MW-9



Drill cuttings from MW-9 (0-5 feet bgs)





Drill rig set up at MW-9



Abandoned MW-1R



Well developing at MW-9



Abandoned MW-2



Tioga Castings Site NYSDEC Site #7-54-012 Owego, New York



Abandoned MW-3



Abandoned MW-7



Abandoned MW-5



Abandoned MW-8

ARCADIS

Appendix C

Well Abandonment Logs

| Site Name: Tioga Castings Site | Well I.D.: | MW-1R |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 10/1/14 |

| DECOMISSIONING I | WELL SCH | EMATIC* | | |
|--|-------------|-------------------------|-----------------------------|------------------|
| (Fill in all that app | Depth | Protective | | |
| | | (feet) | Cover Removed | |
| <u>OVERDRILLING</u> | | 0 | Kennoveu 🖌 | |
| Interval Drilled | NA | 0 | sand | 0.7' |
| Drilling Method(s) | NA | | backfill | \otimes |
| Borehole Dia. (in.) | NA | | 2-inch PVC | \otimes |
| Temporary Casing Installed? (y/n) | N | | cut & pulled | \otimes |
| Depth temporary casing installed | NA | 5 | | 5.0' |
| Casing type/dia. (in.) | NA | 5 | | X |
| Method of installing | NA | | | \otimes |
| | | | | \otimes |
| <u>CASING PULLING</u> | ,, | | grout 🕅 | \otimes |
| Method employed | cut & pull | 10 | backfill | \otimes |
| Casing retrieved (feet) | 5.0' | | | \otimes |
| Casing type/dia. (in) | PVC - 2" | | 🛛 🕅 | \otimes |
| CASING PERFORATING | | | 2-inch PVC | X |
| Equipment used | NA | | in-place | \otimes |
| Number of perforations/foot | NA | 15 | | \otimes |
| Size of perforations | NA | | 1 ^8 | \otimes |
| Interval perforated | NA | |] 🛛 🕅 🕅 | X |
| GROUTING | | | · X | X |
| Interval grouted (FBLS) | 0.7 - 22.0' | 20 | 1 🛛 🕅 | \otimes |
| # of batches prepared | 2 | | 1 🛛 🕅 | 8 |
| For each batch record: | · · · · · · | | | 22.0 |
| Quantity of water used (gal.) | 4 | | | |
| Quantity of cement used (lbs.) | 47 | | | |
| Cement type | Portland | 25 | | |
| Quantity of bentonite used (lbs.) | 2 | |] | |
| Quantity of calcium chloride used (lbs.) | 0 | | | |
| Volume of grout prepared (gal.) | 10 | | | |
| Volume of grout used (gal.) | 9 | 30 | J | |
| | | 50 | | |
| COMMENTS: | | * Sketch in all relevan | t decommissioning data, inc | luding: interval |

overdrilled, interval grouted, casing left in hole, well stickup, etc.

| Site Name: Tioga Castings Site | Well I.D.: | MW-2 |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 10/1/14 |

| DECOMISSIONING I | WELL SCHEMATIC* | | | |
|--|-----------------|-------------------------|-------------------------|------------------------|
| (Fill in all that app | Depth | Protective | | |
| | (feet) | Cover Removed | | |
| <u>OVERDRILLING</u> | | | Kennoved | × |
| Interval Drilled | NA | 0 | sand | 0.8' |
| Drilling Method(s) | NA | | backfill | |
| Borehole Dia. (in.) | NA | | 2-inch PVC | |
| Temporary Casing Installed? (y/n) | N | | cut & pulled | |
| Depth temporary casing installed | NA | 5 | | 50' |
| Casing type/dia. (in.) | NA | | | |
| Method of installing | NA | | | |
| | | | | |
| CASING PULLING | | | grout | |
| Method employed | cut & pull | 10 | backfill | |
| Casing retrieved (feet) | 5.0' | 10 | | |
| Casing type/dia. (in) | PVC - 2" | | | |
| CASING PERFORATING | | | 2-inch PVC | |
| Equipment used | NA | | grouted | |
| Number of perforations/foot | NA | 15 | in-place | |
| Size of perforations | NA | | | |
| Interval perforated | NA | | - | <u>KXXXI</u> 17.0' |
| | | | | |
| GROUTING | | | | |
| Interval grouted (FBLS) | 0.8 - 17.0' | 20 | | |
| # of batches prepared | 1 | | | |
| For each batch record: | LI | | | |
| Quantity of water used (gal.) | 3.9 | | | |
| Quantity of cement used (lbs.) | 47 | | | |
| Cement type | Portland | 25 | | |
| Quantity of bentonite used (lbs.) | 2 | | 1 | |
| Quantity of calcium chloride used (lbs.) | 0 | |] | |
| Volume of grout prepared (gal.) | 5 | |] | |
| Volume of grout used (gal.) | 5 | | | |
| | | | - | |
| COMMENTS: | | * Sketch in all relevan | nt decommissioning data | a, including: interval |

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

| Site Name: Tioga Castings Site | Well I.D.: | MW-3 |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 10/1/14 |

| DECOMISSIONING I | WELL SCHE | EMATIC* | |
|--|-------------|--------------------------|---|
| (Fill in all that appl | ly) | Depth | Protective |
| | | (feet) | Cover Removed |
| <u>OVERDRILLING</u> | | 0 | |
| Interval Drilled | NA | 0 | sand 0.7' |
| Drilling Method(s) | NA | | backfill |
| Borehole Dia. (in.) | NA | | 2-inch PVC |
| Temporary Casing Installed? (y/n) | N | | cut & pulled |
| Depth temporary casing installed | NA | 5 | |
| Casing type/dia. (in.) | NA | | |
| Method of installing | NA | | |
| | | | |
| CASING PULLING | | | erout 🛞 |
| Method employed | cut & pull | 10 | backfill |
| Casing retrieved (feet) | 5.0' | | |
| Casing type/dia. (in) | PVC - 2" | | 2-inch PVC |
| | | | grouted |
| CASING PERFORATING | | | in-place |
| Equipment used | NA | 15 | |
| Number of perforations/foot | NA | | |
| Size of perforations | NA | | |
| Interval perforated | NA | | |
| | | _ | |
| GROUTING | | 20 | |
| Interval grouted (FBLS) | 0.7 - 16.0' | | |
| # of batches prepared | 1 | | |
| For each batch record: | | | |
| Quantity of water used (gal.) | 3.9 | | |
| Quantity of cement used (los.) | 4/ | 25 | |
| Cement type | Portland | | |
| Quantity of bentonite used (lbs.) | 2 | | |
| Quantity of calcium chloride used (lbs.) | 0 | | |
| Volume of grout used (gal.) | 5 | _ | |
| volume of grout used (gal.) | 3 | | |
| COMMENTS: |] | * Sketch in all relevant | decommissioning data, including: interval |

overdrilled, interval grouted, casing left in hole, well stickup, etc.

| Site Name: Tioga Castings Site | Well I.D.: | MW-5 |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 10/1/14 |

| DECOMISSIONING I | WELL SCH | EMATIC* | |
|--|------------|-------------------------|---|
| (Fill in all that app | ly) | Depth | Protective |
| | • / | (feet) | Cover Removed |
| <u>OVERDRILLING</u> | | 0 | |
| Interval Drilled | 0 - 5.0' | 0 | sand 1.0' |
| Drilling Method(s) | HSA | | backfill |
| Borehole Dia. (in.) | 8 | | 2-inch PVC |
| Temporary Casing Installed? (y/n) | N | | cut & pulled |
| Depth temporary casing installed | NA | 5 | |
| Casing type/dia. (in.) | NA | | |
| Method of installing | NA | | |
| | | | |
| CASING PULLING | | | grout 💥 |
| Method employed | cut & pull | 10 | backfil |
| Casing retrieved (feet) | 5.0' | 10 | |
| Casing type/dia. (in) | PVC - 2" | | |
| | | | |
| CASING PERFORATING | | | 2-inch PVC |
| Equipment used | NA | 15 | in-place |
| Number of perforations/foot | NA | | |
| Size of perforations | NA | | |
| Interval perforated | NA | | 11.0 |
| GROUTING | | | |
| Interval grouted (FBLS) | 10-170 | 20 | |
| # of batches prepared | 1 | | |
| For each batch record | 1 | | |
| Ouantity of water used (gal) | 11.5 | | |
| Quantity of cement used (lbs.) | 188 | | |
| Cement type | Portland | 25 | |
| Ouantity of bentonite used (lbs.) | 8 | | |
| Quantity of calcium chloride used (lbs.) | 0 | | |
| Volume of grout prepared (gal.) | 20 | | |
| Volume of grout used (gal.) | 19 | | |
| | • • | 30 | |
| COMMENTS: | | * Sketch in all relevan | t decommissioning data, including: interval |

* Sketch in all relevant decommissioning data, including: interval overdrilled, interval grouted, casing left in hole, well stickup, etc.

| Site Name: Tioga Castings Site | Well I.D.: | MW-7 |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 9/30/14 |

| DECOMISSIONING I | WELL SCH | EMATIC* | | |
|--|---------------------------------------|-------------------------|---------------------------------------|--------|
| (Fill in all that app | ly) | Depth | Protective | |
| | • / | (feet) | Cover Removed | |
| <u>OVERDRILLING</u> | | 0 | Kennoved >> | |
| Interval Drilled | NA | 0 | sand | 0.6' |
| Drilling Method(s) | NA | | backfill | 0.0 |
| Borehole Dia. (in.) | NA | | 2-inch PVC | |
| Temporary Casing Installed? (y/n) | N | | cut & pulled | |
| Depth temporary casing installed | NA | 5 | | 5.0' |
| Casing type/dia. (in.) | NA | | | |
| Method of installing | NA | | | |
| | | | | |
| CASING PULLING | | | | |
| Method employed | cut & pull | 10 | backfill | |
| Casing retrieved (feet) | 5.0' | 10 | | |
| Casing type/dia. (in) | PVC - 2" | | | |
| | | | | |
| CASING PERFORATING | T | | grouted | |
| Equipment used | NA | 15 | in-place | |
| Number of perforations/foot | NA | | | |
| Size of perforations | NA | | | |
| Interval perforated | NA | | | |
| | | | | |
| GROUTING | | 20 | | |
| Interval grouted (FBLS) | 0.6 - 23.0' | | | |
| # of batches prepared | 2 | | | |
| For each batch record: | · · · · · · · · · · · · · · · · · · · | | | 23.0' |
| Quantity of water used (gal.) | 4 | | | |
| Quantity of cement used (lbs.) | 47 | 25 | | |
| Cement type | Portland | | | |
| Quantity of bentonite used (lbs.) | 2 | | | |
| Quantity of calcium chloride used (lbs.) | 0 | | | |
| Volume of grout prepared (gal.) | 10 | | | |
| volume of grout used (gal.) | 8.5 | | | |
| | | * Chotoh in all | t daaammiaalanina data jinch-Jure i | tomal |
| COMMENTS: | | - Sketch in all felevan | a decommissioning data, including: if | nervar |

overdrilled, interval grouted, casing left in hole, well stickup, etc.

| Site Name: Tioga Castings Site | Well I.D.: | MW-8 |
|-----------------------------------|------------|-------------------|
| Site Location: Owego, New York | Driller: | William Rice |
| Drilling Co.: Parratt-Wolff, Inc. | Inspector: | Breanna Quaglieri |
| | Date: | 10/1/14 |

| DECOMISSIONING I | WELL SCHEMATIC* | | | | | |
|--|-----------------|---|---|--|--|--|
| (Fill in all that app | ly) | Depth | Protective | | | |
| | | (feet) | Cover Removed | | | |
| <u>OVERDRILLING</u> | | 0 | Removed > | | | |
| Interval Drilled | NA | 0 | sand 0.6' | | | |
| Drilling Method(s) | NA | | backfill | | | |
| Borehole Dia. (in.) | NA | | 2-inch PVC | | | |
| Temporary Casing Installed? (y/n) | Ν | | cut & pulled | | | |
| Depth temporary casing installed | NA | 5 | | | | |
| Casing type/dia. (in.) | NA | | | | | |
| Method of installing | NA | | | | | |
| | | | | | | |
| CASING PULLING | ,, | | grout 🛞 | | | |
| Method employed | cut & pull | 10 | backfill | | | |
| Casing retrieved (feet) | 5.0' | 10 | | | | |
| Casing type/dia. (in) | PVC - 2" | _ | | | | |
| | | | 2-inch PVC | | | |
| CASING PERFORATING | | | grouted | | | |
| Equipment used | NA | 15 | in-place | | | |
| Number of perforations/foot | NA | | | | | |
| Size of perforations | NA | | | | | |
| interval perforated | NA | | | | | |
| GROUTING | | | | | | |
| Interval grouted (FBLS) | 0.6 - 24.0' | 20 | | | | |
| # of batches prepared | 2 | | | | | |
| For each batch record: | | | | | | |
| Quantity of water used (gal.) | 4 | | | | | |
| Quantity of cement used (lbs.) | 47 | 25 | 24.0 | | | |
| Cement type | Portland | 23 | | | | |
| Quantity of bentonite used (lbs.) | 2 | | | | | |
| Quantity of calcium chloride used (lbs.) | 0 | | | | | |
| Volume of grout prepared (gal.) | 10 | | | | | |
| Volume of grout used (gal.) | 10 | | | | | |
| r | | | | | | |
| COMMENTS: | | * Sketch in all relevant overdrilled, interval gr | t decommissioning data, including: interval outed, casing left in hole, well stickup, etc. | | | |

ARCADIS

Appendix D

Soil Boring Log

| G ARCADIS | | | | | | TEST | BORIN | g lo | G | в | ORING N | o.MW-9 | |
|-----------|--|---------------------------------------|-------|---------------------------------------|----------------------|--------------------------------------|---------------------------------------|---|-----------------------|-----------|--------------|------------------|----------------------------|
| PROJ | IECT TIO | ga Cast | ings | | | LOCATIO | ON Owego, | NY | | | S⊦ | IEET 1 OF | 2 |
| CLIEN | NT NY | SDEC | | | | | | | | | PF | ROJECT No. | 00266403.0000 |
| DRILI | ING CONT | RACTOR | Parra | att Wol | ff | | | | | | ME | EAS. PT. ELEV. | 809.97 |
| PURF | POSE | | Mon | itoring | | | | | | | GF | ROUND ELEV. | |
| WELL | | _ | PVC | | | | | | | | | TUM | |
| DRILI | LING METH | OD(S) | HSA | | | | SAMPLE | CORE | CASI | NG | | | 0/20/11 |
| DRILI | RIG TYPE | | | | | TYPE | | | | | | | 9/29/14 |
| GRO | JND WATE | R DEPTH | 13.0' | I | | DIA. | " | | | | | ATE FINISHED | 9/30/14 |
| MEAS | SURING PO | INT | | | ' | WEIGHT | # | | | | DF | RILLER | Bill |
| DATE | OF MEAS | JREMENT | | | | FALL | " | | | | PI | RNIE STAFF | B. Quaglieri |
| DEPTH FT. | SAMPLE TYPE, RECOVERY, NUMBER | BLOWS ON SAMPLE SPOON PER 6" | PID | GRAPHIC LOG | G Key | EOLOG / - Color, Moistu | IC DESCRI Major, Mino ire, Etc. | PTION or | <u>ELEV.</u> DEPTH | WE Con | ELL Istr. | I | REMARKS |
| | | | | | Light (| gray, well-(/EL_With d | graded, sub-rou ark brown Sand | inded, dv.Silt_Drv | | ×. | | Monitorir | ng well is a ~3' stick-up. |
| - | | | | | | | | | | | | | |
| 2- | | | | | | | | | | | | | |
| _ | | | 0.0 | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 4- | | | | | | | | | | | | | |
| _ | | | | | Light L | | av, well-graded | | 5.0 | | | | |
| 6- | 0.5 | | 0.0 | | sub-ro | ounded GR | AVEL. With dar | rk brown, | | | | | |
| _ | \mathbb{N} | | | | nne-n | ieuium SAr | ND. DIY. | | | | | 6.7 | |
| _ | M | | | | Brown | n, fine-medi | um SAND. Wit | h light gray, | 7.0 | | | | |
| 8- | 1.0 | | 0.0 | | Sub-IC | | ivei. Dry. | | | | | | |
| _ | () | | | | Light (| gray, well-g | raded, sub-rou | nded to | 8.5 | | | 8.9 | |
| 10 | 0.4 | | 0.1 | | Dark b | prown, med | lium SANDY SI | / LT. Dry/ | 9.0 | | | | |
| 10- | M | | | | Light | gray, well-g | raded, angular | GRAVEL. | 9.3 | | | | |
| - | 1.0 | | 0.0 | | Red-b | rown, well- | graded, sub-an | / gular / | 0.5 | | | | |
| 12- | | | | | GRAV | /EL. With tr | race red-brown, | - , | 9.5 | | | | |
| _ | 12 | | 0.0 | | Dark b | prown, med | <u>u</u> lium SAND. Wi |]/ th trace light ! | 10.0 | | | ¥ | |
| | M | | 0.0 | | gray, v | well-graded | , sub-angular g | ravel. Dry. | 12.0 | | | | |
| 14- | \mathbf{M} | | | • • (•) • • • | ך Dark t Ilight g | orown, fine∙ rav, well-qr | -medium SAND aded, sub-angu |). With trace ular gravel. | - 14.0 | E | | | |
| - | 1.5 | | 0.0 | •••••• | Wet. | | | İ | - 45.0 | E | | | |
| 16- | // | | | | \Light (| gray, fine-m | | <u>Wet. </u> | 15.0 | | | | |
| | \mathbb{M} | | | | gray, \ | well-graded | , angular grave | I. Very wet. | | | | | |
| - | 1.6 | | 0.0 | | | | | | | | | | |
| 18- | | | | * * * * * * * * * * * * * * * * * * * | Brown | n, fine-medi | um SAND. Ver | | 18.0 | | | | |
| _ | 0.3 | | 0.0 | | | | | - | | | | | |
| | | | | | | | | | | | | | |

| ARCADIS | | | | | | | | TEST B | ORING LO | G | BORING | No.MW-9 |
|-------------------|--------|---------------------|---------------------------------------|------|----------------|-----------------|----------------------------|--|---------------------------|-------------|-------------|---------------|
| PRO | JECT | Tio | ga Cast | ings | | | LOCATIO | ON Owego, NY | | | SHEET 2 O | F 2 |
| CLIE | NT | NY | SDEC | | | | | | | | PROJECT No. | 00266403.0000 |
| DEPTH FT . | SAMPLE | RECOVERY, NUMBER | BLOWS ON SAMPLE SPOON PER 6" | PID | GRAPHIC LOG | G KEY | EOLOG - Color Moistu | I C DESCRIPT , Major, Minor ,re, Etc. | ION <u>Elev.</u> Depth | WEL Cons | L tr. | REMARKS |
| - | X | 0.3 | | 0.0 | | Gray, wet. | well-grade | d, angular GRAVEL | Very 20.9 21.0 | | 21.0 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |



| Boring/Well | MW-9 | | Project/No | 0. 00266403.0000 | | | | Page | <u>1</u> of | 2 |
|------------------------------------|------------------|------------------|----------------|----------------------------------|---------------------|---------------------------|-------------------|----------------|-------------------|------|
| Site Location | Tioga Cast | ings Owego |), NY | | Drilling Started | 1125 9/29/2014 | Drilling Compl | eted | 1620 9/29/2014 | |
| Total Depth D | rilled | 21 | Feet | Hole Diameter | inches | Type of Sar Coring Dev | mple/ ice | HSA/SS | | |
| Length and D of Coring Dev | iameter ice | 6' x 8" | | | | _ | Sampli | ing Interval | NA | feet |
| Land-Surface | Elev. | | feet | Surveyed | Estimated | Datum | | | | |
| Drilling Fluid | Jsed | None | | | | _ | Drilling | Method | HS.A | |
| Drilling Contractor | Parratt Wo | lff | | | | Driller | Bill | Helper | Brian | |
| Prepared By | B. Quaglier | i | | | | Hammer Weight | | Hammer Drop | | ins. |
| Sample/Core Do (feet below land | epth surface) | Core Recovery | PID Reading | | | | | | | |
| From (ft) | To (ft) | (feet) | (ppm) | Sample/Core Description | | | | | | |
| 0 | 5 | NA | 0.0 | Hand auger - Well graded GRA | VEL, light g | ray, sub-ro | unded, | with dark b | rown Sandy | Silt |
| | | | | Dry. | | | | | | |
| 5 | 7 | 0.5 | 0.0 | 5.0-7.0: Light brown to gray GR | AVEL, well | graded, sul | o-rounc | led, with da | rk brown Sa | nd |
| | | | | fine-medium. Dry | | | | | | |
| 7 | 9 | 1.0 | 0.0 | 7.0-8.5: Brown, fine-medium SA | ND with lig | ht gray Gra | vel sub | -rounded. [| Dry | |
| | | | | 8.5-9.0: Light gray GRAVEL, we | ell graded, s | ub-rounde | d to ang | gular, medii | um-coarse D |)ry. |
| 9 | 10 | 0.4 | 0.1 | 9.0-9.3: Dark brown, medium S | ANDY SILT | , Dry. | | | | |
| | | | | 9.3-9.5: Light gray GRAVEL, an | gular, well g | graded. Dry | <i>.</i> | | | |
| | | | | 9.5-10.0: Red-brown GRAVEL, | sub-angula | r, well grad | ed with | trace red-b | rown sand | |
| | | | | fine-medium. Dry. | | | | | | |
| 10 | 12 | 1.0 | 0.0 | 10.0-12.0: Dark brown, medium | SAND with | trace light | gray gr | avel, sub-ro | ounded, poo | rly |
| | | | | graded. Dry. | | | | | | |
| 12 | 14 | 1.2 | 0.0 | 12.0-12.8: Dark brown fine-med | lium SAND | with trace li | ght gra | y gravel, su | ıb-angular, | |
| | | | | well graded. Dry. | | | | | | |
| | | | | 12.8-14.0: Dark brown, fine, SA | ND, with da | rk gray Gra | ivel, su | b-angular, v | well graded. | Wet |
| | | | | Water table at ~13ft | | | | | | |
| 14 | 16 | 1.5 | 0.0 | 14.0-15.0: Light gray, fine-medi | um SAND. | Wet. | | | | |
| | | | | 15.0-16.0: Brown fine-medium S | SAND with t | race dark g | iray gra | vel, angula | r, well grade | ed. |
| | | | | Very wet. | | | | | | |
| 16 | 18 | 1.6 | 0.0 | 16.0-18.0: Brown fine-medium S | SAND with t | race dark g | iray gra | vel, angula | r, well grade | ed. |



Boring/Well

MW-9

Prepared by

B. Quaglieri

Sample/Core Depth

(feet below land surface)

Core PID Recovery Reading

| From | То | (feet) | (ppm) | Sample/Core Description |
|------|----|--------|-------|--|
| | | | | Very wet. |
| 18 | 20 | 0.3 | 0.0 | 18.0-20.0: Brown fine-medium SAND. Very wet. |
| 20 | 21 | 0.3 | 0.0 | 20.0-20.9: Brown fine-medium SAND. Very wet. |
| | | | | 20.9-21.0: Gray, GRAVEL, angular, well graded. Very wet. |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Page 2 of 2



(Unconsolidated)

| □ <u>*</u> t | Project | Tioga | a Castings | Well MW-9 |
|---|--------------------------|-------------|-------------------|-----------------|
| ↓ LAND SURFACE | Town/City | Owe | go, NY | |
| | County | Tioga | 3 | State NY |
| / / <u>8</u> inch diameter | Permit No. | | | |
| drilled hole | Land-Surface | Elevatio | n and Datum: | |
| \square | | | feet | Surveyed |
| Well casing | | | | Estimated |
| 2 inch diameter. | Installation Da | te(s) | 9/29/14-9/30/14 | |
| Sch. 40 PVC | Drilling Mathe | (-) | | |
| / / Backfill | Drilling Method | u | <u>HSA/55</u> | |
| Grout Cement/bentonite grout | Drilling Contra | ctor | Parratt Wolff | |
| | Drilling Eluid | | Nere | |
| ИИ | Drilling Fluid | | None | |
| 6.7 ft* | | | | |
| | Development ⁻ | Techniq | ue(s) and Date(s) | |
| | | | | |
| 8.9_ft* Xpellets | | | | |
| | | | | |
| | | | | |
| | Fluid Loss Dur | ring Drilli | ng <u>0</u> | gallons |
| 11 ft* | Water Remove | ed Durin | g Development | gallons |
| | Static Depth to | Water | | feet below M P |
| | | | | |
| 2.0 inch diameter | Pumping Dept | h to Wa | er | feet below M.P. |
| <u>Sch 40 PVC</u> , <u>slot</u> | Pumping Dura | ition | hou | rs |
| | Yield | | gpm | Date |
| | Specific Capa | city | apn | n/ft |
| | opcome capa | , | 3P | |
| Sand Pack | Well Purpose | | Monitoring Well | |
| | | | | |
| | | | | |
| | Remarks | | | |
| 21 ft* | | | | |
| ft* | | | | |
| | | | | |
| Measuring Point is Top of Well Casing Unless Otherwise Noted. | | | | |
| * Depth Below Land Surface | Prepared by | <u>В. Q</u> | uaglieri | |

Well Constr Log.xlsx.xls Well Constr

ARCADIS

Appendix E

Analytical Results - IDW



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive Amherst, NY 14228-2298 Tel: (716)691-2600

TestAmerica Job ID: 480-68628-1 Client Project/Site: NYSDEC-Standby TIOGA CASTINGS

For:

ARCADIS U.S. Inc 855 Route 146 Suite 210 Clifton Park, New York 12065

Attn: Jeremy Wyckoff

Joeph V. Giscomayer

Authorized for release by: 10/21/2014 10:06:21 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager (484)685-0868 judy.stone@testamericainc.com

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

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

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



Table of Contents

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

Client: ARCADIS U.S. Inc Project/Site: NYSDEC-Standby TIOGA CASTINGS

2 3 4 5 6 7 8 9 10

Qualifiers

| GC/MS VO | A |
|-----------|--|
| | |
| Qualifier | Qualifier Description |
| U | Analyzed for but not detected. |
| GC/MS Sen | ni VOA |
| Qualifier | Qualifier Description |
| U | Analyzed for but not detected. |
| * | LCS or LCSD exceeds the control limits |
| GC Semi V | OA |
| Qualifier | Qualifier Description |
| U | Analyzed for but not detected. |
| * | Surrogate exceeds the control limit |
| Metals | |
| Qualifier | Qualifier Description |
| U | Indicates analyzed for but not detected. |
| В | Compound was found in the blank and sample. |
| J | Sample result is greater than the MDL but below the CRDL |

General Chemistry

| Qualifier | Qualifier Description |
|-----------|--|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |

Glossary

| Abbroviction | |
|----------------|---|
| Abbreviation | I nese commonly used appreviations may or may not be present in this report. |
| ₩ %D | Decement Recovery |
| | |
| GFL | |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Job ID: 480-68628-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-68628-1

Receipt

The sample was received on 10/4/2014 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2° C.

GC/MS VOA

Method(s) 8260C: The following sample(s) was diluted due to the nature of the TCLP matrix: IDW 1012014 (480-68628-1), IDW 1012014 (LB 480-206140/1-A). Elevated reporting limits (RLs) are provided.

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

GC/MS Semi VOA

Method(s) 8270C: The laboratory control sample (LCS) for preparation batch 206487 recovered outside control limits for the following analyte: Hexachlorobenzene This analytes was based high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

GC Semi VOA

Method(s) 8081B: The closing calibration verification (CCV) associated with batch 256587recovered above the upper control limit for ddd, alpha-BHC and Endrin ketone on the secondaty column. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCV 460-256587/14).

Method(s) 8151A: Surrogate recovery for the following samples was outside control limits: (LB 480-206136/1-E), IDW 1012014 (480-68628-1). This is routine for TCLP herbicides, due to the pH effects created during the leaching process, inhibiting the herbicide derivatization of the free acid components.

Method(s) 8151A: All primary data is reported from the RTX-CLPI column.

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

Metals

Method(s) 6010C: The analyte total barium was detected in the TCLP Extractor Blank, LB 480-206136, at a concentration above the TestAmerica Laboratories standard quantitation limit. Sample IDW 1012014 (480-68628-1) associated with the blank was evaluated and determined to be at least five times less than the TCLP Regulatory Limit. The sample data was therefore accepted and no corrective action was performed.

Method(s) 6010C: The TCLP Extractor Blank, LB 480-206136, contained total chromium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of sample IDW 1012014 (480-68628-1) was not performed.

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

General Chemistry

Method(s) 9045D: The following sample(s) was received outside of holding time: IDW 1012014 (480-68628-1).

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

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 206487.

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

Client Sample ID: IDW 1012014

Lab Sample ID: 480-68628-1 Solid

5

| | | Matr | ix: |
|---|----------|----------|-----|
| р | Prepared | Analyzed | г |

| Date Collected: 10/01/14 13:15 Date Received: 10/04/14 09:00 | | Matrix | | x: Solic | | | | | |
|---|----------------|------------|-----------|----------|------|---|----------------|----------------|--------|
| Method: 8260C - Volatile Orga | anic Compounds | by GC/MS - | TCLP | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fa |
| 1,2-Dichloroethane | 0.010 | U | 0.010 | 0.0021 | mg/L | | | 10/09/14 02:36 | 10 |
| 2-Butanone (MEK) | 0.050 | U | 0.050 | 0.013 | mg/L | | | 10/09/14 02:36 | 10 |
| Benzene | 0.010 | U | 0.010 | 0.0041 | mg/L | | | 10/09/14 02:36 | 1 |
| Carbon tetrachloride | 0.010 | U | 0.010 | 0.0027 | mg/L | | | 10/09/14 02:36 | 1 |
| Chlorobenzene | 0.010 | U | 0.010 | 0.0075 | mg/L | | | 10/09/14 02:36 | 10 |
| Chloroform | 0.010 | U | 0.010 | 0.0034 | mg/L | | | 10/09/14 02:36 | 10 |
| Tetrachloroethene | 0.010 | U | 0.010 | 0.0036 | mg/L | | | 10/09/14 02:36 | 1 |
| Trichloroethene | 0.010 | U | 0.010 | 0.0046 | mg/L | | | 10/09/14 02:36 | 1 |
| Vinyl chloride | 0.010 | U | 0.010 | 0.0090 | mg/L | | | 10/09/14 02:36 | 1 |
| 1,1-Dichloroethene | 0.010 | U | 0.010 | 0.0029 | mg/L | | | 10/09/14 02:36 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fa |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 66 - 137 | | | | | 10/09/14 02:36 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 73 - 120 | | | | | 10/09/14 02:36 | 1 |
| Toluene-d8 (Surr) | 101 | | 71 _ 126 | | | | | 10/09/14 02:36 | 1 |
| Dibromofluoromethane (Surr) | 103 | | 60 - 140 | | | | | 10/09/14 02:36 | 1 |
| Method: 8270C - Semivolatile | Organic Compou | nds (GC/M | S) - TCLP | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fa |
| 1,4-Dichlorobenzene | 0.010 | U | 0.010 | 0.00046 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 2,4-Dinitrotoluene | 0.0050 | U | 0.0050 | 0.00045 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Hexachlorobenzene | 0.0050 | U * | 0.0050 | 0.00051 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Hexachlorobutadiene | 0.0050 | U | 0.0050 | 0.00068 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Hexachloroethane | 0.0050 | U | 0.0050 | 0.00059 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 3-Methylphenol | 0.010 | U | 0.010 | 0.00040 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 2-Methylphenol | 0.0050 | U | 0.0050 | 0.00040 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 4-Methylphenol | 0.010 | U | 0.010 | 0.00036 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Nitrobenzene | 0.0050 | U | 0.0050 | 0.00029 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Pentachlorophenol | 0.010 | U | 0.010 | 0.0022 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| Pyridine | 0.025 | U | 0.025 | 0.00041 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 2,4,5-Trichlorophenol | 0.0050 | U | 0.0050 | 0.00048 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |
| 2,4,6-Trichlorophenol | 0.0050 | U | 0.0050 | 0.00061 | mg/L | | 10/08/14 05:43 | 10/10/14 14:20 | |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2,4,6-Tribromophenol | 129 | | 52 - 132 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |
| 2-Fluorobiphenyl | 115 | | 48 - 120 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |
| 2-Fluorophenol | 65 | | 20 - 120 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |
| Nitrobenzene-d5 | 114 | | 46 - 120 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |
| p-Terphenyl-d14 | 140 | | 67 _ 150 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |
| Phenol-d5 | 44 | | 16 - 120 | 10/08/14 05:43 | 10/10/14 14:20 | 1 |

Method: 8081B - Organochlorine Pesticides (GC) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------|---------|-----------|---------|----------|------|---|----------------|----------------|---------|
| Chlordane (technical) | 0.0050 | U | 0.0050 | 0.00021 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Endrin | 0.00050 | U | 0.00050 | 0.000017 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| gamma-BHC (Lindane) | 0.00050 | U | 0.00050 | 0.000014 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Heptachlor | 0.00050 | U | 0.00050 | 0.000014 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Heptachlor epoxide | 0.00050 | U | 0.00050 | 0.000016 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Methoxychlor | 0.00050 | U | 0.00050 | 0.000015 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Toxaphene | 0.0050 | U | 0.0050 | 0.00034 | mg/L | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |

TestAmerica Buffalo

TestAmerica Job ID: 480-68628-1

Lab Sample ID: 480-68628-1 Matrix: Solid

5

Date Collected: 10/01/14 13:15 Date Received: 10/04/14 09:00

Client Sample ID: IDW 1012014

| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
|------------------------------------|-----------|-----------|----------|---------|-----------|---|----------------|----------------|---------|
| DCB Decachlorobiphenyl | 118 | | 40 - 150 | | | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| DCB Decachlorobiphenyl | 114 | | 40 - 150 | | | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Tetrachloro-m-xylene | 106 | | 42 - 150 | | | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Tetrachloro-m-xylene | 108 | | 42 _ 150 | | | | 10/16/14 08:05 | 10/17/14 11:33 | 1 |
| Method: 8151A - Herbicides (GC) - | TCLP | | | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Silvex (2,4,5-TP) | 0.0020 | U | 0.0020 | 0.00036 | mg/L | | 10/08/14 15:46 | 10/15/14 16:19 | 1 |
| 2,4-D | 0.0020 | U | 0.0020 | 0.00040 | mg/L | | 10/08/14 15:46 | 10/15/14 16:19 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2,4-Dichlorophenylacetic acid | 13 | * | 29 _ 135 | | | | 10/08/14 15:46 | 10/15/14 16:19 | 1 |
| 2,4-Dichlorophenylacetic acid | 15 | * | 29 _ 135 | | | | 10/08/14 15:46 | 10/15/14 16:19 | 1 |
| Method: 6010C - Metals (ICP) - TCI | P | | | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Arsenic | 0.015 | U | 0.015 | 0.0056 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Barium | 0.42 | В | 0.0020 | 0.00070 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Cadmium | 0.013 | | 0.0020 | 0.00050 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Chromium | 0.0032 | JB | 0.0040 | 0.0010 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Lead | 0.15 | | 0.010 | 0.0030 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Selenium | 0.025 | U | 0.025 | 0.0087 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Silver | 0.0060 | U | 0.0060 | 0.0017 | mg/L | | 10/07/14 12:00 | 10/08/14 14:49 | 1 |
| Method: 7470A - Mercury (CVAA) - | TCLP | | | | | | | | |
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Mercury | 0.00020 | U | 0.00020 | 0.00012 | mg/L | | 10/07/14 12:30 | 10/09/14 18:12 | 1 |
| General Chemistry | | | | | | | | | |
| Analyte | Posult | Qualifier | RI | RL | Unit | D | Prepared | Analyzed | Dil Fac |
| Fleebuciet | Result | Quanner | | | | | | | |
| Flashpoint | >200 | | 1.00 | 1.00 | Degrees F | | | 10/13/14 11:44 | 1 |

Lab Sample ID: 480-68628-1

Matrix: Solid

2 3 4 5 6 7

Client Sample ID: IDW 1012014

Date Collected: 10/01/14 13:15 Date Received: 10/04/14 09:00

| | Batch | Batch | | Dilution | Batch | Prepared | | |
|-----------|----------|----------|-----|----------|--------|----------------|---------|---------|
| Ргер Туре | Туре | Method | Run | Factor | Number | or Analyzed | Analyst | Lab |
| TCLP | Leach | 1311 | | | 206140 | 10/06/14 08:24 | TRG | TAL BUF |
| TCLP | Analysis | 8260C | | 10 | 206715 | 10/09/14 02:36 | LCH | TAL BUF |
| TCLP | Leach | 1311 | | | 206136 | 10/06/14 08:19 | TRG | TAL BUF |
| TCLP | Prep | 3510C | | | 206487 | 10/08/14 05:43 | MCZ | TAL BUF |
| TCLP | Analysis | 8270C | | 1 | 207025 | 10/10/14 14:20 | DMR | TAL BUF |
| TCLP | Leach | 1311 | | | 256070 | 10/15/14 16:00 | YAH | TAL EDI |
| TCLP | Prep | 3510C | | | 256245 | 10/16/14 08:05 | HAW | TAL EDI |
| TCLP | Analysis | 8081B | | 1 | 256587 | 10/17/14 11:33 | SAK | TAL EDI |
| TCLP | Leach | 1311 | | | 206136 | 10/06/14 08:19 | TRG | TAL BUF |
| TCLP | Prep | 8151A | | | 206667 | 10/08/14 15:46 | RJS | TAL BUF |
| TCLP | Analysis | 8151A | | 1 | 207907 | 10/15/14 16:19 | JRL | TAL BUF |
| TCLP | Leach | 1311 | | | 206136 | 10/06/14 08:19 | TRG | TAL BUF |
| TCLP | Prep | 3010A | | | 206375 | 10/07/14 12:00 | SLB | TAL BUF |
| TCLP | Analysis | 6010C | | 1 | 206661 | 10/08/14 14:49 | LMH | TAL BUF |
| TCLP | Leach | 1311 | | | 206136 | 10/06/14 08:19 | TRG | TAL BUF |
| TCLP | Prep | 7470A | | | 206382 | 10/07/14 12:30 | LRK | TAL BUF |
| TCLP | Analysis | 7470A | | 1 | 207052 | 10/09/14 18:12 | LRK | TAL BUF |
| Total/NA | Analysis | 1010A | | 1 | 151376 | 10/13/14 11:44 | TPH | TAL CAN |
| Total/NA | Analysis | 9045D | | 1 | 206764 | 10/07/14 12:37 | MDL | TAL BUF |
| Total/NA | Analysis | Moisture | | 1 | 206243 | 10/06/14 16:04 | ZJR | TAL BUF |

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Certification Summary

Client: ARCADIS U.S. Inc Project/Site: NYSDEC-Standby TIOGA CASTINGS

TestAmerica Job ID: 480-68628-1

Laboratory: TestAmerica Buffalo

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

| _ Authority | Program | | EPA Region | Certification ID | Expiration Date |
|--------------------------|--------------------------------|-----------------------------|-----------------------|------------------|-----------------|
| New York | NELAP | | 2 | 10026 | 03-31-15 |
| The following analytes a | re included in this report, bu | ut certification is not off | ered by the governing | authority: | |
| Analysis Method | Prep Method | Matrix | Analy | te | |
| 7470A | 7470A | Solid | Mercu | ıry | |
| 8270C | 3510C | Solid | 1,4-D | ichlorobenzene | |
| 8270C | 3510C | Solid | 2,4,5- | Trichlorophenol | |
| 8270C | 3510C | Solid | 2,4,6- | Trichlorophenol | |
| 8270C | 3510C | Solid | 2,4-D | initrotoluene | |
| 8270C | 3510C | Solid | 2-Met | hylphenol | |
| 8270C | 3510C | Solid | 3-Met | hylphenol | |
| 8270C | 3510C | Solid | 4-Met | hylphenol | |
| 8270C | 3510C | Solid | Hexad | chlorobenzene | |
| 8270C | 3510C | Solid | Hexad | chlorobutadiene | |
| 8270C | 3510C | Solid | Hexad | chloroethane | |
| 8270C | 3510C | Solid | Nitrob | enzene | |
| 8270C | 3510C | Solid | Penta | chlorophenol | |
| 8270C | 3510C | Solid | Pyridi | ne | |
| Moisture | | Solid | Perce | nt Moisture | |
| Moisture | | Solid | Perce | nt Solids | |

Laboratory: TestAmerica Canton

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

| | - | | El A Rogio | | Expiration Date | | |
|-----------------|-------------|--------|------------|--------|-----------------|--|--|
| New York | NELAP | | 2 | 10975 | 03-31-15 | | |
| | | | | | | | |
| Analysis Method | Prep Method | Matrix | A | nalyte | | | |

Laboratory: TestAmerica Edison

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|-----------------------------------|---------------|------------|------------------|-----------------|
| Connecticut | State Program | 1 | PH-0200 | 09-30-14 * |
| DE Haz. Subst. Cleanup Act (HSCA) | State Program | 3 | N/A | 12-31-14 |
| New Jersey | NELAP | 2 | 12028 | 06-30-15 |
| New York | NELAP | 2 | 11452 | 03-31-15 |
| Pennsylvania | NELAP | 3 | 68-00522 | 02-28-15 |
| Rhode Island | State Program | 1 | LAO00132 | 12-30-14 |
| USDA | Federal | | NJCA-003-08 | 04-04-17 |

* Certification renewal pending - certification considered valid.

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

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600 TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396 TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Client: ARCADIS U.S. Inc Project/Site: NYSDEC-Standby TIOGA CASTINGS

Method Description

Herbicides (GC)

Mercury (CVAA)

Percent Moisture

EPA = US Environmental Protection Agency

Metals (ICP)

pН

Protocol References:

Laboratory References:

Volatile Organic Compounds by GC/MS

Organochlorine Pesticides (GC)

Semivolatile Organic Compounds (GC/MS)

Ignitability, Pensky-Martens Closed Cup Method

Method

8260C

8270C

8081B

8151A

6010C

7470A

1010A

9045D

Moisture

Laboratory

TAL BUF

TAL BUF

TAL EDI

TAL BUF

TAL BUF

TAL BUF

TAL CAN

TAL BUF

TAL BUF

Protocol

SW846

SW846

SW846

SW846

SW846

SW846

SW846

SW846

EPA

| 5 |
|---|
| |
| |
| 8 |

TestAmerica Buffalo

Client: ARCADIS U.S. Inc Project/Site: NYSDEC-Standby TIOGA CASTINGS

TestAmerica Job ID: 480-68628-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 480-68628-1 | IDW 1012014 | Solid | 10/01/14 13:15 | 10/04/14 09:00 |

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Login Number: 68628

List Number: 1 Creator: Kolb, Chris M

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity either was not measured or, if measured, is at or below background | True | |
| The cooler's custody seal, if present, is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the sample IDs on the containers and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter. | N/A | |
| If necessary, staff have been informed of any short hold time or quick TAT needs | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Sampling Company provided. | True | arcadis |
| Samples received within 48 hours of sampling. | False | |
| Samples requiring field filtration have been filtered in the field. | True | |
| Chlorine Residual checked. | N/A | |

Job Number: 480-68628-1

List Source: TestAmerica Buffalo

Client: ARCADIS U.S. Inc

Login Number: 68628 List Number: 3

Creator: Rivera, Kenneth

| Question | Answer | Comment |
|---|--------|---|
| Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td> | N/A | |
| The cooler's custody seal, if present, is intact. | True | 316933 |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.2°C, IR #5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | N/A | |
| Residual Chlorine Checked. | N/A | No analysis requiring residual chlorine check assigned. |

List Source: TestAmerica Edison

List Creation: 10/12/14 11:36 AM

| TestAmerica Albany | | | | | | | | | | |
|--|---|------------------------------------|---|------------------------------------|---------------------------|----------------|---|--------------------|---|---|
| 25 Kraft Road Albany, NY 12205 | Chair | n of Cust | tody Rec | cord | | | | | | |
| | Samplar | | -14 DAF | | | | ridor Tradin | a No(e). | | NUCLARY IN THE REPORT |
| Client Information | adinpret _ ; u ycko | - | Stone, J | udy L | | | | g wo(s). | 480-55862-14 | 740.1 |
| Client Contact. Jeremy Wyckoff | Phone: 518-250-7 | 38 | E-Mail: judy.stoi | ne@testame | ericainc.com | | | | Page: Page 1 of 1 | |
| Company: ARCADIS U.S. Inc | | | | | An | alysis Req | uested | | Job #, | |
| Address: 855 Route 146 Suite 210 | Due Date Requested: | | | | | | | | Preservation C | odes: |
| City. Clifton Park | TAT Requested (days): | - | | | d | | | | B - NaOH C - Zn Acetate | M - nexare N - None O - AsNaO2 |
| State, Zip. NY, 12065 | STD/ | D QV | 調節 | | <u>ר ר</u> | | | | D - Nitric Acid E - NaHSO4 | P - Na204S Q - Na2SO3 |
| Phone: 518-250-7300(Tel) | Po# 7.22 Project 00200362.000 | 0026640 | 3,0000 | | 1 | | | | いいしょ F - MeOH いいい たまま 日 - Amchior たままま 日 - Ascorbic Acie | R - Na2S2SO3 S - H2SO4 I T - TSP Dodecahvdrate |
| Emait jeremy.wyckoff@arcadis-us.com | W0 #. Contract D004439 | | N JO G | (A)(8) | 50728 | | | | 1 - Ice 3 - DI Water | U - Acetone V - MCAA |
| Project Name: NYSDEC-Standby TIOGA CASTINGS | Project #: 48006187 | | 97) 0 | pe I I O Se | ,Atat8 | | | | K - EDTA L - EDA | W - ph 4-5 Z - other (specify) |
| Street | #MOSS | | Idmes | vuiew i | 9 (818) 0818,0 | | | | ot con | |
| | | Sample Type | Matrix (w-water, S=solid, | ике - Госа 3, 7471В М\ХМІМТС | 8 '40747 ,3 V 910T - 3 | ¢, 9045D | | | 1equinN | |
| Sample Identification | Sample Date Time | e (C=comp, G=grab) ₁ | O=waste/oil, 0 57=Tissue, A=Air) 14 000.000000000000000000000000000000000 | Perro 60103 | 85600 | /0101 | | | E Special | Instructions/Note: |
| T.DW INFORM | 2011/100 1212 | Ś | Solid | × | ドメ | × | | | | or a state of the |
| time to the same | 22 | 2 | Solid | | · · | | | | | |
| | | | Solid | | | | | | | |
| | | | Solid | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | 80-68628 CF | Tain of Custody | |
| | | | | | | | <u> </u> | | | |
| | | | | | | | | | | |
| Possible Hazard Identification | ison B | Radiological | | Sample Dis | sposal (A t To Client | ee may be a | <mark>ssessed if s</mark> isposal Bv L | amples are n ab | etained longer than Archive For | 1 month) Months |
| Deliverable Requested: I, II, III, IV, Other (specify) | | | | Special Inst | ructions/QC | Requiremen | ts: | | | |
| Empty Kit Relinquished by: | Date: | | | ne: | | | Method o | of Shipment | | |
| Relinquished by f | Bate/Time: | ash 6 | Sompany | Received | A A | | | Date/Time: | 8 | Company |
| Reinquisheyby: J Jan 18 | Date Time | 0 | Company | Received | pyc | | | Date/Time: | | Company |
| Reinquished by: | Date/Time: | | Company | Received | py: | | | Date/Time: | | Company |
| Custody Seals Intact Custody Seal No.: | | | | Cooler Te | mperature(s) | C and Other Re | marks; | | 76 2年 | 2 |
| | | | | | | | | | | |

.

10/21/2014

Î

1 ί

| TestAmerica Buffalo | | | | | 2 | | | | | | to t | <u>λ</u> | |
|---|-----------------------------------|-------------------------------|---|--------------------|---|------------------|-----------|----------------------|----------------|----------------|---|----------------|--|
| 10 Hazelwood Drive Ambaret – NIY 14738-2398 | Chai | n of Cus | stody Re | cord , | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | | | | S | | 5 |
| Phone (716) 691-2600 Fax (716) 691-7991 | | | | 1 | , r. | | | | | | THE ELADER | CALENNINC | MARENTAL TESTING |
| Client Information (Sub Contract Lab) | Sampler. | | Lab PM: Stone, | Juđy L | | | ů | rrier Tracki | :(s)oN bl | | COC No: 480-20176. | | |
| Client Contact Shipping/Receiving | Phone: | | E-Mait: judy.st | one@testa | nericainc. | com | | | | | Page: Page 1 of 1 | | |
| Company. TestAmerica Laboratories, Inc. | | | | | | Analys | s Requ | ested | | | Job #: 480-68628- | | |
| Address: 4101 Shuffel Street NW, | Due Date Requested: 10/14/2014 | | | | | | | | | | C Preservation | 1 Codes: | H |
| City: North Canton | TAT Requested (days): | | | 1698 | | | | | | | B - NCL B - NaOH C - Zn Acetate | ZO | nexarie None AsNaO2 |
| State, Zp: OH, 44720 | | | | 建构 | | | | | | | D - Nitric Acid E - NaHSO4 F - MoOH | 1. d 1 | Na204S Na2S03 Na2S03 |
| Phone: 330-497-9396(Tel) 330-497-0772(Fax) | PO# | | | | | | | | · | | G - Amchlor H - Ascorbic A | vcid T | H2SO4 TSP Dodecahydrate |
| Email: | WO# | | | (ô) | | | | | | | J - Di Water | | Acetone MCAA |
| Project Name: NYSDEC-Standby TiOGA CASTINGS | Project #. 48006187 | | | 10.86 | | 1 11 1.4 | | | | | r- EDA | - ^Z | pri 4-5 other (specify) |
| Site: | SSOW#: | | | λ) ^j αs | <u></u> | | | | | | of con | | |
| Samula Mantification _ Cliant ID (1 ah ID) | Samp Samp | Sample Type Ie (C=comp, | Matrix (w=water, S=solid, C=waststoid, | M/SM/miotre | 501070 | | | | | ····· | | 5 | Crines/Note- |
| | | Preserv | ation Code. | · X | | | | | | - | | | The second s |
| IDW 1012014 (480-68628-1) | 13:1 10/1/14 Faste | 5 10 | Solid | × | | - | * | 2 | | 1 1 1 | i single | | 1-1 2.54 |
| | | | - | | | | | | | | 8.25 | _ | |
| | | | | | | | | · · · · · · · | | | 1.36 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 2.5 2.5 2.5 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Possible Hazard Identification Unconfirmed | | | | Sample I | Disposal (tum To Cl | 'A fee m ient | ay be ass | essed if posal By | samples Lab | are reta | i ned longer th rchive For | ian 1 moi | rth) Months |
| Deliverable Requested: I, II, IV, Other (specify) | | | | Special Ir | astructions | /QC Req | uirements | | | | | | |
| Empty Kit Relinquished by: | Date: | | | īme: | | | | Method | of Shipmer | ŕ | | | |
| Reinquighed by has here the here | Pate/Time | POQ L | Company 3 | The Received | ed by: | All | r f c | JAY | Date/ | ле: УЭ́Э́Э́ | 14 9.5 | <u>5</u> 02 | TH- |
| Reinpuerted by | Date/Time: | | Company | Receiv | ed by: | | | | Date/T | me: | | | npany |
| Reinquisred by: | Date/Time: | | Company | Receiv | ed by: | | | | Date/T | me: | | Co | npany |
| Custody Seals Intact: Custody Seal No.: | | | | Cooler | Temperatum | e(s) °C and | Other Rem | rks; | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | 1 | | | | | | |

_

| TestAmerica Canton Sample Receipt Form/Narrative Logir | 1#: | |
|---|--|---|
| Canton Facility | ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲ | |
| Client TABULALO Site Name N/SCR:-Stowor | Cooler unpacked by: | F |
| Cooler Received on 10/7/14 Opened on 10/7/14 | Healelus, | 2 |
| FedEx: 1 st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier | Other | E |
| TestAmerica Cooler #Foam Box Client Cooler Box Other) | ea MOR | ß |
| Packing material used: Bubble Wrap Foam Plastic Bag None Other | | |
| COOLANT: (Weile Blue Ice Dry Ice Water None | | i |
| 1. Cooler temperature upon receipt | | 5 |
| IR GUN# A (CF +2 °C) Observed Cooler Temp °C Corrected Cooler Te | mp°C | |
| IR GUN# 4 (CF -2 °C) Observed Cooler Temp °C Corrected Cooler Te | mp°C XI Ree Multiple | 5 |
| IR GUN# 5 (CF 0 °C) Observed Cooler Temp°C Corrected Cooler Te | mp°C Cooler Form | 1 |
| IR GUN# 8 (CF 0 °C) Observed Cooler Temp °C Corrected Cooler Te | mp°C | Ī |
| 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity | | 1 |
| -Were custody seals on the outside of the cooler(s) signed & dated? | š No NA | 6 |
| - Were custody seals on the bottle(s)? Ye | | Ì |
| 5. Shippers' packing slip attached to the cooler(s)? | No No | Ð |
| 5 Were the custody papers relinquished & signed in the appropriate place? | No IND | |
| | | C I THE R |
| 6. Did all bottles arrive in good condition (Unbroken)? | No | - |
| 7. Could all bottle labels be reconciled with the COC? | No No | 1 |
| 8. Were correct bottle(s) used for the test(s) indicated? | No No | |
| 9. Sufficient quantity received to perform indicated analyses? | s No | au Decomo |
| 10. Were sample(s) at the correct pH upon receipt? Ye | s No (NA) pH Strip Lot# <u>HC412469</u> | |
| 11. Were VOAs on the COC? Ye | s(NO) | |
| | | ļ. |
| 12. Were air bubbles >6 mm in any VOA vials? Ye | s No NA | · · · · · · · · · · · · · · · · · · · |
| 12. Were air bubbles >6 mm in any VOA vials?Ye13. Was a trip blank present in the cooler(s)?Ye | s No NA s No | - THE LOCAL TO BE THE REAL PROPERTY OF |
| 12. Were air bubbles >6 mm in any VOA vials?Ye13. Was a trip blank present in the cooler(s)?Ye | s No NA s No | Address of the second sec |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Ye | s No NA s No Voice Mail Other | Manual Control of the second state of the second sec |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Ye Concerning Ye | s No NA s No Voice Mail Other | · Manual Control of the second of the second s |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Ye Concerning Ide CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | Manufacture de la construction de la c |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | Anti-state and and an interview of the state /li> |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Ye Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | Melenerity and assessment of the statement of the second statement of the second se Second second secon second second sec |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | Antiparticipation of the second state of the second s |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Ye Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | а на и при стратити на при при стратити стратити и при стратити при при при при при при при при стратити на при |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Ye Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | на политические и политические и политические и значается и политические и и может становалистические и на на В политические и политические и политические и значается и политические и политические и политические и на на |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | • Martin and a state of the |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | • The subscription of t |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Output Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No Voice Mail Other Samples processed by: | • The subscription of the second s Second second s Second second se |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y out | s No NA s No Voice Mail Other Samples processed by: | на противления и слада и против и акториализации принимати и противляют и противляют и противлении с против в так противления и слада и против и при принимати и принимати и принимати и при против и противлении и при при в так при при при при при при при при при при |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Ye Oncerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA s No NA Voice Mail Other Samples processed by: | The article state is a subscription of the subscription of subscription of the subscription o |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Via Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No NA Voice Mail Other Samples processed by: | Provide the state of the state |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal V Verbal V Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No No s No No Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y via Verbal Y Concerning via Verbal Y 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No No s No No Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No No s No No Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y out overbal Y Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No No s No No Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y Output Concerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No Wa Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal Y Oconcerning 14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES | s No No Voice Mail Other Samples processed by: | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PMDatebyvia Verbal Y out | s No No No No No No No No No No Samples processed by: Samples processed by: ding time had expired. ed in a broken container. n in diameter. (Notify PM) | |
| 12. Were air bubbles >6 mm in any VOA vials? Ye 13. Was a trip blank present in the cooler(s)? Ye Contacted PM Date by via Verbal N Output of the cooler of the c | s November Voice Mail Other Samples processed by: | |

_

11

| Cooler # | IR Gun # | Observed Temp ℃ | Corrected Temp ℃ | Coolant |
|--|----------|--|---------------------|--------------------------|
| TAMOTE | 8 | 1.6 | 1. 6 | ICE |
| TH NOIT | | 4.2 | 4.2 | $\underline{\checkmark}$ |
| | | | | |
| | | | | |
| | | · | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| · | | | ······ | |
| And a rest of the second s | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | ····· | | |
| | | · · · · · · · · · · · · · · · · · · · | | |
| | | · · · · · · · · · · · · · · · · · · · | | |
| | | · · · · · · · · · · · · · · · · · · · | | |
| | | <u> </u> | | <u></u> |
| | | ······ | | |
| | | | | <u> </u> |
| | | <u></u> | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | ······································ | ***** | |
| | | ······································ | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

C:\Users\livengoodc\AppData\Local\Microsoft\Windows\Temporary Internet Files\OLKD16\WI-NC-099-031813 Cooler Receipt Form_page 2 - Multiple Coolers.doc Revision 3, 3/18/13 rls

8

9

| Custody Seals Intact: Custody Seal No.: 21693. | Relinquished by: | Reinquished by: | Mentioned of Mary Willer | Empty Kit Relinquished by: | Derverable Requested: I, II, III, IV, Other (specify) | Unconfirmed | Possible Hazard Identification | | | | | | | and a second | | | | IDW 1012014 (480-68628-1) | | Sample Identification - Client ID (Lab ID) | Site | Project Name: NYSDEC-Standby TłOGA CASTINGS | Email. | Phone 732-549-3900(Tel) 732-549-3679(Fax) | State, Zip' NJ, 08817 | Edison | 777 New Durham Road, | Company: TestAmerica Laboratories, Inc. | Shipping/Receiving | Client Information (Sub Contract Lab) | Amherst, NY 14223-2298 Phone (716) 691-2600 Fax (716) 691-7991 | 10 Hazelwood Drive | TestAmerica Buffalo 6 7 8 |
|--|------------------|-----------------|--------------------------|----------------------------|---|-------------|--------------------------------|--------|---|--------------|----|--|----------|--|----------|--------------|----|---------------------------|-------------|--|----------------|--|-------------------------|--|---|----------------------------|--------------------------------|--|---|---------------------------------------|---|--------------------|---------------------------|
| | Date/Time: | l hate/ lime: | 10/10/1 | 1 | | | | | | | | | | | | | | 10/1/14 | | Sample Date | SSOW并 | Project #: 48006187 | WO # | 190 # | | TAT Requested (d: | Due Date Request 10/15/2014 | | Phone | Sampier | | | 9 10 11 |
| | | | 5 | Date: | | | | | | | | | | | | | | 13:15 Eastern | X | Sample Time | | | | | | ays): | Å | | | | | Chain | |
| | | | Ì | | | | | | | | | | | | | | | | Preserv | Sample Type (C=comp, G=grab) | | | | | | | | | | | | of Cus | |
| | Company | Company | | | | | | | | | | | | | | | | Solici | ation Code: | Matrix (w-water, S-rolld, O-wrastaloul, BT-Tissue, A-d | | | | | | | | | juo juo | St 12 | | stodv i | |
| - | | | ľ | Time: | ş | | Sa | | | <u> </u> | | | <u> </u> | | + | +- | - | | X | 5. Field Fillered Perform MS/A | Samp ISD (1 | le (Ye les of | s or N No) | o) | | | | | ^{fail[:] ly.stone⊚} | one, Judy | | Reco | |
| Cooler Te | Received | Received | Received | | ecial Inst | Retu | mple Di | | | - | F | | - | | + | ╀ | | × | | 8081B/1311_T | CLP C | отро | and Lie | st | | | | | Dtestam | Ļ | | rd | |
| mperature | byc | | 5.8 | $\left(\right)$ | tructions | m To Cl | sposal (| | | <u>}</u> −−− | | | | } ── | | \downarrow | -+ | | | <u></u> | | | | ···· | | | <u></u> | | ericainc. | \$ | | | - |
| (s) °C and | | | me (| | /QC Rec | ent | A fee m | | | | | | | | | | | | | | | | | <u></u> | | | | Analys | com |)0-6862 | | | |
| Other Re | | | 200 | | luiremer | | ay be a | | | | | | | | <u> </u> | + | | | | | | | | | | | | is Reo | | 8 Chain | | | |
| marks: | Í | $\overline{\ }$ | X | Met | īs: | lisposal | ssessed | | | | | | | - | - | - | | | | | | | | | | | | ueste | | of Cus | | | |
| 7 | - 2 | | 0 | hod of Shi | | By Lab | i if sam | | | | | | - | | | | | | | | | | | <u> </u> | | | <u> </u> | | | tody | | | |
| 进 | te/Time, | ite/Time; | te/Time: | pment | | | oles are | L L | | | | | <u> </u> | | 1 | 1 | | | | | | | - <u></u> | | | | <u> </u> | | | | | | |
| 1.7 | | | 111 | ~ | | Archi | retaine | · | - | | 2. | | | | | | | <u>.</u> | X | Total Number | ofco | ntaine | 18 | | | | | | | | | | |
| 13.700 | 、 | | 11:52 | | | ve For | d longer than | | | | | | | | | | | | | Special | Other | | I - Ice J - DI Water | G - Amchier H - Ascorbic Acid | D - Nitrie Acid E - NaHSO4 E - MaOt | B - NaOH C - Zn Acetate | Preservation C | Job #. 480-686281 | Page: Page 1 of 1 | COC No: 480-20392,1 | | lest/ | |
| { } | Company | Company ' | Company_JA Co | | | Months | 1 month) | | | | | | | | | | | | | Instructions/Note: | | vv - yn 4-5 2 - other (specify) | U - Acetono V - MCAA | S - H2SO4 T - TSP Dodecahydrate | P - Na204S Q - Na2SO3 | N = None O - AsNaO2 | N - Herone | | | | 'ENVIGONMENTAL TESTING | America | |

ARCADIS

Appendix F

Waste Profile and Shipping Documents



WASTESTREAM INFORMATION PROFILE

| Recertificat | ion | | | Disposal Code |
|------------------|---------------------------------------|------------------------------------|-----------------------------|---------------|
| Veolia ES LOG | CATION | (IT) | | |
| Invoice A | ADDRESS | СПУ | SI | |
| Manifest f | from – blank if direct | | | |
| Veolia ES TSE | DF requestedTechnology re | equested Generator No | Generator EP/ | A ID No |
| 1. Generator | Name New York State Departs | nent of Environmental Conservation | Generator Stat | te No |
| Address F | oundry Street | | State Wastestr | eam No |
| City Oweg | 0 | State NY | Country USA ZIP 13827 | 4 |
| NAICS (SI | IC) Code | Source Origin | Form 5 | System Type |
| 2. Waste Nan | ne Investigation Derived Waste | Soils | Lab or W | Vaste Area |
| 3. Process Ge | enerating Waste <u>Subsurface Inv</u> | estigation | | |
| 4. Shipping N | Name NON HAZARDOUS, NON | N DOT REGULATED | | |
| Hazard Cl | ass <u>None</u> UN/NA | No PG RQ amtlb | | |
| RQ Desc: | 4. | 2. | | |
| DOT Desc: | l | 2. | | |
| 5 Waste Cod | les | | | |
| S. Waste Cou | | | | |
| 6. Physical an | d chemical properties | (check all that apply) | | |
| pH | Specific Gravit | y Flash Point (F) | Solids | |
| a 🗌 < 2 | a<.8 | $a \square < 80$ | % suspended | % ash |
| b 2-5 c X 5-9 | b [].8-1.0 | B B 80 - 100 | % settleable % dissolved | BTU/lb |
| d 7 9 - 12.5 | d 1.0 - 1.2 | d 141 - 200 | | |
| e 🔲 > 12.5 | e 🔲 > 1.2 | e 🖾 > 200 | | |
| exact | exac | f no flashexact | Free Liquid Rangeto | % |
| Phys | ical State | Hazardous Characteristics | | Odor |
| s 🛛 solid | a 🗋 air | reactive reactive or | r NRC regulated | a none 🖂 |
| m semi-sol | id w 🗌 wat | er reactive s shock sensitive | ve | c strong |
| n nquia | le semi-solid | ide reactive m polymerization | on/monomer | describe |
| f flowable | powder e exp | losive n OSHA carcin | iogen | |
| g 🗌 gas | o 🗌 oxi | dizing acid I 🗌 infectious | | Halogens |
| a 🗌 aerosol | p per | oxide former h 🗌 inhalation ha | zard Zone: _ | Br % Bromine |
| r pressuriz | ed liquid | | | Cl % Chlorine |
| d debris pe | er 40 CFR 268.45 | | | F % Fluorine |
| nsnarps | a multilavarad: | h hilavarad: | c X single phase | 1 /8 lodine |
| | Top Laver | Second Laver | Bottom Laver | Color |
| Viscosity | high (syrup) | high (syrup) | high (syrup) | Gray-brown |
| by | medium (oil) | medium (oil) | medium (oil) | |
| Layer: | low (water) | low (water) | low (water) | |
| | solid | solid | solid solid | |
| Used oil y/n _ | HOC <1000 ppm_or > 10 | 00 ppm page 1 of 2 | | |

WIP No.

| | Constituents | Kange | Units | Constit | uents | Kange | Units |
|---|--|---|---|--|---|---|---------------------------------|
| | Soils | 98-100 | % | | | 19- | |
| | Water | 0-2 | % | | | | <u>E</u> - |
| 2 | | | 1200 | | | 11 2 5 | 100 |
| | | | | - | | | 100 |
| | | | | | | | |
| - | | | | | | | |
| - | | | 1. 2. 3 2 | | | | 100 |
| | | | | | | | 12.2 |
| ota | Composition Must Equal or Exceed 100% | | | | | | |
| Ju | er: s the wastestream being imported into the USA' | , | | | Yes No | | |
| Ċ, | Does the wastestream contain PCBs regulated by | 40CFR? | | | Yes No | | |
| 1 | CB concentrationppm | | | | | | |
|). 1 | s the wastestream subject to the Marine Pollutar | nt Regulations? | A 100 | | Yes No | | |
| | f ves is the wastestream subject to Notification | and Control Require | ar / ments? | | | | |
| j | Benzene concentration ppm | and condition reequire | intento) | | | | |
| 1 | Does it contain >= 10% water? | | | | Yes No | | |
| | What is the TAB at your facility? | aantes 1-9 | | | Mg/Yr | | |
| 2. 1 | olatile organic concentration, if known | opmw | | | | | |
| | CC approved analytical method 🔲 Generator | Knowledge 🗌 | | | | | |
| 3. 1 | s the wastestream from a CERCLA or state man | dated cleanup? | | | Yes 🛛 No 🗌 | | |
| | Other | Bulk Liquid | Type/S | ize: Drum 🖾 Typ | e/Size: STL/55 gal | | |
| 5. | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> | Bulk Liquid Quarter | Type/S Year | ize: Drum ⊠Typ □ One Time ⊠ Oth Environmental Remediati | er on | | |
| 5. | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> | Bulk Liquid Quarter Quarter Address: NYS DEC Attn: Pays | Type/S Year | ize: Drum 🖾 Typ | oe/Size: <u>STL/55 gal</u> er <u>on</u> | | |
| 5. | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> | Bulk Liquid Quarter Quarter Attn: Pays 625 Broady | Type/S Year - Division of on Long way - Alban | ize: Drum ⊠Typ □ One Time ⊠ Oth <u>Environmental Remediati</u> y, NY 12233 | er er on | | |
| 5. | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> | Bulk Liquid Quarter Quarter Address: NYS DEC Attn: Pays 625 Broads Phone: 518 | Type/S Year - Division of on Long way - Alban 4-402-9813 | ize: Drum ⊠Typ □ One Time ⊠ Oth <u>Environmental Remediati</u> y, NY 12233 | oe/Size: <u>STL/55 gal</u> er <u>on</u> | | |
| 5. | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> | Bulk Liquid Quarter Quarter Attn: Pays 625 Broady Phone: 518 | Type/S Year - Division of on Long way - Alban 8-402-9813 | ize: Drum ⊠Typ □ One Time ⊠ Oth <u>Environmental Remediati</u> y, NY 12233 | oe/Size: <u>STL/55 gal</u> er <u>on</u> | | |
| 5. s ar FI her i re | Other Shipping Frequency: Units 2 Per Month Additional Information: Generator Mailing A alytical or an MSDS available that describes the IERATOR CERTIFICATION eby certify that all information submitted in this orseentative as defined in 40 CFR 261 - Append ossession of the generator has been disclosed. | Bulk Liquid Quarter Quarter Quarter Attn: Pays 625 Broady Phone: 518 waste? Ye and all attached doc ix 1 or by using an exit | ☐ Type/S Year - Division of on Long way - Alban -402-9813 s ⊠ No [cuments cont quivalent me of any waste | ize: Drum ⊠Typ ☐ One Time ⊠ Oth <u>`Environmental Remediati</u> <u>y, NY 12233</u> ☐ If yes, please attach. ains true and accurate descrithod. All relevant informati shipment for purposes of re | pe/Size: <u>STL/55 gal</u> er on on ptions of this waste. At on regarding known or certification. | ny sample s suspected l | ubmit |
| 5. El her ne p | Other Shipping Frequency: Units 2 Per Month Additional Information: Generator Mailing A alytical or an MSDS available that describes the IERATOR CERTIFICATION eby certify that all information submitted in this porsentative as defined in 40 CFR 261 - Append ossession of the generator has been disclosed. If Payson Long | Bulk Liquid Quarter Quarter Quarter Attn: Pays 625 Broady Phone: 518 waste? Ye and all attached doc ix 1 or by using an ex authorize sampling | ☐ Type/S Year - Division of on Long way - Alban -402-9813 s ⊠ No [cuments cont quivalent me of any waste | ize: Drum \boxtimes Typ Drum \boxtimes Typ One Time \boxtimes Oth <u>Environmental Remediati</u> <u>y, NY 12233</u> If yes, please attach. ains true and accurate descrithod. All relevant informati shipment for purposes of re (5 - 18) 4 ox - 981. | pe/Size: <u>STL/55 gal</u> er on on on regarding known or certification. <i>3</i> // / | ny sample s suspected 1 $\frac{15}{2010}$ | ubmit nazard 1 |
| 5. EI Fer | Other Shipping Frequency: Units 2 Per Month Additional Information: Generator Mailing A alytical or an MSDS available that describes the ERATOR CERTIFICATION eby certify that all information submitted in this presentative as defined in 40 CFR 261 - Appendices Payson Long NAME (PRINT OR TYPE | Bulk Liquid Quarter Quarter Attn: Pays 625 Broady Phone: 518 waste? Ye and all attached doc ix 1 or by using an ex authorize sampling | ☐ Type/S Year <u>- Division of</u> on Long way - Alban <u>8-402-9813</u> s ⊠ No [cuments cont quivalent me of any waste | ize: Drum \boxtimes Typ Drum \boxtimes Typ One Time \boxtimes Oth Environmental Remediati Y, NY 12233 If yes, please attach. ains true and accurate descrithed. All relevant informati shipment for purposes of re <u>(5-18)</u> 402-981. PHONE | ptions of this waste. An on regarding known or certification. | ny sample s suspected 1 $\frac{5}{2010}$ DATE | ubmit nazard 4 |
| 5. EI her re | Other Shipping Frequency: Units <u>2</u> Per Month Additional Information: <u>Generator Mailing A</u> alytical or an MSDS available that describes the ERATOR CERTIFICATION eby certify that all information submitted in this presentative as defined in 40 CFR 261 - Appendic ossession of the generator has been disclosed. If Payson Long NAME (PRINT OR TYPE Payson L 2g | Bulk Liquid Quarter Quarter Attn: Pays 625 Broady Phone: 518 waste? Ye and all attached doc ix 1 or by using an ex authorize sampling 3) | ☐ Type/S Year <u>- Division of</u> on Long way - Alban <u>8-402-9813</u> s ⊠ No [cuments cont quivalent me of any waste | ize: Drum \boxtimes Typ Drum \boxtimes Typ One Time \boxtimes Oth Environmental Remediati Y, NY 12233 If yes, please attach. ains true and accurate descrithod. All relevant informati shipment for purposes of re <u>(6-18)</u> 40x -981. PHONE PHONE | ptions of this waste. As on regarding known or certification. 3/ | ny sample s suspected f $\frac{5}{2010}$ DATE | ubmitt tazardı f |
| 5. s ar FI her s re ne p | Other Shipping Frequency: Units 2 Per Month Additional Information: Generator Mailing A additional Information: Generator Mailing A Exact of the second | Bulk Liquid Quarter Quarter Attn: Pays 625 Broady Phone: 518 waste? Ye and all attached doc ix 1 or by using an ex authorize sampling | ☐ Type/S Year - Division of on Long way - Alban -402-9813 s ⊠ No [cuments cont quivalent me of any waste | ize: Drum \boxtimes Typ One Time \boxtimes Oth Cenvironmental Remediati (Y, NY 12233) If yes, please attach. ains true and accurate descri- thod. All relevant informati shipment for purposes of re (G-1B) 40x -981. PHONE PHONE | ptions of this waste. At on ptions of this waste. At on regarding known or certification. 3/ Managef TITLE | ny sample s suspected f $\frac{15}{2010}$ DATE | ubmit azard 4 |

Describe

7. Chemical Composition [M = Marine Pollutant, S - Severe Marine Pollutant, O = Ozone Depleting Substance, U = Underlying Hazardous Constituent,

TSDF PROCESSING USE ONLY: PPE REQUIRED No Yes PAGE 2 OF 2



WASTESTREAM INFORMATION PROFILE

| Recertification | | | | Disposal Code |
|---|--|---|---|---|
| Veolia ES LOCATION Invoice Address Manifest from – blank if dir | ADDRESS | CITY | ST | |
| /eolia ES TSDF requested | Technology requested | Generator No | Generator | EPA ID No |
| . Generator Name <u>New Yor</u> Address <u>Foundry Street</u> City <u>Owego</u> NAICS (SIC) Code | k State Department of | <u>Environmental Conservation</u> State <u>NY</u> Source Origin _ | Generator State Wast Country <u>USA</u> ZIP <u>13</u> Form | State No estream No 3827 System Type |
| . Waste Name <u>Decontaminal</u> . Process Generating Waste . Shipping Name <u>NON HAZ</u> | ion Water Drill Rig Decontamina ARDOUS, NON DOT | tion REGULATED | Lab | or Waste Area |
| Hazard Class <u>None</u> | UN/NA No | | | |
| Q Desc: 1. | | | 2. | |
| < 2 2 - 5 5 - 9 9 - 12.5 > 12.5 | a $\square < .0$ b $\square .8 - 1.0$ c $\square 1.0$ d $\boxtimes 1.0 - 1.2$ e $\square > 1.2$ exact | $ \begin{array}{c c} a & 0 & 0 \\ b & 80 - 100 \\ c & 101 - 140 \\ d & 141 - 200 \\ e & > 200 \\ f & no flash \underline{\qquad} exact \\ \end{array} $ | % settleable % dissolved Free Liquid Range | water solubility BTU/lb |
| Physical State solid semi-solid liquid pumpable semi-solid flowable powder g gas a aerosol pressurized liquid d debris per 40 CFR 268.4. | a air reactive w water react c cyanide react f sulfide react e explosive o oxidizing a p peroxide fo | Hazardous Characteristics r radioactiv tive s shock sense active t temp sens ctive m polymeriz n OSHA car actid 1 infectious former h inhalation | e or NRC regulated sitive ation/monomer reinogen hazard Zone: _ | Odor a none b mild c strong describe Halogens Br % Bromine Cl % Chlorine F % Fluorine 1 % Iodine |
| Layers: a multilayer | ed: t |) 🖾 bi-layered: | c 🗌 single phase: | |
| To Viscosity high by medi Layer: low (|) Layer (syrup) um (oil) water) | Second Layer high (syrup) medium (oil) low (water) solid | Bottom Layer high (syrup) medium (oil) low (water) Solid | Color |
| Used oil y/n HOC <100 | 0 ppm_or > 1000 ppr | m page 1 of | 2 | WIP No. |

| 7. | Chemical Composition | [M | - Marine Pollutant, | S- | Severe Marine Pollutant, O = Ozone I | Depleting Substance, | U = Underlying Hazardous Constituent, |
|----|-----------------------------|----|---------------------|-----|--------------------------------------|----------------------|---------------------------------------|
| | | | n imminin | 100 | THE CHARTER OF THE CARDEN OF THE | 1 | |

| B = Benzene NESHAP, T = Constituents | RI Chemical, C = OS Range | HA Carcinogen Units | Constituents | Range | Units |
|---|---|---|--|----------------------------|---------------------------|
| Water | 98-100 | % | / • | 10 | lie - |
| Soils | 0-2 | % | | 14 | 117 |
| | | | | 10.00 | |
| | | | | | |
| | - | | | - | - |
| | | | | | |
| | | 1 | | i | $\mathbf{k} = \mathbf{k}$ |
| | | | | | |
| Total Composition Must Equal or Exceed 100% | | X. | | | |
| Other: 8 Is the wastestream being imported into the USA? | | | Ves No X | | |
| Does the wastestream contain PCBs regulated by | 40CFR? | - 19 | Yes No X | ić i | |
| PCB concentrationppm | | | | | |
| 10. Is the wastestream subject to the Marine Pollutant | Regulations? | | | 5 | |
| 11. Is the wastestream from an industry regulated und If yes, is the wastestream subject to Notification as | er Benzene NESH | AP? | | 19 Y | |
| Benzene concentration ppm | a control require | anemar | | 5 1 | |
| Does it contain >= 10% water? | | | Yes No | l, i | |
| What is the TAB at your facility? | optrale9 | | | | |
| Volatile organic concentration, if known pp | omw | | | S | |
| CC approved analytical method Generator H | Knowledge 🗌 | | | | |
| 13. Is the wastestream from a CERCLA or state mand | ated cleanup? | | Yes 🖾 No | <u></u> | |
| 14. Container Information (Identify UN container Packaging: Bulk Solid Type/Size: Other | marking if known) Bulk Liquid | Type/S | ize: Drum 🖾 Type/Size: <u>STL/55 gal</u> | | |
| Shipping Frequency: Units <u>1</u> Per Month L | | Year | One Time Other | | |
| 15. Additional Information: Generator Mailing Ad | dress: NYS DEC | - Division o | Environmental Remediation | | |
| | Attn: Pays | on Long | | | |
| | 625 Broad | way - Alban | y, NY 12233 | | |
| | Phone: 518 | 8-402-9813 | | | |
| | | | | | |
| Is analytical or an MSDS available that describes the GENERATOR CERTIFICATION I hereby certify that all information submitted in this a is representative as defined in 40 CFR 261 - Appendix the possession of the generator has been disclosed. 1 a | waste? Ye ind all attached doo (J or by using an e authorize sampling | s No cuments con quivalent me of any waste | If yes, please attach. ains true and accurate descriptions of this waste. A thod. All relevant information regarding known or shipment for purposes of recertification. | ny sample s suspected l | submitted hazards in |
| Payson Long | | | (518) 402-9813 111 | 5/201 | 4 |
| NAME (PRINT OR TYPE) | | | PHONE | DATE | |
| Kaylon DZ9 | | | Project manago | | |
| SIGNATURE | | | TITLE | | |
| | | | All a second | | |

If approved for management, Veolia ES has all the necessary permits and licenses for the waste that has been characterized and identified by this profile.

| TSDF PROCESSING USE ONLY: PPE REQUIRED | No | Yes | Describe |
|--|----|-----|----------|
| | | | |



| D(5. (<u>Ger</u> 6. 1 | OCUMENT | 1 Generator ID Number | 2. Page 1 o | f 3. Emergency Response | e Phone | 4. Shipping [| Document | Tracking Numbe | ır 👘 | | |
|---|---|--|--|-----------------------------|-----------------------------------|--|------------|-------------------------|----------------------------------|---|--|
| 5. 0 Gei 6. T | | NVCRSOG | 1 | (977) \$12,6687 | | 1 Z | Ζ 0 | 0344 | 086 | 5 | |
| Gei 6. T | Generator's Name and Mailir | g Address | | Generator's Site Address | (if different that | n mailing address | 5) | | | | |
| Gei 6. T | | NYS DEC DIVISI | VDR V STF | STREET, OWEGO | | | | | | | |
| Gei 6. T | | ATTN: PAYSON 625 RROADWAY | LUNG T | FOUNDRY STR | BET | | | | | | |
| 6.1 | nerator's Phone: 518 40 | 12.0213 ALBANY. NY 12 | 1233 | OSWEGO, NY | 13827 | | ł | | | | |
| | Transporter 1 Company Nam | e | | · | | U.S. EPA ID N | umber | | | | |
| U5 | S ENVIRONMENT. | AL. INC | | | | PAR | 0 0 | 0 5 2 4 | i) 4 | | |
| 7.T | Fransporter 2 Company Nam | e | | | | U.S. EPA ID N | umber | | | | |
| Vi | IOLIA ES TECHNI | CAL SOLUTIONS | | | | NJD | 8 6 | 6 6 3 1 | 3 6 | 9 | |
| 8 . C | Designated Facility Name an | d Site Address | TATIMAN OPERATIONS | | | U.S. EPA ID N | umber | | | | |
| | | 4391 INFIFMARI | INICAL SOLUTIONS - | | | | | | | | |
| | | | | | | | | | | | |
| Fac | ility's Phone: 037 85 | 9-6101 WEST CARROLL | TON, OH 45449 | | | OHE | 9 9 | 3 9 4 5 | 2.9 | 1 | |
| 9a. | 9b. U.S. DOT Description | on (including Proper Shipping Name, Haza | rd Class, ID Number, | 10. Conta | ners | 11. Total | 12. Unit | 12.0 | | | |
| HM | and Packing Group (if a | ny)) | | No. | Туре | Quantity | Wt./Vol. | 13, 000 | es | | |
| | ^{1.} NON HAZAR | DOUS, NON DOT REGUL | ATED MATERIAL | | | | | NONE | | | |
| | | | | ω_{I} | | | | | | | |
| | | | | (E.) X | 12 BVI . | 22256 | Ę. | 1. | | | |
| | 2. NON HAZAR | DOUS, NON DOT REGUL | ATED MATERIAL | 5.52 | | | | HOME | | | |
| | | | | 15 1 | 75.32 | | 15 | | | | |
| | | | | CV2 | DM | 20500 | i' | - | | | |
| | 3. | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | 4. | | | | | | | | | | |
| | | | | | | | | | | | |
| | | Construction of the American | | | | | | | | | |
| 14. | Special Handling Instruction | S and Additional Information E. | R Service Contracted by | VESTS | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 45 | | | | 6.0 | | and the second second second | | | | | |
| 15. | marked and labeled/placar | ded, and are in all respects in proper cond | lition for transport according to appl | cable international and nat | scribed above d ional governme | iy the proper ship ntal regulations. | iping name | , and are classified | еа, раскад | ea, | |
| | | | | | | | | | ~ | | |
| Gen | erator's/Offeror's Printed/Tv | ped Name | Si | mature | | 6 | | Month | Dav | Year | |
| -1 | Conner Willie | At my list if | | 1 | 1.4 | 1_ | | 1 | 10 | | |
| 40 | International Shipments | | | -Runn L2 | <u>~~] (N R</u> | <u></u> | | 1 | 11 6 | | |
| 1 16. | | Import to U.S. | Export from | UKS. 🖌 Port of en | Itry/exit: | Y | | | | n n | |
| 16. T | nsporter signature (for expor Transporter Acknowledomeni | is unity): | | L)ale leav | ng U.S.: 🖉 👘 | | | | | 1 4 | |
| 16. Trai | manaparter normanisagment | | | 0001001 | | | | | | - Da | |
| 16. Trai 17. Tran | sporter 1 Printed/Typed Nar | né | Sig | jnature | | | | Month | Day | e en | |
| 16. Trai 17. 1 Tran | sporter 1 Printed/Typed Nar | ne | Sig | jnature | . / | | | Month | Day | Year | |
| Trai 17. [°] Tran SE Tran | sporter 1 Printed/Typed Nar CAN HANNES sporter 2 Printed/Typed Nar | ne | Sig Sig Sig | gnature | [.] | | | Month | Day ن ر Day | Year | |
| 16. Trai 17. ¹ Tran SE Tran | asporter 1 Printed/Typed Nar CAN HANNES Isporter 2 Printed/Typed Nar | ne | Sig Sig Sig | nature | | | | Month J i i Month | Day Jo Day Day | Year Year | |
| 16. Trai 17. Tran SE Tran | Isporter 1 Printed/Typed Nar IAN HANNES Isporter 2 Printed/Typed Nar Discrepancy | ne | Sig Sig | jnature | | | | Month 3 i Month | Day Day Day | ^a d ✓Year ¹ d Year | |
| 16. Tran 17. Tran SE Tran 18.1 | ISPORT 1 Printed/Typed Nar CAN HANNES ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy | | Sig Sig | gnature | | | | Month J i i Month | Day Day Day | ° Year ∑_4 Year | |
| 16. Tran 17. Tran SE Tran 18.1 | ISPORT 1 Printed/Typed Nar CAN HANNES ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa | ne Ce Quantity | Sig Sig Type | gnature | | Partial Rejec | tion | Month J 3 t Month | Day Day Day | ₹ Year Year Year | |
| 16. Trai 17. Tran SE Tran 18. 18a. | ISPORT 1 Printed/Typed Nar ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa | ce Quantity | Sig Sig Type | gnature | t Tracking Num | Partial Reject | tion | Month | Day Day Day Full Reject | Year Year Year | |
| 16. 1 Train 3.E Tran 18. 1 18a. | ISPORT 1 Printed/Typed Nar ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General | ce Quantity | Sig Sig Type | gnature | t Tracking Num | Partial Rejection Partial Rejection Partial Rejection Partial Rejection Partial Rejection Partial Partiae Partiae Part | tion | Month | Day Day Day | ₹ Year Year ion | |
| 16. 1 Trai 17. Tran SE Tran 18. 1 18a. | ISPORTER 1 Printed/Typed Nar ISPORTER 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General | ce Quantity | Sig Sig Type | gnature | t Tracking Num | Partial Rejection | tion | Month | Day Day Day | Year Year Year | |
| 16. 1 Tran 17. 1 Tran SE Tran 18. 1 18a. | Isporter 1 Printed/Typed Nar ISPOrter 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General lithy's Phone: | ce Quantity | Sig Sig Type | gnature | t Tracking Numi | Partial Rejection Partia Rejection Partial Rejection Partial Rejection Partial Rejec | tion | Month | Day Day Day | Year Year Year | |
| 16. 1 Tran 17. Tran <u>SE</u> Tran 18. 1 18a. 18b. Faci 18c. | ISPORT 1 Printed/Typed Nar ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General litty's Phone: Signature of Alternate Facili | ce Quantity ator) | Sig Sig Type | gnature | t Tracking Num | Partial Reject per: U.S. EPA ID No | tion | Month | Day Day Full Reject | Year Year Year | |
| 16. 1 Trai 17. 1 Tran SE Tran 18. 1 18a. 18b. 18b. 18b. | Isporter 1 Printed/Typed Nar ISPOrter 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General lity's Phone: Signature of Alternate Facili | ce Quantity ator) ty (or Generator) | Sig Sig Type | gnature | t Tracking Num | Partial Reject Der: U.S. EPA ID No | tion | Month | Day Day Full Reject | Year Year Year | |
| 16. Trai 17. Tran <u>SE</u> Tran 18. 18a. 18b. Faci 18c. 19. | Isporter 1 Printed/Typed Nar ISPOrter 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Atternate Facility (or General ility's Phone: Signature of Atternate Facili Report Management Method | ce Quantity tor (or Generator) Codes (i.e., codes for treatment, disposa | Sig | gnature | t Tracking Num | Partial Reject per: U.S. EPA ID No | tion | Month | Day Day Full Reject | Year Year Year | |
| 16. Trai 17 Tran <u>SE</u> Trar 18. 18a. 18b. Faci 18c. 19. 1. | Isporter 1 Printed/Typed Nar ISPORTE 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General lity's Phone: Signature of Alternate Facili Report Management Method | ce Quantity ator) ty (or Generator) Codes (i.e., codes for treatment, disposa 2. | Sig | nature | t Tracking Num | Partial Rejection Partial Reje | tion | Month | Day Day Day Full Reject | Year Year ion | |
| 16. 1 Trai 17. ⁻ Tran <u>SE</u> Trar 18. 1 18a. 18b. 18b. 18c. 19. 1 1. | Isporter 1 Printed/Typed Nar ISPorter 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General Ility's Phone: Signature of Alternate Facili Report Management Method | ce Quantity to receip or onpinent ce Quantity ator) ty (or Generator) Codes (i.e., codes for treatment, disposa 2. | Signal Si | jnature | t Tracking Num | Partial Rejectory Der: U.S. EPA ID No | tion | Month | Day Day Full Reject | Year Year Year | |
| 16. 1 Tran SE Tran 18. 1 18a. 18b. 18b. 18b. 18b. 18b. 18b. 18b. 18b | Isporter 1 Printed/Typed Nar ISPOrter 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General Isity's Phone: Signature of Alternate Facili Report Management Method Designated Facility Owner of | ce Quantity ce Quantity ty (or Generator) Codes (i.e., codes for treatment, disposa 2. Operator: Certification of receipt of shipn | Signature Signat | gnature | t Tracking Num | Partial Rejector | tion | Month | Day Day Full Reject | Year Year Year | |
| 16. 1 Tran <u>SE</u> Tran 18. 1 18. 1 19. 1 1 1. 1 1 1. 1 1 1. 1 1 1 1 1 1 1 1 1 | ISPORTER 1 Printed/Typed Nar ISPORTER 2 Printed/Typed Nar Discrepancy Discrepancy Discrepancy Indication Spa Alternate Facility (or General Signature of Alternate Facili Report Management Method Designated Facility Owner of ted/Typed Name | ce Quantity ce Quantity ator) ty (or Generator) Codes (i.e., codes for treatment, disposa 2. Operator: Certification of receipt of shipn | I, and recycling systems) I, and recycling systems I, and recycling syste | gnature | t Tracking Num | Partial Rejector | tion | Month | Day Day Full Reject | Year Year Year Year | |
| 16. 1 Tran 17. Tran SE Tran 18. 1 18a. | ISPORT 1 Printed/Typed Nar ISPORT 2 Printed/Typed Nar Discrepancy Discrepancy Indication Spa Alternate Facility (or General litty's Phone: | ce Quantity ator) | Sig Sig Type | gnature | t Tracking Num | Partial Reject per: U.S. EPA ID No | tion | N N N | lonth | I I I I I I I I I I I I I I I I I I I | |

1 ha

| \odot | VEOLIA | .' | |
|---------|--------------|-----|---------|
| - | ENVIRONMENTA | L S | ERVICES |

PACKING SUMMARY

Generator Number: 817707 NYS DEC FOUNDRY STREET, OWEGO FOUNDRY STREET OSWEGO, NY 13827 Attn: PAYSON LONG EPA ID:NYCESQG Manifest Number:ZZ00344086Field System (D):FRWork Order Number:2117457000Date Shipped:11/06/2014

| Container# FR-2117457000-002 | Waste Area | Manifest Page/Line: 01 / 1 |
|-----------------------------------|-----------------------------------|---|
| WiP: 691307 DisposalCode: | SRRLFLIQ-NH PHY State | <u>م</u> ــــ |
| Date Accumulated: 11/06/2014 | | Gen Drum ID: |
| Shipping Name: NON HAZARDOUS, N | NON DOT REGULATED MATERIAL | |
| No. of Commons: 01 | Outer Container: 551A1-DM | Inner Container: |
| Primary Waste Codes: NONEL | PCB Serial #: | OOS Date: // |
| Total Crinis Wt 4288 4-2 SIC: 95 | 12 Source: G19 Form: W219 | System H141 Cubic Ft.: 7.50 ²⁴ |
| ft | 2 69, 18 0 (POUNDS) | |
| Units Container Size Net Weig | ht Chemical Name | EPA/State Codes |
| i 55 GAL 🐔 | WATER [98-100%] SOIL [0-2%] | NONE, L |
| Container#: FR-2117457000-001 | Waste Area: | Manifest Page/Line: 01 / 2 |
| WIP: 691309 DisposalCode: | SRRLFSOLID-NH PHY State | a: 8 |
| Date Accumulated: 11/06/2014 | | Gen Drum ID: |
| Shipping Name: NON HAZARDOUS, N | ION DOT REGULATED MATERIAL | <u>.</u> |
| No. of Commons: 032 | Outer Container, 551A2-DM | Inner Container. |
| Primary Waste Codes: NONE,L | PCB Serial # \ | OOS Date: 11 |
| Total Crinis With 500 SIC: 951 | 12 Source: G18 Form: W219 | System H141 Cubic Ft.: 7.50 |
| Individual Common Weights: 400,40 | 22-25 20.400 (POUNDS) | |
| Units Container Size Net Weig | ht Chemical Name | EPA/State Codes |
| 1 55 GAL 🕰 ב | SOIL 198-100%) WATER 10-2%) | NONE 1 |



| Activity Report | JOB NO: 2117457000 BILL DOC NO FR40100289 GENERATOR NO 617707 | | | | WO NO: 2117457000 | | | | |
|---|---|---|----------------|------------------------------------|---|------------|--|--|--|
| | | | | | D: NYCE | SQG | | | |
| BILL TO: ARCADIS 28550 CABOT DRIVE NORVI, MI 48377 (123) 456-7890 | JOB SITE: NYS DEC FOUNDRY STREET, OWEGO FOUNDRY STREET OSWEGO, NY 13827 (518) 402-9813 | | | | | | | | |
| CONTACT: LIZ MARSH | cc | INTACT: PAY | SON LONG | ĩ | | | | | |
| MANIFEST NUMBER(3): ZZ00344086 | | | | | | | | | |
| CUSTOMER P.O. NUMBER PROJECT NUMBER | | ۵۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ - ۲۰۰۵ ۱۰۰۰ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - ۲۰۰۹ - | SHIP DATE | | | TERR. | | | |
| | 22 - 2010 - 44 194 194 194 194 194 194 194 194 194 | والمحاولة الأركب والمحالية والمحالية والمحاولة والمحاولة والمحاولة والمحاولة والمحاولة والمحاولة والمحاولة وال | 11/06/201 | 4 | | NY2 | | | |
| DESCRIPTION | # CONT. | CONT./CODE | QTY | NON | PG/LN | WASTE AREA | | | |
| Manifest # Z200344088 WP 691307 / Approval SRRLFEIQ-NH DECONTAMINATION WATER | ŀ | 551A1-DM | 50 | Į٣ | 1/1 | 14 | | | |
| Manifest # ZZ00344086 WIP 691309 / Approval SRRLFSOLID-NH INVESTIGATION DERIVED WASTE SOILS | 3 | 551A2-DM | Sw | 2 | 1/2 | 2 data. | | | |
| | T #of(| otal Hours: Containers: | 0 6 | ********************************** | na – de de caracter de la construcción de la co | | | | |
| Comments: | | | | | | | | | |
| Signature: Jung la hurt | | veneral many and a more set of the | undergrow dage | | | - #\$\$., | | | |
| Print Name: Jerenny Wyckolt on | behalt | f NYSI | <u>266</u> . | | | | | | |

Veolia Environmental Solutions is permitted for and has capacity to accept waste listed above in container quantities. 1 of 1

ARCADIS

Appendix G

Well Development Log



WELL DEVELOPMENT/ PURGING LOG

| | WELL NUMBER: MW- | 9 | | DATE: | 10/1/14 | |
|----|---|------------------|---------|-------|-----------|----------|
| | | | | | | |
| | PROJECT NAME: Tioga Castin | gs | | | | |
| | PROJECT NUMBER: 00266403.00 | 000 | | | | |
| | SAMPLERS: B. Quaglieri | | | | | |
| | | | | | | |
| | | | | | | Vol. |
| A: | Total Casing and Screen Length: | | 23.33' | | Well I.D. | Gal./ft. |
| | | | | _ | 1" | 0.04 |
| B: | Casing Internal Diameter: | | 2" | | 2" | 0.17 |
| | - | | | | 3" | 0.38 |
| C: | Water Level Below Top of Casing | | 15.68' | | 4" | 0.66 |
| | | | | | 5" | 1.04 |
| D: | Volume of Water in Casing: | | 1.3 gal | | 6" | 1.50 |
| | | | | _ | 8" | 2.60 |
| | v = 0.0408 (B) ² x (A-C) = D | | | | | |
| | | | | | | |
| | v = 0.0408 ()2 | ² X (| - |) = | | gal. |
| | | | | | | |

| PARAMETER | | ACCUMULATED VOLUME PURGED | | | | | | | | | | |
|------------------------|-------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Time | 0920 | 0930 | 0940 | 1100 | 1110 | 1120 | 1130 | 1140 | 1150 | 1310 | 1320 | |
| Gallons | | | | ~6 | ~7 | | | | ~10 | ~14 | ~15 | |
| Well Volume | | | | | | | | | | | | |
| Depth to Water (ft.) | | | | 21.22 | 21.10 | | | | | | | |
| Temperature (°C) | 14.83 | 14.60 | 14.61 | 18.34 | 16.49 | 16.49 | 16.57 | 16.53 | 16.43 | 15.20 | 14.82 | |
| рН | 7.28 | 6.89 | 6.66 | 6.39 | 6.76 | 6.40 | 6.47 | 6.57 | 6.36 | 6.42 | 6.49 | |
| REDOX (mV) | 212 | 209 | 156 | 93 | 60 | 79 | 72 | 67 | 77 | 156 | 118 | |
| Conductivity (mohm/cm) | 0.376 | 0.336 | 0.333 | 0.214 | 0.348 | 0.345 | 0.344 | 0.338 | 0.339 | 0.351 | 0.337 | |
| Turbidity | over | over | over | 171 | 291 | 89.1 | 135 | 69.8 | 47.2 | 82.9 | 34.7 | |
| Dissolved Oxygen | 3.50 | 3.34 | 2.53 | 0.76 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.98 | 0.00 | |
| TDS | 0.244 | 0.218 | 0.217 | 0.206 | 0.226 | 0.224 | 0.224 | 0.220 | 0.220 | 0.228 | 0.218 | |
| Salinity | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Notes: 0900-Surged with slug.

0945-Surged with slug.

1155-Surged with slug.