NO FURTHER ACTION REPORT

FOR

FORMER DTE GREENWOOD OIL TERMINAL
298 GRATIOT BOULEVARD
MARYSVILLE, MICHIGAN

Presented to:
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

MAY 25, 2016

Prepared on Behalf of:
CDC MARYSVILLE, LLC

ENVIROLOGIC TECHNOLOGIES, INC.
2960 Interstate Parkway
Kalamazoo, Michigan 49048
(269) 342-1100

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - REMEDIATION AND REDEVELOPMENT DIVISION
PO BOX 30426, LANSING, MICHIGAN 48909-7926, Phone 517-373-9837, Fax 517-373-2637

Request for DEQ Review of No Further Action (NFA) Report

This form is required for submittal of a request for the DEQ to review a No Further Action Report, under Section 20114d, Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Section A: NFA Category (Check all that apply:)

Residential, unrestricted	☐	Restricted (limited) Residential	☐
		Restricted (limited) Non-Residential	☒
		Restricted (limited) Site Specific	☐

Does this NFA address the entire facility (as defined in Sec 20101 of Part 201): ☒

Section B: Facility Information:

Facility Name: Greenwood Oil Terminal

Street Address of Property: 298 Gratiot Boulevard

City: Marysville State: MI Zip: 48025

Property Tax ID (include all applicable IDs):
74-03-029-2005-010

Status of submitter relative to the property (check all that apply):

	Former	Current	Prospective
Owner	☐	☒	☐
Operator	☐	☐	☐

County: St. Clair
City/Village/Township: Marysville

Town: 6N Range: 17E Section: 29/28
Quarter: SW/SE Quarter-Quarter: NE/NW

Decimal Degrees Latitude: 42.931250
Decimal Degrees Longitute: -82.462245

Reference point for latitude and longitude:
Center of site ☒ Main/front door ☐
Front gate/main entrance ☐ Other ☐

Collection method:
Survey ☐ GPS ☒ Interpolation ☐

Section C: Submitter Information:

Entity/person requesting review: CDC Marysville, LLC

Contact Person (name and title): Mike Roberts, Principle

Submitter's Address: 1650 Des Peres Rd, Suite 303

City: St. Louis State: MO Zip: 63052

Telephone: (314) 835-2878 E-Mail: APeetz@eltransfer.com

Relationship of Contact Person to the Submitter: Member

Owner Name, if different from Submitter: Company:

Owner Address: City: State: Zip:

Telephone: E-Mail:

Section D: Facility/Property Subject to (Check all that apply):

Facility regulated under Part 201, other source, or source unknown Part 201 Site ID, if known: 74000339	☒
Leaking Underground Storage Tank regulated pursuant to Part 213 Part 211/213. Facility ID, if known:	☐
Oil or gas production and development regulated pursuant to Part 615 or 625	☐
Licensed landfill regulated pursuant to Part 115	☐
Licensed hazardous waste treatment, storage, or disposal facility regulated pursuant to Part 111	☐
Consent Agreement or other legal agreement with the MDEQ	☐

Section E: Are/were the following present at the facility (Check all that apply):

	Current	Previously	Unknown
Free product/Non aqueous phase liquids (NAPL)	☒	☐	☐
Soil contamination above residential criteria	☒	☐	☐
Soil contamination above non-residential criteria	☒	☐	☐
Soil aesthetic impacts	☒	☐	☐
Groundwater contamination above residential criteria	☒	☐	☐
Groundwater contamination above non-residential criteria	☒	☐	☐
Groundwater contamination above the Acute Inhalation Screening Level	☐	☐	☐
Groundwater aesthetic impacts	☒	☐	☐
Soil Gas contamination above residential vapor intrusion (vi) screening levels	☐	☐	☐
Soil Gas contamination above non-residential VIscreening levels	☐	☐	☐
Conditions immediately dangerous to life or health (IDLH)	☐	☐	☐
Fire & Explosion hazards related to releases	☐	☐	☐
Contamination existing in drinking water supply	☐	☐	☐
Imminent threat to drinking water supply	☐	☐	☐
Impact to surface water	☐	☐	☐
Impact to surface water sediments above screening levels	☐	☐	☐

Section F: The following questions assist MDEQ in evaluating the No Further Action Report:

Have other plans or reports, BEAs, DDCCs, NFAs, etc. been submitted for this facility?

Facility Name, if different than this submittal: -
Date and Name of most recent submittal: -

Response Activities or Remedial Action that have been Implemented (Check all that apply):

	Current	Previously
Excavation	☒	☐
Physical or Engineered Exposure Barrier	☐	☐
Active Soil Remediation System	☐	☐
In-situ Soil Remediation	☐	☐
Active Groundwater Remediation System	☐	☐
In-situ Groundwater Remediation	☐	☐
Groundwater Monitored Natural Attenuation	☐	☐
Containment, Physical or Hydraulic	☐	☐
Vapor Intrusion Barrier	☐	☐
Vapor Intrusion Remediation System	☐	☐
Other, Specify:		

Remedial Action Relies on (Check all that apply):

Mixing Zone	☐
Part 201 Section 20118(5) and (6)	☐
Site-Specific Criteria Section 20120b	☒
MIOSHA demonstration Section 20120a(19)	☐

Post Closure Plan and Components:

Post Closure Plan Required? Yes ☐ No ☒

Plan Includes:

Permanent Markers	☐
Restrictive Covenant	☒
Institutional Controls	☐

Post Closure Agreement and Components:

Post Closure Agreement Required? Yes ☐ No ☒

Agreement Includes:

FAM	☐
FAM, de minimus	☐
Waiver of Permanent Marker	☐

Section G: Attachments (Required):

	Yes
Environmental Professional's Affidavit is attached:	☒
Environmental Professional's Certificate of Insurance is attached:	☒
Submitter's Affidavit is attached:	☒

Section H: Environmental Professional Signature:

With my signature below, I certify that this plan and all related materials are true, accurate, and complete to the best of my knowledge and belief.

Signature: David B. Warwick Date: May 27, 2016

Printed Name: David B. Warwick

Company: Envirologic Technologies, Inc.

Mailing Address: 2960 Interstate Parkway City: Kalamazoo State: MI Zip: 49048

Telephone: 269-342-1100 E-mail: dwarwick@envirologic.com

Section I: Submitter Signature:

With my signature below, I certify that this plan and all related materials are true, accurate, and complete to the best of my knowledge and belief and I am legally authorized to sign for the submitter.

Signature: Date: 5-26-16

(Person legally authorized to bind the legal entity)

Printed Name: Mike Roberts

Title and Relationship of signatory to submitter: Member

Address: 1650 Des Peres Rd, Ste 303 City: St. Louis State: MO Zip: 63052

Telephone: (314) 835-2878 E-Mail: APeetz@eltransfer.com

This form and the no further action report should be submitted to the DEQ Remediation and Redevelopment Division District Office unless the response activity is related to a facility that is regulated by another DEQ Division. A district map is located at www.michigan.gov/deqrrd. If regulated by another division, contact should be made with that division for information on where to submit the form and report.

NFA Table of Contents
Currently under development

Affidavit of Person Submitting a No Further Action Report

Required pursuant to Section 20114d(5) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NEREPA), 1994 PA 451, as amended, to be submitted by a person submitting a No Further action (NFA) report to Michigan DEQ. All terms found in this document which are defined in Part 3, Definitions, and Part 201, Environmental Remediation, of NREPA shall have the same meaning as in the statute.

State of Missouri

County of Saint Louis

!. I, Mike Roberts, am authorized to submit this affidavit on behalf of CDC Marysville, LLC under MCL 324.20114d(5).

2. A No Further Action (NFA) report dated May 25, 2016 is being submitted for the facility referred to as the Greenwood Oil Terminal located at 298 Gratiot Boulevard, Marysville, Michigan 48040 (the "Facility").

3. The purpose of the NFA report is to detail the completion of remedial action at the Facility.

4. The remedial action at the Facility described in the NFA report was conducted in compliance with all applicable local, state, and federal laws and regulations.

5. I affirm to the best of my knowledge and belief that the NFA report prepared for this Facility, and all information, data, documents and reports relied upon for this NFA report, are true, accurate and complete.

Signature of Affiant

Sworn to before me and subscribed in my presence this 26 day of May, 2016.

Notary Public

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

REBECCA LYDON
My Commission Expires
November 1, 2017
St. Louis County
Commission #13540330

EQP4031 (REV. 11/7/12)

Environmental Consultant Affidavit for No Further Action Report

Required pursuant to Section 20114d(5) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NEREPA), 1994 PA 451, as amended, for the Environmental Consultant who prepared a No Further Action (NFA) report that is being submitted to Michigan DEQ. All terms found in this document which are defined in Part 3, Definitions, and Part 201, Environmental Remediation, of NREPA shall have the same meaning as in the statute.

State of Michigan
County of Kalamazoo

1. I, David B. Warwick, am an Environmental Consultant whose title is, Vice President–Hydrogeologist, and I am employed by Envirologic Technologies, Inc.

2. I meet the professional qualifications set forth in MCL 324.20114e(2) of NREPA. A description of my qualifications, including education and work experience, is attached.

3. I have prepared a No Further Action (NFA) report dated May 25, 2016 for the facility referred to as the Greenwood Oil Terminal located at 298 Gratiot Boulevard, Marysville, Michigan 48040 (the "Facility"). Parcel identification number: 74-03-029-2005-010. I am submitting this affidavit pursuant to MCL 324.20114d(5).

   Parcel legal description: BEG S 2D 23M 56S E 1250' FROM NE SEC COR, TH S 2D 23M 56S E 1434.03', TH S 88D 32M 23S W 691.57', TH N 1D 35M 46S W 1199.17', TH N 2D 7M 18S W 223.69', TH N 87D 36M 14S E 673.60' TO BEG SECTION 29 T6N R17E 22.35A

4. I prepared the NFA Report at the request of CDC Marysville, LLC, located at 1650 Des Peres Road Suite 303, St. Louis, Missouri 63052.

5. The remedial action at the Facility described in the NFA report was conducted in compliance with Part 201 of the NREPA, and all other applicable local, state, and federal laws and regulations.

6. I affirm to the best of my knowledge and belief that the NFA report prepared for this Facility, and all information, data, documents and reports relied upon for this NFA report, are true, accurate and complete.

David B. Warwick
Signature of Affiant

Sworn to before me and subscribed in my presence this 27th day of May, 2016.

Robyn E. Logelin
Notary Public

ROBYN E. LOGELIN
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF KALAMAZOO
My Commission Expires April 27, 2018
Acting in County of Kalamazoo

envirologic
environmental consulting + services

David B. Warwick
Vice President, Co-owner, Hydrogeologist

Education
Master of Science, Geology
Western Michigan University
Emphasis on Hydrogeology

Bachelor of Science, Geology
Eastern Kentucky University

Continuing Education:
- Short Course by John Cherry: Groundwater Contamination– A Field Perspective; Sponsored by Department of Geology, Western Michigan University
- National Water Well Association Short Course: Environmental Site Assessments for Groundwater Professionals
- Underground Storage Tank Seminar; Western Michigan University
- Wetlands: Constraints and Developments; Western Michigan University
- Risk-Based Corrective Action (RCBA) Training
- National Water Well Association Course: Corrective Action for Containing and Controlling Groundwater Contamination
- Battelle Conference on the Remediation of Recalcitrant Compounds
- USEPA Quality Assurance Project Plan Development, Review and Implementation Seminars
- Certified Land Science Technologies, Inc. Vapor Barrier Inspector
- AIPG Technical Training Workshop 2014, 2015

Professional Affiliations:
- National Ground Water Association
- Michigan Association of Environmental Professionals
- Air and Waste Management Association

Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Phone: 269-342-1100
Fax: 269-342-4945
Email: dwarwick@envirologic.com

Areas of Expertise:
Environmental investigations of industrial and commercial facilities including: contaminant investigations, risk assessments, risk based corrective actions, underground storage tank activities; due diligence/ environmental site assessments; solid waste characterizations; general environmental permitting, including air quality permits; and environmental compliance audits

Experience:
- 30 years experience
- Risk Assessment protocols applied to varying contaminant situations including organics, metals and PCBs; design and implement groundwater monitoring systems at industrial facilities and solid waste disposal areas to monitor site activities and/or investigate alleged contamination
- Part 201: Remedial investigations and action, Generic and Restricted residential and non-residential No Further Action designations; Quality Assurance Project Plans (QAPP)
- Part 213: Leaking UST investigations, remedial activities, compliance report preparation
- Environmental site assessments and due diligence activities to establish property conditions for real estate transactions
- Design and implementation of sampling programs for determining characteristics of solid waste for appropriate waste designation
- Preparation of groundwater/surface water discharge permit applications, air use permit applications, monitoring reports and continued compliance reports (PIPP, SPCC)
- Environmental compliance audits to establish compliance status of industrial/commercial facilities with environmental regulations
- Statistical analyses of groundwater data and environmental quality data
- State of Michigan Air Use Permits to install, recordkeeping

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/6/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

Walton Agency
2929 Spring Arbor Rd.
P.O. Box 3029
Jackson MI 49204

CONTACT NAME: Kathy Corden
PHONE (A/C, No, Ext): (517)787-2600
FAX (A/C, No): (517)787-3857
E-MAIL ADDRESS: kcorden@waltonagency.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Colony Insurance Company	39993
INSURER B : Cincinnati Insurance Company	10677
INSURER C : Safety National Casualty Corp	15105
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Envirologic Technologies Inc.
West Michigan Drilling
2960 Interstate Parkway
Kalamazoo MI 49048

COVERAGES **CERTIFICATE NUMBER:** CL165612977 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR X Contractors Pollution X Professional GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC			PACE303127	3/1/2016	3/1/2017	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 5,000,000 $ 300,000 $ 5,000 $ 5,000,000 $ 5,000,000 $ 5,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			EBA0182258	3/1/2016	3/1/2017	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) PD BU	$ 1,000,000 $ $ $ $ 1,000
A	X UMBRELLA LIAB X OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED X RETENTION $ 10,000			EXC303128	3/1/2016	3/1/2017	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		ENVIR2C	5/1/2016	5/1/2017	X WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Eric Walton/KCORD

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TABLES

APPENDICES

ACRONYMS

AOI—Area of Interest
AST—Aboveground Storage Tank
BGL—Below Ground Level
BTEX—Benzene, Toluene, Ethylbenzene, and Xylenes
CDC—Commercial Development Company
COC—Contaminant of Concern
DTE—Detroit Edison
ESA—Environmental Site Assessment
GOT—Greenwood Oil Terminal
GSI—Groundwater Surface Water Interface
GSIP—Groundwater Surface Water Interface Protection
GVIIC—Groundwater Vapor to Indoor Air Inhalation Criteria
MDEQ—Michigan Department of Environmental Quality
NAPL—Non-Aqueous Phase Liquid
NFA—No Further Action
NRDC—Non-Residential Direct Contact
NRVI—Non-Residential Vapor Intrusion
PSI—Particulate Soil Inhalation
PID—Photo Ionization Detector
PCB—Polychlorinated Biphenyl
PNA—Polynuclear Aromatic Hydrocarbon
RRD—Remediation and Redevelopment Division
SVIIC—Soil Vapor to Indoor Air Inhalation Criteria
TMB—Trimethylbenzene
TPH-DRO—Total Petroleum Hydrocarbons-Diesel Range Organics
USEPA—United States Environmental Protection Agency
VOC—Volatile Organic Compound
VSR—Verification of Soil Remediation

NO FURTHER ACTION REPORT

FORMER DTE GREENWOOD OIL TERMINAL
298 GRATIOT BOULEVARD
MARYSVILLE, MICHIGAN

1.0 EXECUTIVE SUMMARY AND CONCEPTUAL SITE MODEL

The following *No Further Action Report* has been prepared by Envirologic on behalf of CDC Marysville LLC. The former DTE Greenwood Oil Terminal (GOT) was purchased from DTE Energy by CDC Marysville, LLC in May 2014. During the property transaction, a *Restrictive Covenant*, limiting the site to nonresidential use and eliminating drinking water use, was filed with the property deed on May 30, 2014.

As part of a divestiture Phase II Environmental Site Assessment (ESA) by DTE Energy, field and analytical data was collected and then compiled in a January 2013 report. Envirologic performed additional site assessment and cleanup planning work, the majority of which is summarized in a January 11, 2016 report titled *Assessment Summary for the Former DTE Greenwood Oil Terminal*. The summary report was submitted to MDEQ on April 6, 2016. During site investigation activities, the GOT was subdivided into four areas of interest (AOIs), as presented in Table A.

Table A: Areas of Interest

Area J (1)—Oil Terminal (Southern Woodlot)
Area J (2)—Oil Terminal (Southern Berm)
Area J (3)—Oil Terminal (Southern Pipeline Operations/Eastern Berm)
Area J (4)—Oil Terminal (Northern/Western Berm)

The following report details the results of an investigation and ensuing corrective action activities that were conducted in select areas across the GOT.

A Conceptual Site Model for the GOT is provided in Appendix A, Figure 1. The following narrative provides a summary of the model.

1.1 Direct Contact Pathway

Arsenic, cadmium, and benzo(a)pyrene were identified in-excess of Non-Residential Direct Contact (NRDC) criteria in fill material at depth (greater than three feet below ground level [bgl]),

north of Bunce Creek. Arsenic was also identified in-excess of the NRDC criterion in fill material both at the surface and at depth, south of Bunce Creek (AOI-J(1). Non-Residential Direct Contact exceedances occurred in soil samples collected between 0.5 feet and 16 feet bgl.

In September 2015, surficial fill material (less than three feet bgl) with arsenic concentrations in excess of the NRDC criterion was excavated from AOI-J (1) and replaced with demolition debris and topsoil. The removal of the arsenic in shallow soil was confirmed by VSR samples collected around the perimeter of the excavation. Arsenic in excess of the NRDC criterion remains in soil at depths greater than three feet bgl. Notice of the NRDC exceedances at depth have been addressed through a *Restrictive Covenant* (Appendix G—file pending).

1.2 GSI Pathway

Seven metals were identified in-excess of generic Groundwater Surface Water Interface (GSI) criteria in groundwater, both north and south of Bunce Creek. Groundwater flow is generally towards Bunce Creek. The saturated thickness varies from 0.5 feet to 11 feet.

The seven metals of concern in groundwater were not identified in-excess of generic or site-specific GSI criteria in downgradient monitoring wells or pore water samplers.

1.3 Particulate Soil Inhalation and Vapor Intrusion Pathways

Cadmium in a single soil sample (J-MW76@16') was identified in-excess of the Particulate Soil Inhalation (PSI) criterion. The saturated soil sample was collected from a depth of 16 feet bgl. The concentration of cadmium in overlying soil samples did not exceed the PSI criterion. The PSI exceedance is within a direct contact exposure notification area that is included in the *Restrictive Covenant* (Section 4.3.2).

Trichloroethene and cis-1,2-dichloroethene in a single saturated soil sample (J-MW76@16') were identified in-excess of Non-Residential Vapor Intrusion (NRVI) screening levels. Neither contaminant was detected in overlying soil samples, nor are there occupied buildings at the GOT.

1.4 Drinking Water Pathway

Groundwater use has been restricted at the subject site; therefore, the drinking water pathway was only evaluated for offsite migration. Arsenic in groundwater from a monitoring well near the west property boundary (J-MW40) was identified in-excess of the Residential Drinking Water criterion. Groundwater flow near J-MW40 is generally to the west-southwest, towards the west

property boundary that runs adjacent to residential property. Arsenic was not detected in groundwater from J-MW34, installed downgradient of J-MW40 and along the west property boundary.

1.5 NAPL

Petroleum staining was observed in saturated soil from 10.5 feet to 17 feet bgl in borings J-15 and J-MW76. The depth to groundwater in monitoring well J-MW76 is 6.68 feet. No NAPL was observed in any of the monitoring wells across the GOT. No petroleum-related contaminants were identified in-excess of generic Non-Residential criteria in groundwater samples collected from the GOT. The residual NAPL body does not appear to be acting as a continuous source of dissolved contaminants.

There are no complete exposure pathways across the GOT.

2.0 BACKGROUND

2.1 Site Location and Description

The GOT is located at 298 Gratiot Blvd. in Marysville, Michigan. Specifically, the facility is located in Sections 28 and 29, Township 6 North, Range 17 East (Port Huron Township), St. Clair County, Michigan (Appendix A, Figure 2).

Coinciding with the startup of the Marysville Power Plant in the early 1920s, coal and coal combustion byproduct material was stored across the GOT (Appendix B, Images 1 and 2). In the mid-1970s, the property was converted into a bulk storage facility, where oil was stored and transported via an underground pipeline to the Greenwood Power Plant (located approximately 20 miles north of the subject site). Three aboveground storage tanks (ASTs) at the site have the capacity to hold between 67,000 and 403,000 barrels of petroleum product. The GOT is currently “mothballed” and has ceased operation as a storage facility.

Bunce Creek bisects the southern portion of the GOT and empties into the St. Clair River, approximately 0.2 miles to the east of the subject site. South of Bunce Creek, AOI-J (1) is a woodlot (Appendix A, Figure 3). The three ASTs and a large secondary containment berm (AOI-J (2), AOI-J (3), and AOI-J (4)) are situated north of Bunce Creek. The underground pipeline runs along the east side of the containment berm. Three maintenance buildings are also located near the east property boundary.

2.2 Discovery of Elevated Metal Concentrations in Fill Material and Petroleum NAPL Body

As part of additional assessment activities by Envirologic across the GOT property between 2014 and 2016, soil and groundwater samples were collected to identify constituents associated the historical storage of coal and oil at the GOT. The concentration of multiple metals, primarily arsenic, exceeds NRDC and GSI criteria in select portions of the GOT. A limited residual NAPL body was also identified along the eastern containment berm (*Assessment Summary for the Former DTE Greenwood Oil Terminal*, January 11, 2016).

3.0 SUMMARY OF SITE INVESTIGATIONS AND CONDITIONS

3.1 Assessment Investigation

DTE Energy commissioned a Phase II ESA, which was completed between October and November 2012. The Phase II ESA was implemented to evaluate environmental conditions associated with the historical storage of coal, coal combustion byproduct, and oil. As part of the Phase II ESA, 23 soil borings were advanced across the GOT. Temporary monitoring wells were set in eight soil borings north of Bunce Creek. During remedial assessment activities between July 2014 and February 2016, Envirologic advanced 73 additional soil borings to further define conditions across the GOT. Permanent monitoring wells were set in 20 soil boring locations. Six pore water sampling ports were also installed on either side of Bunce Creek. Soil boring, monitoring well, and pore water sampler locations are presented in Appendix A, Figure 3. Soil boring logs and monitoring well construction details can be found in Appendix C.

During both investigations, soil cuttings were scanned with a photo ionization detector (PID) for organic vapors. A total of 273 soil samples were collected across the GOT to evaluate the presence of soil contaminants. A total of 43 groundwater samples were collected from temporary and permanent monitoring wells across the GOT.

As part of additional assessment activities to evaluate the GSI pathway, nine pore water samples were collected from the transition zone in Bunce Creek. Prior to sampling, the creek was evaluated for gaining and losing sections approximately every 75 feet on either side of the creek. Following Section 4.2 of the USEPA SOP #EH-03 procedure for sediment pore water sampling, groundwater flux readings were collected using a PushPoint sampler. A total of six semi-permanent pore water sampling ports (SedPoint sampler) were installed in gaining sections of the creek (Appendix A, Figure 3).

Soil, groundwater, and pore water samples were analyzed for a combination of VOCs (VOCs, USEPA Method 8260), semi-volatile organic compounds (PNAs, USEPA Method 8270), polychlorinated biphenyls (PCBs USEPA Method 8082), Michigan 10 metals, boron, lithium, and sulfate (USEPA Method 200.8/6020A and 7471). Metal concentrations are reported as total and dissolved from the initial sampling event by Envirologic. Due to similarities between the two datasets, metal concentrations are reported as total for the remaining sampling events. All metal concentrations from the Phase II ESA are reported as dissolved. Analytical results are summarized in Appendix D, Table 1 and 2.

3.2 Site Geology

The subject site is relatively flat; however, the surface elevation slopes downward near Bunce Creek, forming a standard stream channel profile. Underlying the surficial granular material, a gray, low to high plasticity clay was encountered throughout the entire site. Nearby residential well logs indicate that the basal clay unit is 83 feet to 117 feet thick.

The area south of Bunce Creek (AOI-J (1)) is characterized by sand, clay, and fill material, which was observed from the surface to a depth of 7.5 feet bgl. Fill material was primarily found in the southern portion of AOI-J (1). Five piles of fill material (approximately 50 feet long by 15 feet wide by four feet tall), trending north-south, were observed between soil borings J-23 and J-43.

The area north of Bunce Creek is characterized by sand, clay, and fill material, which was observed from the surface to a depth of 21.5 feet bgl. The thickness of fill material increases near the pipeline, along the eastern portion of the subject site. Within the AST secondary containment berm, a brown, low plasticity clay liner, two feet to three feet thick, overlies one foot to seven feet of sand and the basal clay unit. The containment berm is composed of the same clay liner material and is approximately 10 feet above-grade from inside the berm. Soil borings through the containment berm identified the presence of a coal ash layer, 0.5 feet to two feet thick, at the base of the southern containment berm wall. The only layer of coal observed at the GOT was identified in soil boring J-MW77 from nine feet to 12 feet bgl. Cross-sections across the GOT, with a location map, are provided in Appendix A, Figures 4 through 6.

3.3 Site Hydrogeology

Groundwater saturation is inconsistent across the GOT site due to the undulating surface of the basal clay unit. Depth to groundwater, south of Bunce Creek, is 4.5 feet to seven feet bgl. Depth to groundwater, north of Bunce Creek, is five feet to 10 feet bgl. Static water levels are presented

in Appendix D, Table 3. The saturated thickness south of the creek varies from 0.5 feet to one foot. The saturated thickness north of the creek varies from 0.5 feet to 11 feet. Saturation was not encountered in multiple soil borings on either side of Bunce Creek (Appendix A, Figure 7). An attempt was made to set permanent monitoring wells at several boring locations with limited saturation (J-24, J-44, and J-84); however, no water presented in the wells after a 24-hour period. Groundwater flow at the GOT is towards Bunce Creek; south of the creek groundwater flows to the east while north of the creek groundwater flow is generally to the southwest (Appendix A, Figure 7). Results from the Bunce Creek groundwater flux evaluation indicate that the creek is primarily gaining, yet there are localized losing sections (Section 3.1).

3.4 Chemicals of Concern

The following COCs were identified in soil (Table B) and groundwater (Table C) samples from the Phase II ESA and additional assessment activities.

Table B: Soil COCs

Compound	Sample Location	Sample Depth (ft)	Maximum Concentration (µg/kg)
Arsenic	J-MW40, J-63	9', 18'	150,000
Barium	J-MW76	16'	3.10E+06
Cadmium	J-MW76	16'	3.60E+06
Chromium	J-MW76	16'	33,000
Copper	J-MW76	16'	150,000
Lead	J-MW76	16'	110,000
Lithium	J-15B	12'-13'	150,000
Mercury	J-17	6'-8'	1,490
Selenium	J-15	4'-5'	17,800
Silver	J-17	6'-8'	2,020
Zinc	J-17	6'-8'	1.13E+06
Benzo(a)pyrene	J-MW76	9'	8,800
Fluoranthene	J-MW76	9'	22,000
Naphthalene	J-17	6'-8'	1,000
Phenanthrene	J-MW76	9'	16,000
Trichloroethene	J-MW76	16'	870
1,3,5-TMB	J-15A	5'-6'	2,200

The highest soil contaminant concentrations were identified in the southern pipeline operations area (AOI-J (3)) and along the southern containment berm (AOI-J (2)). Note that soil samples J-MW40@9', J-63@18', J-MW76@9', and J-MW76@16' were collected from saturated fill material.

Table C: Groundwater COCs

Compound	Sample Location	Sample Depth (ft)	Maximum Concentration (µg/L)
Arsenic	J-15A	5'-10'	437
Cadmium	J-MW81	3'-8'	23
Copper	J-MW81	3'-8'	47
Lead	J-1	5'-10'	16
Selenium	J-5	5'-10'	14
Silver	J-MW21	1'-6'	0.25
Zinc	J-MW81	3'-8'	2,000

Note: (n) – groundwater sample collected from a temporary monitoring well, analyzed for dissolved metals

Metals were the only COCs identified in groundwater at the GOT. The highest concentration of COCs was observed in monitoring wells located in AOI-J (1), AOI-J (2), and AOI-J (3). Note that the highest concentration of arsenic, lead, and selenium was identified in groundwater samples collected from Phase II ESA temporary monitoring wells.

3.5 Extent of Contaminants

Soil and groundwater samples collected from the Phase II ESA and remedial assessment activities by Envirologic indicate that the majority of COCs are in fill material overlying the basal clay unit. Most COCs were observed in the woodlot south of Bunce Creek (AOI-J (1)), along the southern containment berm (AOI-J (2)), or in the southern pipeline operations area (AOI-J (3)). The COCs identified in soil from AOI-J (4) are metals attributed to natural background levels (Section 4.2.2).

3.6 Nature of NAPL Contaminant Body

A limited residual NAPL body was identified along the southern pipeline operations area (AOI-J (3)). Petroleum staining was observed in saturated soil from boring J-MW76 at 10.5 feet to 17 feet bgl. A sheen in soil cuttings from J-15 was observed at 12.5 feet to 15.5 feet bgl. A saturated soil sample was collected at 16 feet bgl from J-MW76 and analyzed for TPH-DRO (USEPA Method 3546). According to Table 1 of the MDEQ *NAPL Characterization, Remediation, and Management*

for Petroleum Releases document (2014), the TPH-DRO value of 2,500 mg/kg from J-MW76@16' is above the recommended screening level (1,050 mg/kg) for a mobile NAPL body.

In lieu of the TPH-DRO value, several lines of evidence suggest that the NAPL body is residual. No measurable amount of NAPL has been observed in J-MW76 (screen set from 12 feet to 17 feet bgl) or any other monitoring wells across the GOT. No petroleum-related COCs (VOCs or PNAs) exceed generic criteria in any groundwater samples collected at the GOT, including samples from J-15 and J-MW76. The data indicates that the NAPL body is no longer acting as a source of dissolved COCs. The horizontal and vertical extent of the NAPL body has been noted in the *Restrictive Covenant* (File Pending).

4.0 PATHWAY EVALUATION

4.1 Summary of Site Conditions

4.1.1 Land Use and Zoning

The subject site is zoned as utility property. The subject site is bound by property zoned for utility use to the north and south, a railroad to the east, and a residential mobile home park to the west. Within a half mile of the subject site, the surrounding land use is a mixture of industrial, utility, and residential.

4.1.2 Surface Water

The nearest surface water body is Bunce Creek, which bisects the southern portion of the GOT (Appendix A, Figure 3). Bunce Creek flows to the east and empties into the St. Clair River, approximately 0.2 miles from the GOT.

4.1.3 Water Supply

The subject site is supplied by municipal water. A groundwater use restriction was placed on the property deed during the property transaction.

4.1.4 Utilities

The subject site is serviced by overhead electric. A natural gas line runs parallel to the east property boundary and appears to service the maintenance buildings. The underground pipeline is located in the eastern portion of the site and runs the length of the GOT. A water line runs around the outside of the AST secondary containment berm and services a series of fire suppressant sprayers. Several stormwater lines convey stormwater from the pipeline operations area and from within the AST secondary containment area into an oil-water separator, prior to

discharging into Bunce Creek. A drain swale runs along the west property boundary and terminates into Bunce Creek. Adjacent to the drain swale, a 12-inch storm line, of unknown origin, empties into Bunce Creek.

4.2 Alternative Criteria

4.2.1 Site-Specific GSI Criteria

To calculate site-specific GSI criteria based upon the receiving water body, pH and hardness values were recorded directly from Bunce Creek. An unpreserved water sample was collected from Bunce Creek and submitted for hardness analysis (USEPA Method 0200.8). The pH of Bunce Creek was recorded in the field using an Oakton pH meter. A site-specific GSI criterion value for copper and lead were calculated following guidance in Footnote G of the MDEQ-RRD *Footnotes for Generic Cleanup Criteria Tables* (2013). The generic GSI criteria for copper and lead are based upon a hardness value used for the entire southern portion of the Lower Peninsula (150 mg/L as $CaCO_3$). The hardness of Bunce Creek is 270 mg-$CaCO_3$/L. Below, Table D summarizes generic and site-specific GSI criteria for copper and lead. The hardness analytical report for Bunce Creek can be found in Appendix E.

Table D: Site-Specific GSI Criteria

Bunce Creek – pH:	7.41
Bunce Creek—hardness (mg-$CaCO_3$/L):	270
Copper—Site specific GSI Criterion (µg/L):	21
Copper—Generic GSI Criterion (µg/L):	13
Lead—Site specific GSI Criterion (µg/L):	45
Lead—Generic GSI Criterion (µg/L):	14

4.2.2 Natural Soil Background Values (Metals)

Throughout the GOT, the concentration of numerous metals in soil exceeds generic Groundwater Surface Water Interface Protection (GSIP) criteria; however, many of these exceedances have been attributed to natural background concentrations. Soil data was compared to the MDEQ *Michigan Background Soil Survey* document (2015), which provides a detailed interpretation of background metal concentrations in soil from the Huron-Erie glacial lobe in southeast Michigan. An expected range of values for metals in soil throughout the state is listed in Table 1 of the document. In the same report, Tables 2, 3, and 4 provide the two standard deviations of the mean for metals in the appropriate material (topsoil, sand, and clay) from the Huron-Erie glacial lobe (MDEQ, 2015). To evaluate soil data from the GOT for a particular metal, a target background value was selected from

either the uppermost value from Table 1 or two standard deviations of the mean for the appropriate soil type from the Huron-Erie lobe (Tables 2, 3, or 4), whichever of the two values was less (Table E). When evaluating copper and mercury in sand, the default background value was used.

Table E: Background Values for Metals

Metal	Default Background	Uppermost Value (Table 1)[1]	Sand - 2 S.D. (Table 3)[1, 2]	Clay - 2 S.D. (Table 4)[1, 2]
Arsenic	5,800	**22,800**	26,300	31,400
Barium	75,000	**172,000**	199,000	227,000
Cadmium	1,200	**2,000**	2,000	3,100
Chromium	18,000	**55,600**	**30,400**	77,000
Copper	**32,000**	50,600	23,500	**46,900**
Lead	21,000	38,900	**24,100**	**26,200**
Lithium	9,800	**37,900**	**9,600**	40,400
Mercury	**130**	**500**	120	580
Selenium	410	**1,300**	3,900	**1,200**
Silver	1,000	**1,400**	**1,200**	6,000
Zinc	47,000	118,000	**85,800**	**102,000**

(1) Background values (µg/kg) from Table 1, 3, and 4 originate from the MDEQ Michigan Soil Background Survey document (2015); (2) Values from the Huron-Erie glacial lobe; (**n**)—used as background value for appropriate soil material.

4.3 Risk Evaluation

Based on site characterization information and the distribution of contaminants across the GOT, the following potential exposure pathways inclusive of receptors and routes of exposure, were identified for the site:

- Human exposure via direct contact with contaminated soil.
- Human exposure via inhalation of volatilized soil or groundwater contaminants to indoor air.
- Human exposure via inhalation of volatilized soil or groundwater contaminants to ambient air.
- Human exposure via inhalation of contaminated soil particulates.
- Flammable and explosion hazard.

There are no imminent threats or hazards that require immediate mitigation relative to the subject release.

As the subject property is restricted to non-residential use, contaminant concentrations are compared to Part 201 Tier 1 generic Non-Residential Criteria (MDEQ-RRD *Operational Memorandum #1*, December 31, 2013). Due to site conditions, contaminant concentrations are also compared to NRVI screening levels (MDEQ-RRD *Guidance Document for the Vapor Intrusion Pathway*, May, 2013). A groundwater use restriction was placed on the property prior to the start of remedial site characterization by Envirologic and as such, the drinking water pathway was not viewed as a relevant pathway for the majority of the site. An exception to the drinking water pathway evaluation was along the western property boundary, where the potential for offsite migration existed.

Soil analytical data is compared to Non-Residential criteria in Appendix D, Table 1. The following Non-Residential criteria exceedances, for applicable pathways, were noted in soil samples.

- Direct Contact
  - Arsenic
  - Cadmium
  - Benzo(a)pyrene
- Groundwater Surface Water Interface Protection (GSIP)
  - Arsenic
  - Barium
  - Cadmium
  - Chromium
  - Copper
  - Lithium
  - Mercury
  - Selenium
  - Silver
  - Zinc
  - Naphthalene
  - Fluoranthene
  - Phenanthrene
  - 1,3,5-TMB
- Particulate Soil Inhalation
  - Cadmium

- Vapor Intrusion
  - cis-1,2-Dichloroethene
  - Trichloroethene

Groundwater analytical data is compared to Non-Residential criteria in Appendix D, Table 2. The following Non-Residential criteria exceedances, for applicable pathways, were identified in groundwater samples.

- Drinking Water (only applicable along the western property boundary)
  - Arsenic
- Groundwater Surface Water Interface (GSI)
  - Arsenic
  - Cadmium
  - Copper
  - Lead
  - Mercury
  - Selenium
  - Zinc

Current site conditions suggest that there are no complete exposure pathways across the GOT. Institutional controls have been implemented to prevent unacceptable exposure for the drinking water, direct contact, and particulate soil inhalation pathways.

The following presents a detailed evaluation of exposure risk across the GOT.

4.3.1 Groundwater Surface Water Interface (GSI)

Based upon soil and groundwater analytical data from the Phase II ESA and remedial site characterization by Envirologic, the concentration of several COCs exceed GSIP and/or GSI criteria in select locations across the GOT.

– South of Bunce Creek: The concentration of the four COCs in groundwater (cadmium, copper, mercury, and zinc) do not exceed generic GSI criteria in downgradient groundwater or pore water samples. Note that the concentration of arsenic (11 µg/L) in a second pore water sample from PW-2 is marginally above the GSI criterion (10 µg/L). Arsenic was not

detected in any groundwater samples collected from permanent monitoring wells in AOI-J (1).

– North of Bunce Creek: The concentration of the five COCs in groundwater (arsenic, cadmium, copper, lead, selenium) do not exceed applicable GSI criteria in downgradient groundwater or pore water samples. Note that the concentration of copper and lead in a pore water sample from PW-6 does not exceed the site-specific GSI criteria, presented in Table D.

Due to a lack of contaminant conveyance into Bunce Creek at concentrations in-excess of GSI criteria, current site conditions indicate that there is no unacceptable exposure risk via the GSI pathway.

4.3.2 Direct Contact

Excavation in AOI-J (1) has adequately removed surficial soil where the concentration of arsenic exceeds the NRDC criterion (Section 5.0). Upon completion of excavation, there were no NRDC criteria exceedances for arsenic in the final set of surficial VSR samples (collected at a depth less than three feet bgl).

Soil analytical data from the Phase II ESA and remedial site characterization by Envirologic indicates that arsenic (in AOI-J (1) and AOI-J (2)), cadmium (in AOI-J (3)), and benzo(a)pyrene (in AOI-J (3)) exceed NRDC criteria at a depth greater than three feet bgl.

As outlined in the *Restrictive Covenant* (File Pending) provided in Appendix G, a direct contact exposure notification encompasses areas where COCs were identified in-excess of NRDC criteria at depth (greater than three feet bgl). Due to the depth of contaminants, a direct contact barrier is not necessary; however, soil management precautions for the impacted areas are outlined in the *Restrictive Covenant*. The approximate exposure notification areas are presented in Appendix A, Figure 8, while the surveyed areas are included in the *Restrictive Covenant*.

The data indicates that there is no unacceptable exposure via the direct contact pathway.

4.3.3 Drinking Water

The concentration of arsenic in groundwater from a monitoring well (J-MW40) near the west property boundary exceeds the Residential Drinking Water criterion. While groundwater use has been restricted at the subject site, the direction of groundwater flow near J-MW40 is towards the

west property boundary, adjacent to residential property. A monitoring well (J-MW34) was installed along the west property boundary, downgradient of J-MW40. Arsenic was not detected in groundwater from J-MW34.

The data indicates that there is no unacceptable exposure, via the drinking water pathway, for offsite migration. There is no onsite exposure risk due to restrictions that are in place.

4.3.4 Ambient Air Inhalation

The concentration of cadmium in a single soil sample (J-MW76@16') exceeds the PSI criterion. The saturated soil sample was collected from a depth of 16 feet bgl. Cadmium was not detected in a soil sample collected at nine feet bgl from the same soil boring (J-MW76). A direct contact exposure notification area encompasses J-MW76 (Section 4.3.2).

There were no Volatile Soil Inhalation criteria exceedances. The data indicates that there is no unacceptable exposure via the ambient air inhalation pathway.

4.3.5 Indoor Air Inhalation

Due to site conditions (depth to groundwater less than nine feet, presence of a NAPL body), the Johnson & Ettinger model is not applicable. Non-Residential Vapor Intrusion screening levels were applied to the vapor intrusion pathway evaluation.

The concentration of cis-1,2-dichloroethene and trichloroethene in a single soil sample (J-MW76@16') exceed NRVI screening levels. The saturated soil sample was collected from a depth of 16 feet bgl. Neither cis-1,2-dichloroethene or trichloroethene were detected in a soil sample collected at nine feet bgl from the same soil boring (J-MW76) or from any other nearby soil samples. There were no other NRVI exceedances across the GOT. There are no occupied buildings at the GOT.

The data indicates that there is no unacceptable exposure via the indoor air inhalation pathway.

4.3.6 Fire and Explosion Hazards

Contaminant concentrations were not detected in groundwater samples above Flammability and Explosively criteria. The data indicates that there is not unacceptable exposure via the flammability and explosively pathway.

5.0 CORRECTIVE ACTION

Remedial efforts in AOI-J (1) took place in September 2015 (Appendix B, Images 3 through 6). A total of 825 tons of granular fill and sand was excavated and disposed of at Smiths Creek Landfill in Smiths Creek, Michigan (Appendix F). The area of excavation was approximately 8,930 square feet while the depth of excavation varied between three feet and four feet. The objective of excavation was to remove surficial sediment with arsenic concentrations that exceeded the NRDC criterion. Non-Residential Direct Contact criteria exceedances at a depth greater than three feet bgl have been addressed across the GOT through a *Restrictive Covenant* (Section 4.3.2).

The preliminary extent of excavation was defined using soil analytical data from soil borings in the southwest corner of AOI-J (1). Following the initial phase of excavation, VSR sidewall samples were collected at the surface of the original grade (non-excavated surface), immediately adjacent to the edge of excavation (Appendix A, Figure 8). The number of sidewall samples was calculated following guidance in Table 1.2 of the DEQ-RRD *Sampling Strategies and Statistics Training Materials* (ST3M) document (2002). Values used to determine the appropriate number of sidewall VSR samples for the initial phase of excavation are summarized below in Table F.

Table F: VSR Calculations (Initial Area)

Sidewall Area (ft^2)	Recommended Sidewall Samples (1,000<1,500 ft^2)
1,365	6

In the southwestern portion of the initial excavated area, arsenic concentrations exceeded the NRDC criterion in four VSR samples (2SW-W, 7SW-S, 10SW-W, 11SW-W). Consistent with initial activities (depth of excavation, VSR sample location), the boundary of excavation was extended in the southwestern area and additional VSR samples were collected from each sidewall.

A total of 13 VSR samples were collected in AOI-J (1). All VSR samples were analyzed for arsenic (USEPA Method 0200.2-M/6020A). Following the completion of excavation, there were no surficial NRDC exceedances for arsenic. The excavation void was backfilled with demolition debris from the former DTE Marysville Power Plant and topsoil. Analytical reports are presented in Appendix E.

Analytical results are summarized in Appendix D, Table 4.

6.0 REQUEST FOR NO FURTHER ACTION

Prior to the current investigation by Envirologic, a *Restrictive Covenant* (Filed on May 30, 2014) was placed on the property deed which restricts the entire parcel to nonresidential use with a groundwater use restriction (Appendix G). A second *Restrictive Covenant* (File Pending), detailing the direct contact exposure notification and extent of the NAPL body, is also provided in Appendix G.

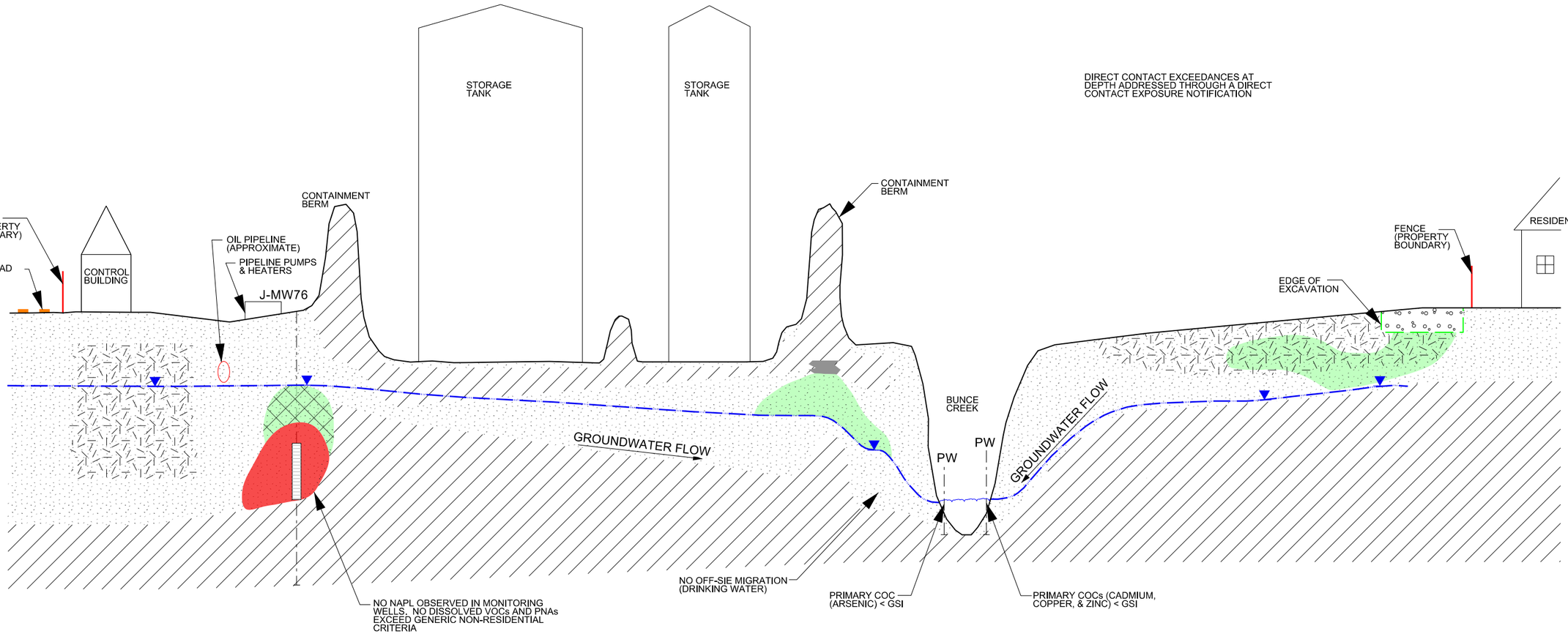
Based upon current site conditions, there are no impacted offsite receptors nor are there any complete exposure pathways associated with contaminants from the historical storage of coal and oil at the GOT. Where arsenic exceeded the NRDC criterion in shallow soil, excavation adequately removed the impacted soil. Contaminants that remain at the GOT in-excess of NRDC criteria are at depth and have been addressed through a *Restrictive Covenant*. While various contaminants exceed GSI, PSI, and NRVI criteria, these pathways have been deemed incomplete due to a lack of contaminant conveyance and/or depth of contaminant.

Based on the results of site characterization, excavation activities, and restrictions that have been applied, the entire GOT can be closed under Part 201 (Appendix A, Figure 9).

APPENDIX A

FIGURES

NOT TO SCALE



DIRECT CONTACT EXCEEDANCES AT DEPTH ADDRESSED THROUGH A DIRECT CONTACT EXPOSURE NOTIFICATION

NOT TO SCALE

SCREENED INTERVAL

PW PORE WATER SAMPLER

SOIL EXCEEDS GENERIC DIRECT CONTACT CRITERIA FOR METALS AND/OR PNAs

RESIDUAL NAPL BODY

SOIL EXCEEDS PARTICULATE SOIL INHALATION CRITERIA AND/OR VAPOR INTRUSION SCREENING LEVELS FOR PNAs AND/OR VOCs

CLAY

BACKFILL

STATIC WATER LEVEL (AUG. 27, 2014)

INDUSTRIAL FILL

SAND

COAL ASH

envirologic
environmental consulting + services
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49048
PH: (269) 342-1100 FAX: (269) 342-4945

GREENWOOD OIL TERMINAL

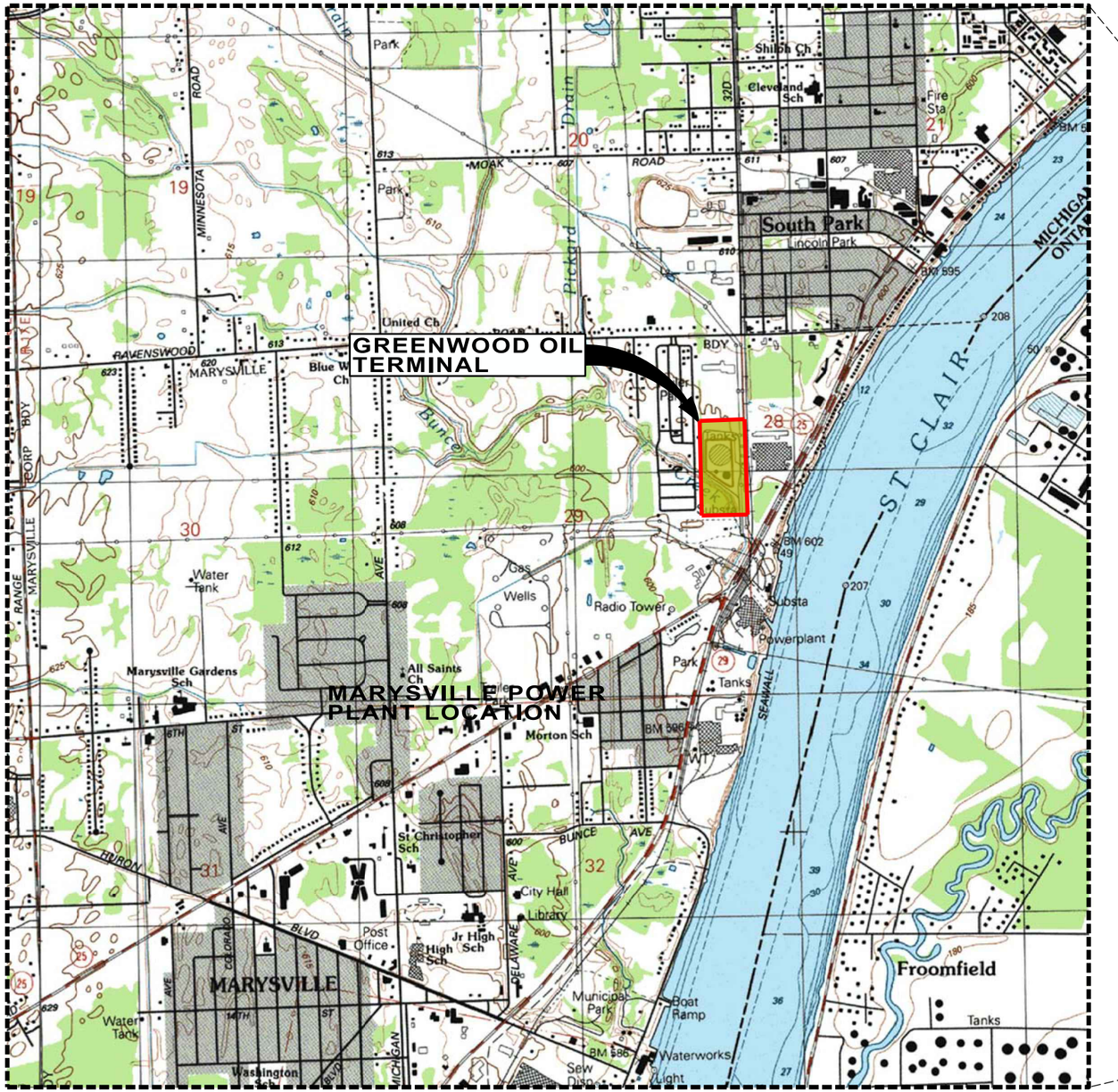
298 GRATIOT BLVD
MARYSVILLE, MI

CONCEPTUAL SITE MODEL

PROJECT NO.
150323

FIGURE No.
1

000000 AAAAAA File: Model:



SOURCE: MARYSVILLE, MICHIGAN USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS
MAPTECH© U.S. TERRAIN SERIES™ ®MAPTECH©, INC. 606-433-8500

T 6 N. R. 17 E. S 29/28
PORT HURON TOWNSHIP
MARYSVILLE, MICHIGAN

0 500 1000 2000 4000
SCALE 1" = 2000'

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environmental consulting + services
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49048
PH: (269) 342-1100 FAX: (269) 342-4945

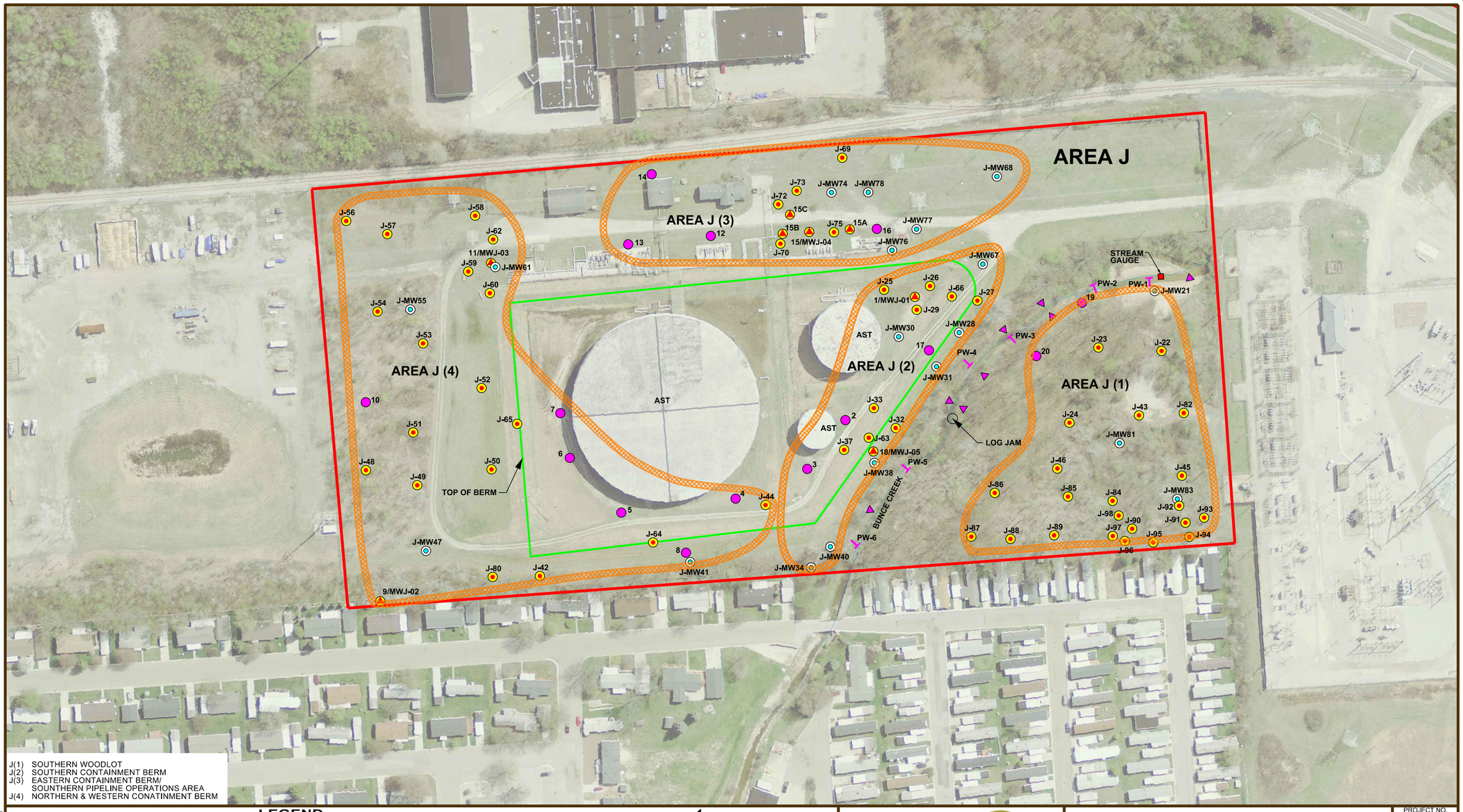
GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

LOCATION MAP

PROJECT NO. 150323

FIGURE No. 2



J(1) SOUTHERN WOODLOT
J(2) SOUTHERN CONTAINMENT BERM
J(3) EASTERN CONTAINMENT BERM/
SOUNTHERN PIPELINE OPERATIONS AREA
J(4) NORTHERN & WESTERN CONATINMENT BERM

LEGEND

- SOIL BORING LOCATION (PHASE II)
- SOIL BORING/TEMPORARY MONITORING WELL LOCATION (PHASE II)
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- PORE WATER SAMPLE
- SECTION OF LOSING STREAM

AREA OF INTEREST BOUNDARY (APPROXIMATE)

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

N

SCALE 1" = 150'
0 50 100 150 300

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GREENWOOD OIL TERMINAL

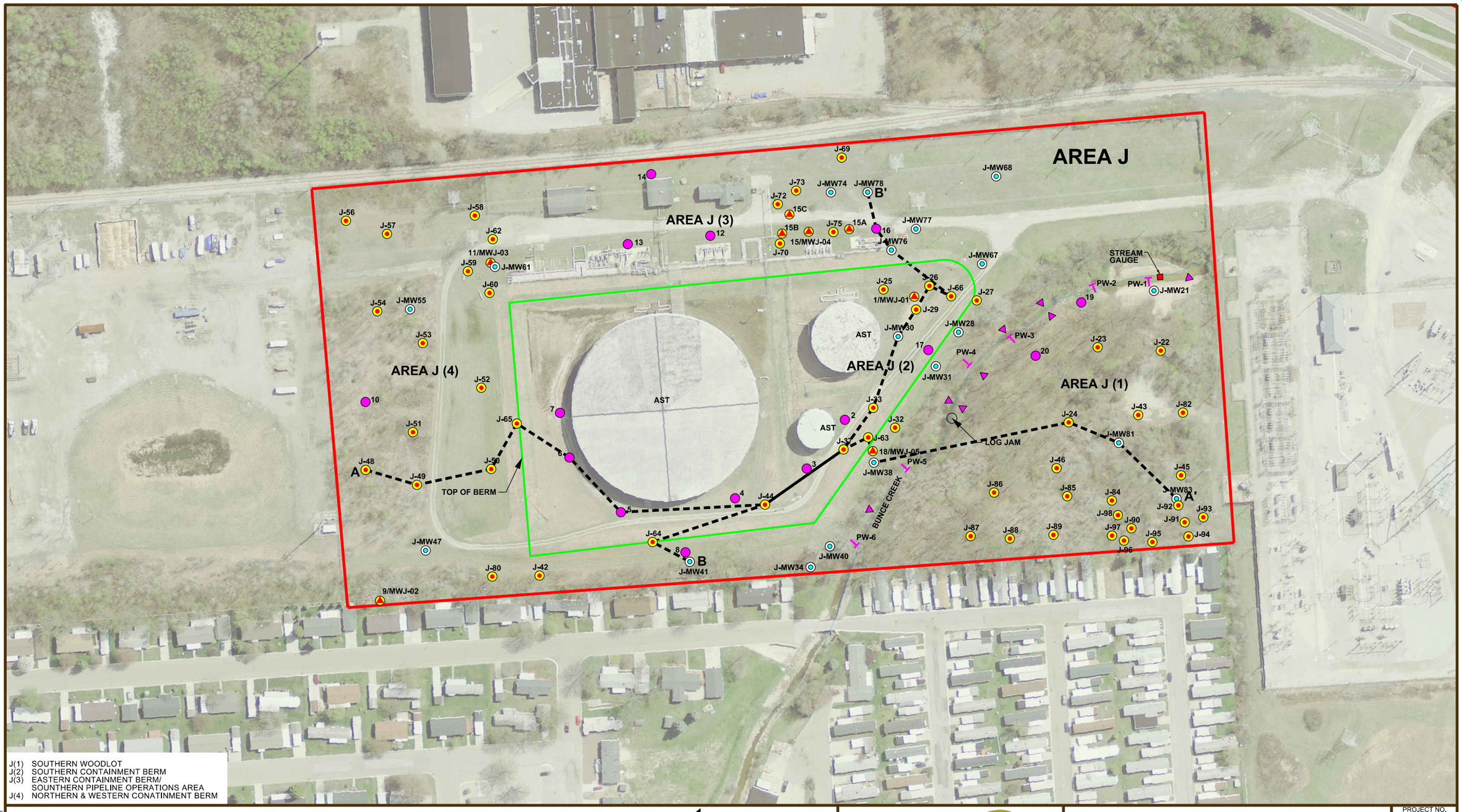
298 GRATIOT BLVD
MARYSVILLE, MI

SITE PLAN WITH AREAS OF INTEREST, SOIL BORINGS AND MONITORING WELL LOCATIONS

PROJECT NO. 150323

FIGURE No. 3

140189_Site_Plan-Site Plan P-000.pdf



J(1) SOUTHERN WOODLOT
J(2) SOUTHERN CONTAINMENT BERM
J(3) EASTERN CONTAINMENT BERM/
SOUNTHERN PIPELINE OPERATIONS AREA
J(4) NORTHERN & WESTERN CONATINMENT BERM

LEGEND

- SOIL BORING LOCATION (PHASE II)
- SOIL BORING/TEMPORARY MONITORING WELL LOCATION (PHASE II)
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- PORE WATER SAMPLE
- SECTION OF LOSING STREAM

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

N

SCALE 1" = 150'
0 50 100 150 300

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GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

GEOLOGIC CROSS-SECTION LOCATION MAP

PROJECT NO.
150323

FIGURE No.
4

140189_Site_Plan-Site Plan P-000.pdf

A

HORIZONTAL DISTANCE IN FEET (1" = 100')

A'

ELEVATION (1" = 10')

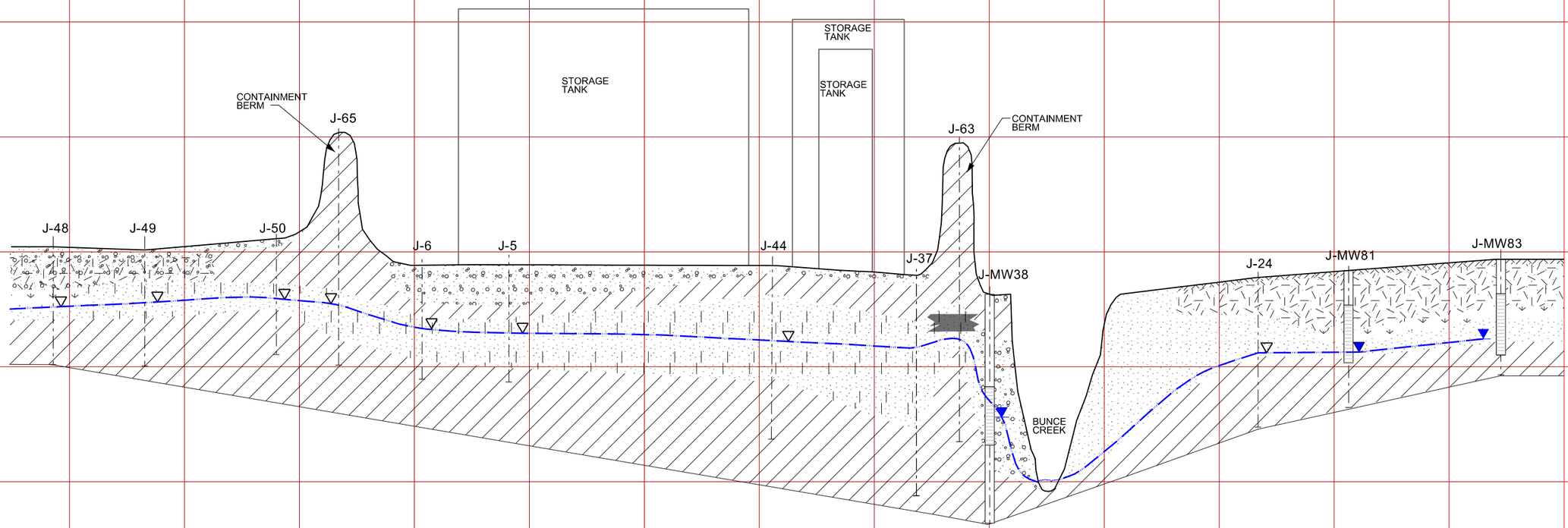
607

597

587

577

567



GROUNDWATER SATURATION

STATIC WATER LEVEL (AUG. 25, 2014)

WELL CASING

SCREENED INTERVAL

ORGANIC

COAL ASH

TOPSOIL

CLAY

SAND

INDUSTRIAL FILL

SILT

GRAVEL

envirologic
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GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

GEOLOGIC CROSS-SECTION A-A'

PROJECT NO.
150323

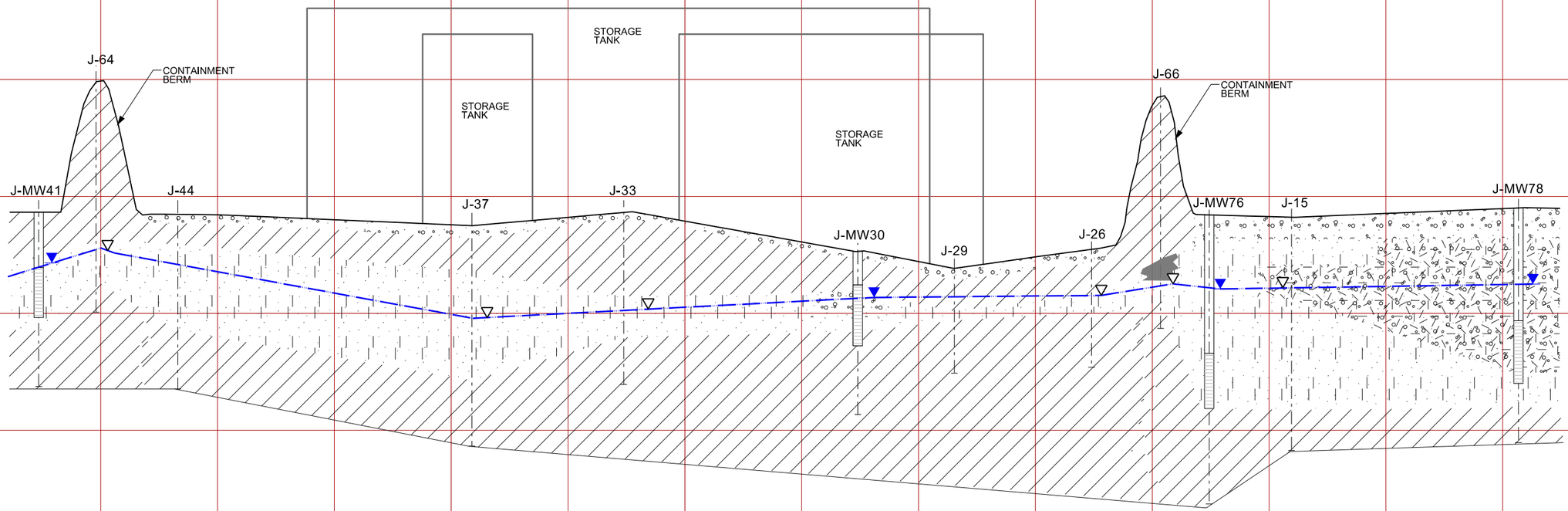
FIGURE No.
5

000000.AAAAAA, File: Model:

HORIZONTAL DISTANCE IN FEET (1" = 60')

ELEVATION (1" = 10')

100.00
607.6
597.6
587.6
577.6
567.6



GROUNDWATER SATURATION
STATIC WATER LEVEL (AUG. 25, 2014)
WELL CASING
SCREENED INTERVAL

SAND
COAL ASH
INDUSTRIAL FILL
GRAVEL
CLAY
SILT

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GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

GEOLOGIC CROSS-SECTION B-B'

PROJECT NO. 150323

FIGURE No. 6

000000.AAAAAA, File: Model:

J(1) SOUTHERN WOODLOT
J(2) SOUTHERN CONTAINMENT BERM
J(3) EASTERN CONTAINMENT BERM/
SOUNTHERN PIPELINE OPERATIONS AREA
J(4) NORTHERN & WESTERN CONATINMENT BERM

PHASE II ESA

LEGEND

- SOIL BORING LOCATION (PHASE II)
- SOIL BORING/TEMPORARY MONITORING WELL LOCATION (PHASE II)
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- PORE WATER SAMPLE
- NO SATURATION

- 100.00 STATIC WATER LEVEL (4-13-15)
- 100.0 GROUNDWATER CONTOUR LINE CONTOUR INTERVAL: AS SHOWN
- DIRECTION OF GROUNDWATER MOVEMENT

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

N

SCALE 1" = 150'
0 50 100 150 300

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GREENWOOD OIL TERMINAL

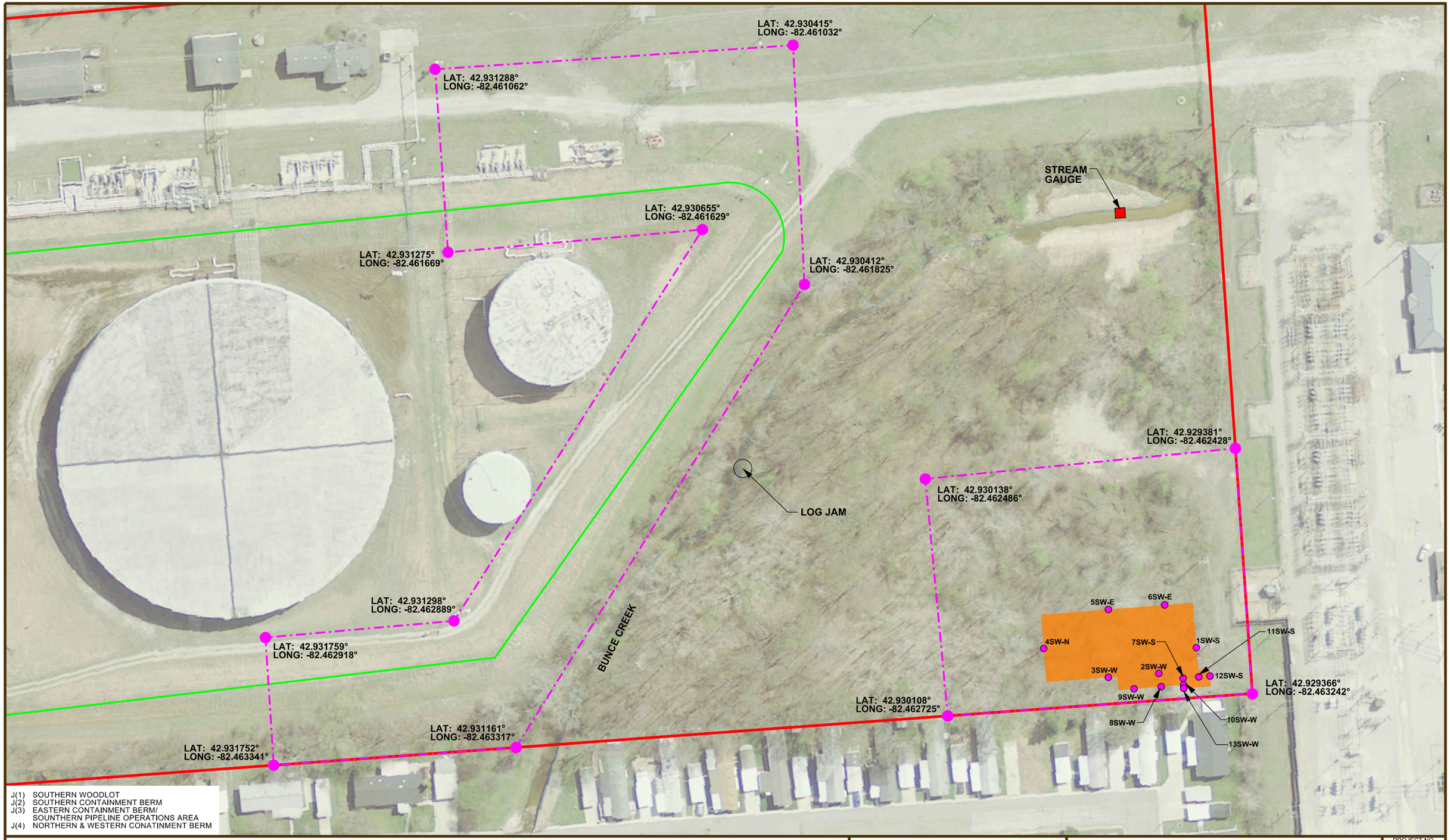
298 GRATIOT BLVD
MARYSVILLE, MI

GROUNDWATER FLOW DIRECTION & POTENTIOMETRIC SURFACE MAP

PROJECT NO. 150323

FIGURE No. 7

140189_Site_Plan-Site Plan C-000.pdf



LEGEND

- EXTENT OF EXCAVATION
- BOUNDARY OF NOTIFICATION AREA
- VSR SAMPLE LOCATION

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

N

SCALE 1" = 80'

0 20 40 80 160

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GREENWOOD OIL TERMINAL

298 GRATIOT
MARYSVILLE, MI

VSR SAMPLE LOCATION MAP AND DIRECT CONTACT NOTIFICATION AREAS

PROJECT NO.
150323

FIGURE No.
8

000000 AAAAAA File: Model:

LAT: 42.933148°
LONG: -82.460905°

LAT: 42.929487°
LONG: -82.460674°

LAT: 42.933334°
LONG: -82.463416°

LAT: 42.929366°
LONG: -82.463242°

TOP OF BERM

LOG JAM

BUNCE CREEK

J(1) SOUTHERN WOODLOT
J(2) SOUTHERN CONTAINMENT BERM
J(3) EASTERN CONTAINMENT BERM/
SOUNTHERN PIPELINE OPERATIONS AREA
J(4) NORTHERN & WESTERN CONATINMENT BERM

LEGEND

BOUNDARY OF NFA AREA

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

SCALE 1" = 150'
0 50 100 150 300

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GREENWOOD OIL TERMINAL

298 GRATIOT
MARYSVILLE, MI

NFA AREA

PROJECT NO.
150323

FIGURE No.
9

140189_Site_Plan-Site Plan R-000.pdf

APPENDIX B

EXCAVATION IMAGES

Image 1. Entrance of the GOT, looking north (1934).

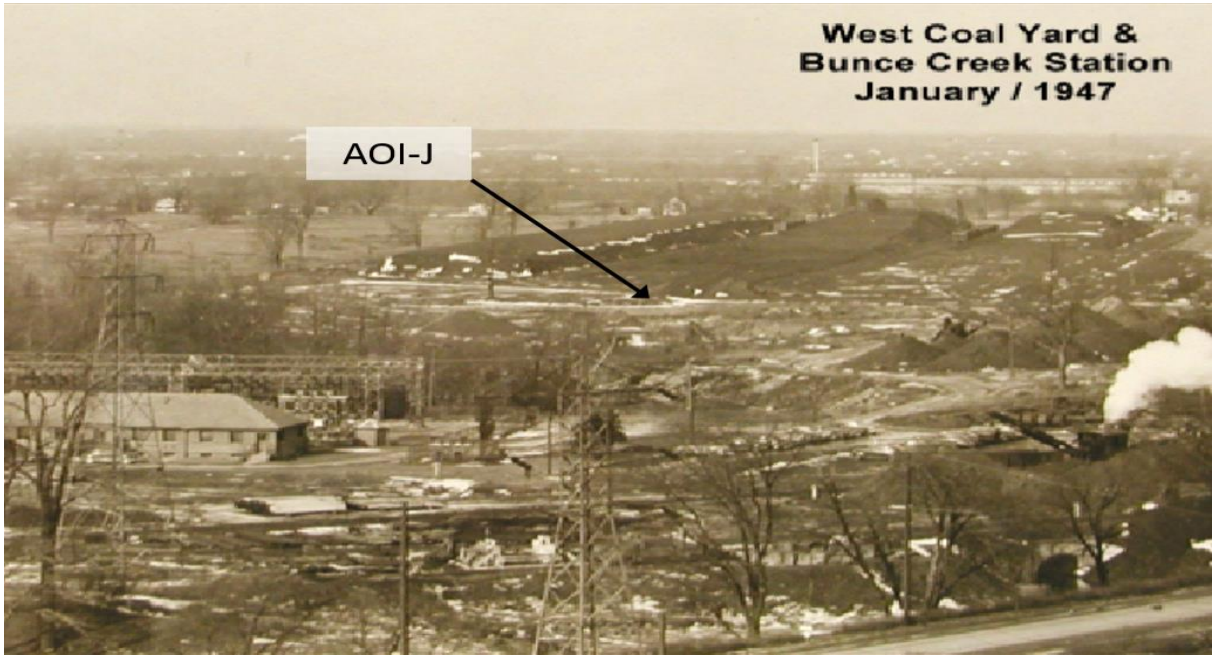

Image 2. Atop the MVPP building, looking north.

Image 3. Completed excavation, looking south.

Image 4. Completed excavation, looking west.

Image 5. Completed excavation, looking west.

Image 6. Completed excavation, looking north.

APPENDIX C

BORING LOGS

SOIL BORING LOG

BORING NO. J-01

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 5 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP			0	**FILL;** Gravel, sand, some silt, roots, loose, wet, gray (10YR 5/1)			0	0-1' soil sample collected at 0950.
				Change to silt, some gravel, grayish brown (10YR 5/2).				
				Change to sand, little silt, mottled yellowish brown (10YR 5/8) and brown (10YR 5/3).			0	4-5' soil sample collected at 0955.
			5 ▽					5-10' water sample collected at 1425.
2 GP				**CLAY;** Mostly clay, little gravel, stiff, cohesive, high plasticity, mottled brown (10YR 5/3, gray (10YR 6/1), and black (10YR 2/1).	CH		0	
							0	
			10	End of boring at 10' below ground surface.				
			15					
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-02

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 6 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP				**FILL;** Silt, sand, roots, grass, stiff, damp, brown (10YR 4/3).			0	0-1' soil sample collected at 1005.
				Change to sand with little silt yellowish brown (10YR 5/4).			0	
				Change to grayish brown (10YR 5/2).			0	
2 GP			5	▽ Change to loose, wet.			0	5-6' soil sample collected at 1010.
				CLAY; Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, brown (10YR 4/3).	CH		0	
			10	End of boring at 10' belwo ground surface.				
			15					
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-03

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 12
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	55		0	**FILL;** Silt, sand, topsoil, roots, grass, loose, dark brown (10YR 3/3).			0	1-2' soil sample collected at 1050,
				Change to gravel, sand, silt, gray (10YR 5/1).				
				Change to silt, sand, gravel, mottled gray (10YR 5/1) and brown (10YR 4/3).			0	
				Change to sand, trace silt, loose, damp, yellowish brown (10YR 5/6).				
2 GP	75		5				0	
				Change to brown (10YR 5/3).				
				Change to grayish brown (10YR 5/2).			0	
3 GP	75		10					10-11' soil sample collected at 1055.
				▽ Change to wet at approximately 12' below ground surface.				
4 GP	100		15					
			20	**CLAY;** Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, mottled gray (10YR 5/1) and brown (10YR 5/3).	CH			
				End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-04

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 4 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	75		0	**FILL;** Silt, clay, sand, roots, grass, damp, dark grayish brown (10YR 4/2). Change to silt and clay, gravel, mottled dark grayish brown (10YR 4/2) and dark yellowish brown (10YR 3/6). Change to sand, silt, dark yellowish brown (10YR 4/4).			0	0-1' soil sample collected at 1110. 3-4' soil sample collected at 1115.
2 GP	75		5	▽ Change to wet, grayish brown (10YR 5/2). Change to yellowish brown (10YR 5/4).			0	
3 GP				**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, mottled gray (10YR 6/1) and black (10YR 2/1).	CH		0	
			10	End of boring at 10' below ground surface.				
			15					
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-05

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 5 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	90		0	**FILL;** Silt, sand, gravel, soft to stiff, damp, mottled dark brown (10YR 3/3) and black (10YR 2/1).			0	0-1' soil sample collected at 1140.
				Change to sand, trace silt, loose, mottled white (10YR 8/1) and grayish brown (10YR 5/2).			0	
				Change to brown 10YR 4/3.				4-5' soil sample collected at 1145.
				Change to clay, some sand, wood soft, cohesive, medium plasticity, wet.			0	
			5	▽ Change to sand, some silt, loose, wet, mottled very dark gray (10YR 3/1) and black (10YR 2/1).				
2 GP	100			Change to wet at approximately 5' below ground surface.			0	
				CLAY; Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, slight odor, dark gray (10YR 4/1).	CL			
			10	End of boring at 10' below ground surface.				
			15					
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-06

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	10.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 5 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	100		0	**FILL;** Gravel, sand, roots, loose, dry, light gray (10YR 7/1).			0	1-2' soil sample collected at 1155.
							0	4-5' soil sample collected at 1200.
			5	▽ Change to brown (10YR 5/3). Change to wet at approximately 5' below ground surface.			0	
2 GP	100			Change to damp.			0	
				CLAY; Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, slight odor, dark gray (10YR 4/1).	CL			
			10	End of boring at 10' below ground surface.				
			15					
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-07

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 5
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	95		0	**FILL;** Silt, clay, sand, gravel, stiff, dry to damp, dark mottled grayish brown (10YR 4/2) and gray (10YR 5/1).			0	0-1' soil sample collected at 1210.
				Change to soft.				
				Change to sand with trace silt. dense, damp, brown (10YR 4/3)			0	4-5' soil sample collected at 1215.
			5	▽ Black (10YR 2/1) seam present from 4.5' to 4.75' below ground surface.				
2 GP	90			Change to wet at approximately 5' below ground surface.			0	
							0	
			10	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, dark gray (10YR 4/1).			0	
3 GP	100						0	
							0	
			15	Change to soft.	CH			
				Change to wet.			0	
4 GP	50							
							0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-08

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time Depth (ft bgs) After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	80			**FILL;** Topsoil, silt, sand, gravel, soft to stiff, damp, grayish brown (10YR 5/2). 1-inch thick coal seam present. Change to silt, sand, and gravel, soft to stiff, damp, mottled very dark grayish brown (10YR 3/2), black (10YR 2/1), yellow (10YR 7/8), and reddish brown (5YR 4/4). 1-inch thick ash seam present. Change to stiff, mottled dark grayish brown (10YR 3/2), black (10YR 2/1), yellow (10YR 7/8).			0	0-1' soil sample collected at 1350.
2 GP	80		5	Change to soft. **CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, mottled grayish brown (10YR 5/2) and brown (10YR 5/3).			0	4-5' soil sample collected 1355.
3 GP	90		10	Change to gray (10YR 6/1).			0	
4 GP	80		15	Change to gray (10YR 5/1).	CH		0	
5 GP	100						0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-09

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time
After Drilling: Date/Time
▽ Depth (ft bgs) 8
Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	50			**FILL;** Silt, gravel, sand, roots, grass loose, damp, dark brown (10YR 3/3).			0	1-2' soil sample collected at 0935.
2 GP	50		5				0	4-9' soil sample collected at 1010. 6-7' soil sample collected at 1005.
				▽ Change to wet at approximately 8' below ground surface.				
3 GP	100		10	**CLAY;** Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, gray (10YR 5/1).	CH		0	
4 GP	100			Change to little gravel.			0	
5 GP	100		15	Change to soft, gray (10YR 6/1), wet.			0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-10

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 4 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	90		0	**FILL;** Silt, sand, grass, roots, soft, damp, brown (10YR 5/3).			0	0-1' soil sample collected at 1045.
				▽				3-4' soil sample collected at 1050.
2 GP	100		5	Change to wet at approximately 7' below ground surface.			0	
3 GP	100		10	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, mottled gray (10YR 5/1) and yellowish brown (10YR 5/6).			0	
4 GP	100			Change to dry to moist. Change to moist. 1-inch thick gravel lens.	CH		0	
5 GP	100		15	Change to stiff to soft. Change to soft, moist to wet.			0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-11

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time
After Drilling: Date/Time
▽ Depth (ft bgs) 4
Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	75		0	**FILL;** Sand, silt, loose, damp.			0	1-2' soil sample collected at 1115.
				Coal observed from 3'-3.5' below ground surface.				3-4' soil sample collected at 1125.
				▽ Change to wet at approximately 4' below ground surface.				4-9' water sample collected at 1145.
2 GP	100		5				0	
				Slight odor present.				
3 GP	75		10				0	
				CLAY; Mostly clay, little gravel, stiff, cohesive, high plasticity, damp, gray (10YR 5/1).				
				2-inch thick gravel seam.				
4 GP	80			Change to trace fine gravel.			0	
			15		CH			
5 GP	100						0	
				Change to soft to stiff.				
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-12

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 4 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	25		0	**FILL;** Silt, sand, gravel, clay, roots, grass, soft, damp.			0	1-2' soil sample collected at 1405.
				Change to soft to stiff.				
				▽ Change to wet, sand and gravel, loose.				
2 GP	75		5	Change to sand and silt.			0	7-8' soil sample collected at 1410.
3 GP	0		10	No recovery from 8' to 12' below grouond surface (obstruction).			0	
4 GP	75		15	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, gray (10YR 5/1).	CH		0	
5 GP	100			Change to trace to no fine gravel, soft.			0	
			20	Change to 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-13

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 4 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	50		0	**FILL;** Sand, gravel, silt, slag, loose, damp.			0	0-1' soil sample collected at 1205.
				▽				3-4' soil sample collected at 1210.
2 GP	100		5	Change to wet at approximately 6' below ground surface.			0 0	
3 GP	100		10	CLAY; **Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, gray (10YR 5/1)**			0 0	
4 GP	100		15	Change to trace no gravel, moist to wet, soft to stiff.	CH		0 0	
5 GP	100		20	End of boring at 20' below ground surface.			0 0	

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-14

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 4 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	50		0	**FILL;** Sand, silt, roots, grass, loose, damp.			0	0-1' soil sample collected at 1340.
				▽ Change to wet at approximately 4' below ground surface.				
2 GP	65		5				0	7-8' soil sample collected at 1345.
3 GP	85		10	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, gray (10YR 5/1).			0	
4 GP	100		15		CH		0	
5 GP	100			Change to no fine gravel, soft to stiff.			0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-15

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 7
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	60			**FILL;** Sand, gravel, silt, roots, grass, loose, damp.			0	0-1' soil sample collected at 1440.
				Change to loose to dense.				
2 GP	100		5				0	4-5' soil sample collected at 1445.
				▽ Change to wet at approximately 7' below ground surface.				
3 GP	100		10				0	8-13' water sample + DUP-01J collected at 0820.
4 GP	100			**SILT;** Mostly silt, trace sand, soft, wet, black (10YR 2/1), sheen present Change to dark gray (10YR 4/1).	ML		0	
5 GP	100		15	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, mottled grayish brown (10YR 5/2) and yellowish brown (10YR 4/6). Change to soft.	CH		0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-15A

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Stearns Drilling Company	Geoprobe	---	---	15.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - T. Ulrich

Drilling Equipment: Geoprobe 7782

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 5
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	75		0	**FILL;** Sand, gravel, silt, loose, damp.			0	
				Change to little silt and gravel.			0	
			5	**SILTY SAND;** Mostly silt, some sand, some gravel, loose, damp, black (10YR 2/1).	SP-SM		0	5-6' + DUP-02 soil sample collected at 0920. 5-10' water sample collected at 0925
2 GP	75			Change to wet at approximately 5.5' below ground surface. **SAND;** Mostly sand, trace silt and gravel, loose, wet, yellowish brown (10YR 4/6) and black (10YR 2/1), s	SP		0	
			10	**SILT;** Mostly silt, trace sand and gravel, soft, wet, slight odor, yellowish brown (10YR 4/6) and black (10YR 2/1).	ML		0	
3 GP	50			**SAND;** Mostly sand, some silt, loose, wet, black (10YR 2/1).	SP		0	
			15	**CLAY;** Mostly clay, trace fine gravel, soft, cohesive, high plasticity, damp, very dary gray (10YR 3/1).	CL		0	
				End of boring at 15' below ground surface.				
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-15B

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Stearns Drilling Company	Geoprobe	---	---	15.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - T. Ulrich

Drilling Equipment: Geoprobe 7782

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 6
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	100		0	**FILL;** Silt, clay, sand, gravel, roots, grass, soft, damp, brown (10YR 5/3).			0	
				Change to sand with some gravel, dry to damp, loose.			0	
			5					5-10' water sample collected at 1010.
			▽	Change to wet at approximately 6' below ground surface.			0	
2 GP	50						0	
				Change to gravel, loose, wet.				
			10	Change to silt, sand, gravel, soft, wet.				
3 GP	90			Plant material, slight odor present, wet.			0 0	12-13' soil sample collected at 1000.
				CLAY; Mostly clay, some sand, soft, damp to wet, mottled brown (10YR 5/3) and dark gray (10YR 4/1).	CL		0	
			15	End of boring at 15' below ground surface.				
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-15C

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Stearns Drilling Company	Geoprobe	---	---	15.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - T. Ulrich

Drilling Equipment: Geoprobe 7782

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 10
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	90		0	**FILL;** Silt, sand, gravel, soft, damp, grayish brown (10YR 5/2).			0	
				Change to sand and gravel with little silt.				
				Change to very dark brown (10YR 2/2 and white (10YR 8/1), ash present.			0	
			5	Change to sand with little gravel, loose, damp, yellowish brown (10YR 5/6).				
2 GP	80			Change to clay sand and gravel, damp to wet, soft to stiff, mottled brown (10YR 5/3) and dark yellowish brown (10YR 4/6).			0	
							0	8-13' water sample collected at 1045.
				Change to mostly clay, trace gravel, stiff, damp.				9-10' soil sample collected at 1040.
			10 ▽	Change to wet at approximately 10' below ground surface.				
				Change to sand and gravel with trace silt, loose wet.				
3 GP	75			Change to gravel with trace silt, slag, loose, wet, brown (10YR 4/3), black (10YR 2/1), and white (10YR 8/1).			0	
							0	
				Change to sand with some silt, loose, wet, black (10YR 2/1).				
				Change to dark gray (10YR 4/1).			0	
			15	End of boring at 15' below ground surface.				
			20					

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-16

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	12.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time ▽ Depth (ft bgs) 7 After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	25			**FILL;** Topsoil, sand, gravel, silt, loose, damp, gray (10YR 6/1).			0	0-1' soil samplpe collected at 1515.
				Change to silt, sand, and some clay, stiff, damp.				3-4' soil sample collected at 1520.
2 GP	10		5	Change to gravel, sand, brick, loose, damp.			0	
				▽ Change silt, sand, trace gravel, soft, wet at approximately 7' below ground surface.				
3 GP	25		10	Change to gravel and sand with little silt, loose, wet, black (10YR 2/1).			0	
				Change to slight odor, black (10YR 2/1).				
4 GP	100			**CLAY;** Mostly clay, trace gravel and silt, soft, cohesive, high plasticity, damp to wet, mottled gray (10YR 5/1) and very dark gray (10YR 3/1).	CH		0	
5 GP	100		15				0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-17

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 8
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	25		0	**FILL;** Silt, gravel, roots, grass, stiff, damp, brown (10YR 4/3). Change to silt, gravel and sand, white, (10YR 8/1). Change to very pale brown (10YR 8/4).			0	0-1' soil sample collected at 0835.
2 GP	15		5	Change to soft, dark brown (10YR 3/3). Change to sand and silt, some gravel, loose, damp.			0	6-8' soil sample +DUP-02J collected at 0845.
3 GP	75		10	▽ Change to silt, sand, gravel, soft, wet, dark yellowish brown (10YR 4/4). Change to some clay, grayish brown (10YR 5/2).			0	
4 GP	80		15	Change to clay and sand, soft to stiff, wet. Change to dark grayish brown (10YR 4/2). **CLAY;** Mostly clay, trace gravel, soft to stiff, damp, dary gray (10YR 4/1) and gray (10YR 5/1).	CH		0	
5 GP	75			Change to stiff.			0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-18

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).

Personnel
Logged By - R. Pulliam
Driller - S. Bischoff

Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:
Marysville	St. Clair	Michigan

Water Level Observations:
While Drilling: Date/Time ▽ Depth (ft bgs) 6
After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	30			**FILL;** Silt, gravel, sand, roots, grass, stiff, damp.			0	0-1' soil sample collected at 0910.
2 GP	50		5	Change to sand, silt, gravel, loose, damp. Change to silt with some sand, soft, damp. ▽ Change to silt and sand, wet.			0	5-6' soil sample collected at 0915.
3 GP	100		10				0	
4 GP	100		15	**CLAY;** Mostly clay, trace to no fine gravel, stiff, cohesive, high plasticity, damp, dark gray (10YR 4/1).			0	
5 GP	100			Change to mottled dark yellowish brown (10YR 4/4) and gray (10YR 6/1). Change to gray (10YR 5/1)	CH		0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

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Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-19

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time Depth (ft bgs) After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	80			**FILL;** Sand, silt, gravel, loose, damp, dark brown (10YR 3/3). Change to sand, gravel, loose to dense, mottled black (10YR 2/1), brownish yellow (10YR 6/6), and very pale brown (10YR 8/3).			0	0-1' soil sample collected at 1025. 3-4' soil sample collected at 1030.
2 GP	100		5	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, dry to damp, mottled brown (10YR 5/3) and and yellowish brown (10YR 5/8). Change to soft, damp, dark yellowish brown (10YR 4/6).	CH		0	
3 GP	100		10	Change to soft to stiff, dark gray (10YR 4/1).			0	
4 GP	100		15				0	
5 GP	100			Change to moist to wet, soft, no gravel.			0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:

Firm: TRC Environmental Corporation (734) 971-7080
1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

Checked By: R. Pulliam

SOIL BORING LOG

BORING NO. J-20

Facility/Project Name:	Date Drilling Started:	Date Drilling Completed:	Project Number:
DTE Marysville Power Plant DTE Marysville	11/2/12	11/2/12	198159

Drilling Firm:	Drilling Method:	Surface Elev. (ft)	TOC Elevation (ft)	Total Depth (ft bgs)	Borehole Dia. (in)
Terra Probe Environmental	Geoprobe	---	---	20.0	2.5

Boring Location: Greenwood Fuel Oil #2 AST Terminal (see Map).	Personnel Logged By - R. Pulliam Driller - S. Bischoff	Drilling Equipment: Geoprobe 6620

Civil Town/City/or Village:	County:	State:	Water Level Observations:
Marysville	St. Clair	Michigan	While Drilling: Date/Time Depth (ft bgs) After Drilling: Date/Time Depth (ft bgs)

SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	PID (PPM)	COMMENTS
1 GP	50		0	**FILL;** Sand, silt, gravel, loose, damp, mottled yellowish brown (10YR 5/8) and very dark brown (10YR 2/2).			0	0-1' soil sample collected at 1000.
								3-4' soil sample collected at 1005.
2 GP	50		5	Change to silt, soft, damp, mottled brown (10YR 4/3) and brownish yellow (10YR 6/8).			0	
				Change to little gravel present, soft to stiff, gray (10YR 6/1) present in mottling.				
3 GP	100		10	**CLAY;** Mostly clay, trace gravel, stiff, cohesive, high plasticity, damp, mottled yellowish brown (10YR 5/4) and gray (10YR 6/1).			0	
				Change to brown (10YR 5/3), stiff.				
4 GP	100		15		CH		0	
				Change to dry to damp, grayish brown (10YR 5/2).				
5 GP	100						0	
			20	End of boring at 20' below ground surface.				

SOIL BORING WELL CONSTRUCTION LOG 198159 DTE MARYSVILLE.GPJ RMT_CORP.GDT 198159 1/15/13

Signature:	Firm: TRC Environmental Corporation (734) 971-7080 1540 Eisenhower Place Ann Arbor, MI 48108 Fax (734) 971-9022

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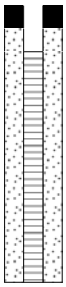
LOG OF J-MW-21

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/24/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/15/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		**TOPSOIL**
					CLAY - brown, soft, low plasticity, with some fine sand, little fine to medium gravel, dry.
			5		**CLAYEY SAND - brown, fine grained, well sorted, with clay binder, low plasticity, wet.**
0					**CLAY - gray with brown mottling, soft, low to medium plasticity, with little fine to medium gravel, slightly damp.**
			10		**TOTAL DEPTH = 10 FEET**
			15		
			20		
			25		



ELEVATIONS

SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4.5

Soil samples collected at 3 feet, and 10 feet.

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LOG OF J-22

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/24/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/24/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - sandy clay, dark gray, soft, low plasticity, with fine sand, little fine to medium gravel, dry.
			5		SAND - brown, fine grained, well sorted, with little silt, dry, damp at 6 feet.
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 5 feet, and 10 feet.

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LOG OF J-23

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/24/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/24/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL - with some slag fragments, dry.
					SAND - light brown, fine grained, well sorted, with some fine to medium gravel, dry.
					SAND - light brown, fine grained, well sorted, with trace fine gravel, dry, damp at 4.5 feet, wet at 6 feet.
			5		
0					CLAY - gray, soft, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 3 feet, and 10 feet.

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LOG OF J-24

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/24/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/14/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, brown, fine to medium grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		SAND - brown, fine grained, well sorted, with some silt, dry, damp at 5.5 feet, wet at 6 feet.
0					
			10		CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
0					
					TOTAL DEPTH = 13 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 1 foot, 4 feet, and 12 feet.

Set monitoring well at 3 - 8 feet. Well produced no water and was abandoned.

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LOG OF J-25

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					SAND - brown, fine grained, well sorted, dry.
					CLAY - brown, soft, medium plasticity, with trace fine sand, little fine gravel, slightly damp.
0					
			5		SILTY SAND - gray, fine grained, well sorted, with silt, little fine to coarse gravel, wet.
					CLAY - brown with gray mottling, soft, low plasticity, with trace fine gravel, dry.
0					
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3 feet, and 10 feet.

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LOG OF J-26

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL - surface under water CLAY - brown, soft, low to medium plasticity, with little fine sand, some fine gravel, slightly damp.
			5		GRAVELLY SAND - dark brown, fine to medium grained, poorly sorted, with fine to medium gravel, some organic material, wet. SILTY SAND - gray, fine grained, well sorted, with silt, wet.
0					CLAY - brown with gray mottling, soft to firm, low plasticity, with little fine gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3 feet, and 10 feet.

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LOG OF J-27

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - clay, brown, soft, low plasticity, with little fine sand, little fine gravel, dry.
0					FILL - gravelly sand, dark gray, fine to medium grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
			5		FILL - clay, dark gray, soft, low plasticity, with little fine to medium gravel, dry.
					SAND - brown, fine to medium grained, well sorted, with little silt, dry.
0					CLAY - brown, soft, low plasticity, with little fine gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 10 feet.

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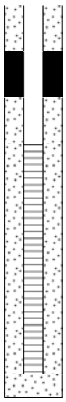
LOG OF J-MW-28

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
0					FILL - clay, brown, soft, low plasticity, with little fine sand, little fine to medium gravel, dry.
					FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
			5		ORGANIC MATERIAL - peat, gray to black, with some silt, damp.
					CLAY - brown, soft to firm, low plasticity, with little fine gravel, dry.
0					SAND - brown, fine grained, well sorted, with little silt, damp, wet at 5.5 feet.
					CLAY - gray, soft to firm, low plasticity, with little fine gravel, dry.
			10		
0					SILTY CLAY - gray, soft, low to medium plasticity, with silt, slightly damp.
					CLAY - gray, soft, low to medium plasticity, with little fine gravel, slightly damp.
					TOTAL DEPTH = 14 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5.5

Soil samples collected at 6 feet and 12 feet.

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LOG OF J-29

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
164					CLAY - brown, soft, low plasticity, with little fine sand, little fine to medium gravel, dry.
			5		CLAYEY SAND - light gray, fine grained, well sorted, with clay binder, slightly damp, moderate odor.
0					CLAY - gray with brown mottling, soft, low plasticity, with little fine gravel, dry.
					TOTAL DEPTH = 9 FEET
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 4.5 feet and 10 feet.

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LOG OF J-MW-30

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, pooorly sorted, with fine to medium gravel, dry.
					FILL - clay, brown, soft, low plasticity, with little fine sand, little fine to medium gravel, dry.
					FILL - sand, brown, fine to medium grained, well sorted, with some silt, dry, wet at 4 feet.
			5		FILL - gravelly sand, dark brown to black, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, wet.
0					SILTY SAND - brown, fine to medium grained, well sorted, with silt, wet.
					CLAY - gray with brown mottling, soft to firm, low plasticity, with little silt, trace fine gravel, dry.
			10		
0					
					TOTAL DEPTH = 14 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 6 feet and 12 feet.

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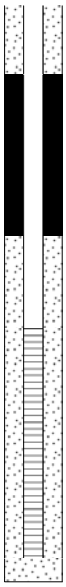
LOG OF J-MW-31

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - clay, grayish brown, soft, low plasticity, with little fine sand, some fine gravel, dry, concrete fragments observed from 3 to 3.5 feet.
0.4			5		FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
					SILTY SAND - brown, fine to medium grained, well sorted, with silt, wet.
			10		ORGANIC MATERIAL - peat, black, with some fine to medium sand, some fine gravel, wet.
					CLAY - gray, soft, medium plasticity, slightly damp.
0					SILT - gray, soft, low plasticity, with little clay binder, wet.
					CLAY - gray, soft, high plasticity, with some fine to medium sand, trace fine gravel, wet.
			15		
0					CLAY - gray, soft, medium to high plasticity, with trace fine gravel, slightly damp.
			20		TOTAL DEPTH = 20 FEET
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8

Soil samples collected at 8.5 feet, 13.5 feet, and 20 feet.

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LOG OF J-32

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
0					FILL - clay, brown, soft, low plasticity, with little fine sand, little fine to medium gravel, dry.
					FILL - gravelly sand, brown, fine to coarse grained, poorly sorted, with fine to coarse gravel and concrete pieces, dry.
			5		FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
0					CLAYEY SAND - brown, fine gfrained, well sorted, with clay binder, slightly damp.
					CLAY - brown, soft to firm, low plasticity, with trace fine gravel, dry.
0			10		
					CLAY - brown, with gray mottling, soft, low plasticity, with little silt, dry.
					TOTAL DEPTH = 14 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 7.5 feet and 14 feet.

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LOG OF J-33

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					CLAY - brown, soft to firm, low plasticity, with little fine sand, some fine to medium gravel, dry.
0			5		SILTY CLAY - brown, soft, low plasticity, with silt, little fine gravel, dry.
					SAND - brown, fine to medium grained, well sorted, dry.
					SILT - dark gray, soft, low plasticity, with little fine sand, dry.
0			10		SILTY SAND - brown, very fine to fine grained, well sorted, with silt, wet.
					CLAY - brown, soft to firm, low plasticity, with trace fine gravel, dry.
0			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 9

Soil samples collected at 1 foot, 9 feet, and 15 feet.

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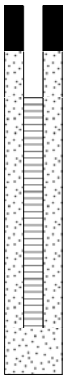
LOG OF J-MW34

CLIENT:	CDC/150323
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	2/18/16
GEOLOGIST:	DAL
COMPLETION DATE:	2/18/16

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		**TOPSOIL**
					Silty Sand - light gray, well worted, fine grained, brown mottling, occasional wood fragments, some clay binder, dry.
					Damp at 3 feet, wet at 4 feet.
			5		**CLAY - gray, soft, high plasticity, some fine to medium gravel, dry.**
0					
			10		
0					
			15		**TOTAL DEPTH = 15 FEET**
			20		
			25		



ELEVATIONS

SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 2.5 feet and 6 feet.

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LOG OF J-37

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					CLAY - brown, soft, low plasticity, with little fine sand, some fine gravel, dry.
			5		SILT - dark gray, soft, low plasticity, with little fine sand, dry.
0					SILTY SAND - dark gray, very fine grained, well sorted, with silt, dry, wet at 8 feet.
0			10		
					CLAY - brown, soft to firm, low plasticity, with little fine gravel, dry.
0			15		
					TOTAL DEPTH = 19 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8

Soil samples collected at 1 foot, 8 feet, 12.5 feet, and 18.5 feet.

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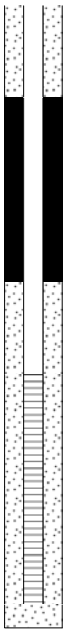
LOG OF J-MW-38

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
6.0					**FILL - clay, brown, soft, medium plasticity, with little fine to coarse gravel, slightly damp.**
			5		**FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to coarse gravel, dry.**
0					**SANDY SILT - gray, soft, low plasticity, with fine sand, dry, wet at 8 feet.**
			10		
0					**CLAYEY SAND - brown, fine to medium grained, well sorted, with clay binder, wet.**
			15		**CLAY - brown with gray mottling, sotft, high plasticity, with trace fine to coarse gravel, damp.**
0					
			20		**TOTAL DEPTH = 20 FEET**
			25		



ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 9 feet, 14 feet, and 20 feet.

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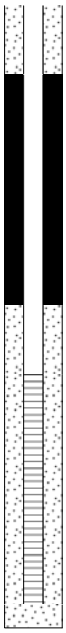
LOG OF J-MW40

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	10/28/14
GEOLOGIST:	DAL
COMPLETION DATE:	10/28/14



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - clay, brown, hard, medium plasticity, some fine to medium gravel, trace coal fragments, dry.
			5		
0					FILL - silty sand, black, well sorted, fine grained, some slag and coal fragments, little clay binder, wet at 7 feet.
			10		
0					FILL - gravelly sand, black, poorly sorted, fine to coarse grained, fine to coarse gravel, coal, slag, concrete, brick fragments, wet.
					CLAY - gray, soft, high plasticity, minor fine gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 7

Soil samples collected at 5 feet, 9 feet, and 15 feet.

Well installed on 4/6/15.

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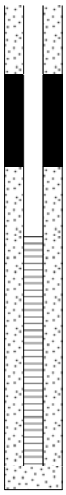
LOG OF J-MW41

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	10/28/14
GEOLOGIST:	DAL
COMPLETION DATE:	10/28/14



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL FILL - clay, brown, hard, low plasticity, fine to coarse gravel, some coal and slag fragments, dry.
0			5		FILL - gravelly sand, dark brown, poorly sorted, coarse grained, fine to medium gravel, clay binder, some coal and slag fragments, dry. FILL - sand, black, poorly sorted, coarse grained, some fine slag and coal fragments, dry. FILL - silty sand, well sorted, fine grained, wet.
0					Red layer with slag at 7 feet. SAND - light brown, well sorted, medium grained, wet.
0			10		CLAY - gray, hard, high plasticity, some fine to medium gravel, damp.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5.5

Soil samples collected at 5 feet, 9 feet, and 15 feet.

Well installed on 4/6/15.

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LOG OF J-42

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	10/28/14
GEOLOGIST:	DAL
COMPLETION DATE:	10/28/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		**TOPSOIL**
					FILL - clay, brown, hard, low plasticity, fine to coarse gravel, cement, coal, and brick fragments, dry.
			5		
0					**CLAY - brown, hard, low plasticity, some fine gravel, dry.**
			10		**TOTAL DEPTH = 10 FEET**
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 3 feet and 8 feet.

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LOG OF J-43

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/29/14

GEOLOGIST: DAL | COMPLETION DATE: 10/29/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		SILTY SAND - gray, well sorted, fine grained, dry.
					FILL - sand, brown, well sorted, medium grained, some coal and slag fragments, damp at 4 feet.
0			5		ORGANIC MATERIAL - black, damp.
0					SILTY SAND - gray, well sorted, fine grained, wet.
					CLAY - gray, soft, high plasticity, some fine to medium gravel, damp.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5.5

Soil samples collected at 2 feet and 7 feet.

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LOG OF J-44

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 08/11/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					CLAY - brown, soft to firm, low plasticity, with little fine sand, little fine gravel, dry.
0			5		SAND - brown, fine grained, well sorted, with little silt, dry, damp at 8 feet, wet at 9.5 feet.
0			10		CLAY - brownish gray, soft to firm, low plasticity, with little fine gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 9.5

Soil samples collected at 4 feet, and 12 feet.

Set monitoring well at 5 - 10 feet. Well produced no water and was abandoned.

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LOG OF J-45

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	10/29/14
GEOLOGIST:	DAL
COMPLETION DATE:	10/29/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
0					**FILL - silty sand, gray, well sorted, fine grained, minor fine gravel, some fine coal and slag fragments, dry.**
			5		**SAND - brown, well sorted, medium grained, damp.**
0					**Wet at 6.5 feet.**
0					**CLAY - gray, hard, high plasticity, fine to medium gravel, damp.**
			10		**TOTAL DEPTH = 10 FEET**
			15		
			20		
			25		

ELEVATIONS

SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6.5

Soil samples collected at 0.5 feet, 3 feet, and 6 feet.

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LOG OF J-46

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/29/14

GEOLOGIST: DAL | COMPLETION DATE: 10/29/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		**TOPSOIL** **FILL - silty sand, brown, well sorted, fine grained, some fine gravel, trace coal and slag fragments, dry.**
0			5		**SAND - light brown, well sorted, fine grained, some clay binder, damp at 5 feet.** **Wet at 7 feet.**
0			10		**CLAY - gray, soft, high plasticity, some silt, fine to coarse gravel, dry.** **TOTAL DEPTH = 10 FEET**
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 7

Soil samples collected at 2 feet and 5.5 feet.

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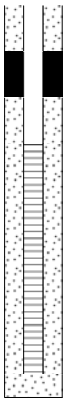
LOG OF J-MW-47

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/11/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - sand, brown, fine to medium grained, well sorted, dry.
					FILL - sandy clay, brown, soft, low plasticity, with fine sand, some fine gravel, dry.
0			5		FILL - gravelly sand, brown, fine to medium grained, poorly sorted, with fine to medium gravel and cinders, dry.
					SAND - brownish gray, fine grained, well sorted, with little silt, damp, wet at 6.5 feet.
0			10		CLAY - brownish gray, soft to firm, low plasticity, with little fine gravel, dry.
0					TOTAL DEPTH = 14 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6.5

Soil samples collected at 6.5 feet and 13 feet.

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LOG OF J-48

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine to medium grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, dark brown, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, concrete pieces, and coal fragments, dry.
					ORGANIC MATERIAL - peat, black, dry.
			5		SAND - gray, fine grained, well sorted, with little silt, wet.
0					CLAY - gray, soft to firm, low plasticity, with little fine to coarse gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 4 feet and 10 feet.

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LOG OF J-49

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - sand, brown, fine to medium grained, well sorted, with little fine to medium gravel, dry.
					FILL - gravelly sand, black, fine to medium grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
					FILL - gravelly sand, brown, fine to medium grained, poorly sorted, with fine to medium gravel, dry.
			5		SILTY SAND - dark gray, fine grained, well sorted, with silt, some organic material, dry, wet at 4 feet.
0					GRAVELLY SAND - gray, fine to medium grained, poorly sorted, with fine to medium gravel, dry.
					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 5 feet and 10 feet.

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LOG OF J-50

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		CLAY - brown, soft, low plasticity, with little fine sand, some fine gravel, dry.
			5		SAND - dark brown, fine grained, well sorted, with some organic material, dry.
0					SAND - brown, fine grained, well sorted, with some silt, damp, wet at 5 feet.
					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5

Soil samples collected at 5 feet and 10 feet.

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LOG OF J-51

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, coal fragments, and brick fragments, dry.
					ORGANIC MATERIAL - peat, black, dry, slightly damp at 3 feet.
			5		SAND - brown, fine grained, well sorted, with little silt, wet.
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 3.5

Soil samples collected at 4 feet and 10 feet.

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LOG OF J-52

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/17/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/17/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					GRAVELLY SAND - dark grayish brown, fine to medium grained, poorly sorted, with fine to medium gravel, some organic material, dry.
					GRAVELLY SAND - brown, fine to medium grained, poorly sorted, with fine to medium gravel, wet.
			5		SILTY SAND - brown, very fine to fine grained, well sorted, with silt, wet.
0					SAND - brown, fine to medium grained, well sorted wet.
					CLAY - gray, soft, medium plasticity, with trace fine gravel, slightly damp.
			10		CLAY - gray, soft to firm, low palsticity, with trace fine gravel, dry.
0					
					TOTAL DEPTH = 14 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 3

Soil samples collected at 3 feet, 6 feet, and 12.5 feet.

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LOG OF J-53

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		**TOPSOIL**
					SAND - brown, fine grained, well sorted, with little silt, dry, damp at 3 feet.
0			5		**SAND - gray, fine grained, well sorted, with little silt, wet.**
0			10		**CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.**
			15		**TOTAL DEPTH = 14 FEET**
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 2.5 feet, 7 feet, and 14 feet.

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LOG OF J-54

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, dark brown, fine to medium grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
					SAND - brown, fine grained, well sorted, with little silt, dry, damp at 3 feet.
0			5		SAND - brownish gray, fine grained, well sorted, with little silt, wet.
			10		
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3 feet, 7.5 feet, and 15 feet.

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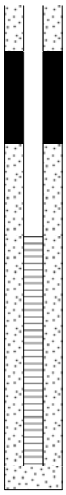
LOG OF J-MW-55

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to medium gravel, cinders, coal fragments, and concrete pieces, dry.
0			5		SAND - brown, fine grained, well sorted, with little silt, dry, damp at 3.5 feet, wet at 4 feet.
0			10		SAND - gray, fine grained, well sorted, with little silt, wet.
					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
0			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3.5 feet, 8 feet, and 15 feet.

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LOG OF J-56

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					ORGANIC MATERIAL - peat, black, with little fine to medium sand, trace fine gravel, dry, damp at 3.5 feet.
0			5		SAND - brown, fine grained, well sorted, with little silt, wet.
0			10		SAND - brownish gray, fine grained, well sorted, with little silt, wet.
0					SILTY SAND - brown, very fine to fine grained, well sorted, with silt, wet.
					GRAVELLY SAND - gray, fine to coarse grained, poorly sorted, with fine to medium gravel, wet.
0			15		CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
					TOTAL DEPTH = 19 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3 feet, 7.5 feet, and 18 feet.

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LOG OF J-57

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, black, fine to medium grained, poorly sorted, with fine to medium gravel and coal fragments, dry.
					SAND - brown, fine grained, well sorted, with some silt, dry, damp at 4 feet, wet at 4.5 feet.
			5		
0					SAND - brownish gray, fine grained, well sorted, with little silt, wet.
					SILTY SAND - brown, very fine to fine grained, well sorted, with silt, wet.
			10		CLAYEY SAND - gary, very fine to fine grained, well sorted, with clay binder, wet.
					GRAVELLY SAND - gray, fine to coarse grained, poorly sorted, with fine to medium gravel, wet.
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4.5

Soil samples collected at 3 feet, 8 feet, and 15 feet.

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LOG OF J-58

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, black, fine to medium grained, poorly sorted, with fine to medium gravel and cinders, dry.
					FILL - gravelly sand, black, fine to medium grained, poorly sorted, with fine to medium gravel and coal fragments, dry.
			5		SAND - light brown, fine grained, well sorted, with some silt, dry, damp at 3.5 feet.
0					SAND - borwn, fine grained, well sorted, with some silt, wet.
					SAND - gray, fine grained, well sorted, with little silt, wet.
			10		
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3.5 feet, 8 feet, and 15 feet.

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LOG OF J-59

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, dark borwn, fine to medium grained, poorly sorted, with fine to medium gravel, cinders, and coal fragments, dry.
0			5		SAND - brown, fine grained, well sorted, with some silt, dry, damp at 3 feet, wet at 4 feet.
0			10		SILTY SAND - gray, fine grained, well sorted, with silt, wet.
0			15		CLAY - gray, soft to firm, low plasticity, with trace fine gravel, dry.
					TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 3 feet, 9 feet, and 15 feet.

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LOG OF J-60

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
0					FILL - clay, brown, soft, low plasticity, with little fine sand, some fine to medium gravel, dry.
					FILL - organic material, peat, black, with some coal fragments, slightly damp.
			5		SILTY SAND - brown, fine grained, well sorted, with silt, little fine gravel, wet, trace clay binder observed starting at 9 feet.
0					
			10		CLAY - gray, soft to firm, low plasticity, with trace fine gravel, dry.
0					
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4.5

Soil samples collected at 5 feet, 9 feet, and 15 feet.

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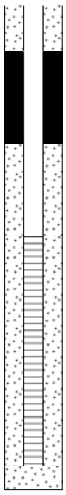
LOG OF J-MW-61

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/22/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/12/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					SAND - brown, fine grained, well sorted, with trace fine gravel, dry, wet at 4 feet.
			5		SAND - dark brown, fine grained, well sorted, with some organic material, trace fine gravel, wet.
0					SILTY SAND - brown, fine grained, well sorted, with silt, little clay binder, wet.
			10		
					CLAY - gray, soft to firm, low plasticity, with trace fine gravel, dry.
0			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4

Soil samples collected at 4 feet, 9 feet, and 15 feet.

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LOG OF J-62

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/22/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/22/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, dark brown, fine to medium grained, poorly sorted, with fine to medium gravel, dry.
0			5		SAND - brown, fine grained, well sorted, with little silt, dry, damp at 4 feet, wet at 4.5 feet, little clay binder observed starting at 9 feet.
0			10		CLAY - gray, soft to firm, low plasticity, with trace fine gravel, dry.
			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 4.5

Soil samples collected at 4 feet, 9 feet, and 15 feet.

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LOG OF J-63

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/28/14

GEOLOGIST: DAL | COMPLETION DATE: 10/28/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - clay, brown, hard, medium plasticity, some fine to medium gravel, some coal and slag fragments, dry.
			5		
			10		
0			15		FILL - coal ash, dark gray, well sorted, fine grained, compacted, dry.
0					FILL - silty sand, gray, well sorted, fine grained, damp.
					Wet at 17 feet.
0			20		FILL - Sand, brown, well sorted, fine grained, wet.
					CLAY - brown, hard, high plasticity, some fine to coarse gravel, dry.
0			25		TOTAL DEPTH = 25 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 17

Soil samples collected at 14 feet, 18 feet, and 23.5 feet.

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LOG OF J-64

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/28/14

GEOLOGIST: DAL | COMPLETION DATE: 10/28/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - clay, brown, hard, medium plasticity, some fine to medium gravel, some coal and slag fragments, dry.
			5		
			10		
0					
0					FILL - gravelly sand, poorly sorted, fine to coarse grained, coal and slag fragments, dry.
			15		FILL - sand, brown, well sorted, medium grained, wet.
0					CLAY - brown, hard, high plasticity, some fine to medium gravel, dry.
			20		TOTAL DEPTH = 20 FEET
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 14

Soil samples collected at 12 feet, 15 feet, and 19 feet.

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LOG OF J-65

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/28/14

GEOLOGIST: DAL | COMPLETION DATE: 10/28/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - clay, brown, hard, medium plasticity, some fine to coarse gravel, some coal, brick, cement, and slag fragments, dry.
0			15		FILL - sand, light brown, well sorted, medium grained, wet.
0			20		CLAY - gray, hard, low plasticity, some fine to coarse gravel, dry.
					TOTAL DEPTH = 20 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 13.5

Soil samples collected at 11.5 feet, 16.5 feet, and 19 feet.

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LOG OF J-66

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 10/28/14

GEOLOGIST: DAL | COMPLETION DATE: 10/28/14

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - clay, brown, hard, medium plasticity, some fine to coarse gravel, some slag, brick, and coal fragments, dry.
0			5		FILL - clay, gray, hard, high plasticity, little fine to coarse gravel, some coal fragments, dry.
0			10		FILL - coal ash, black, well sorted, fine grained, some fine coal and slag fragments, compacted, dry.
0			15		FILL - sand, gray, well sorted, fine grained, some clay binder, wet.
					CLAY - brown, hard, high plasticity, some fine to medium gravel, dry.
			20		TOTAL DEPTH = 20 FEET
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 16

Soil samples collected at 13.5 feet, 17 feet, and 19.5 feet.

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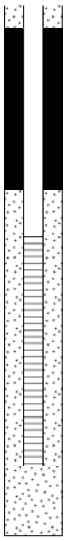
LOG OF J-MW67

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	04/07/2015
GEOLOGIST:	DAL
COMPLETION DATE:	04/07/2015



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - clay, brown, soft, high plasticity, minor fine to medium gravel, dry.
0.1					FILL - fly ash, gray, fine grained, well sorted, some fine grained sand, six-inch dark brown gravel seam with slag at 3.5 feet, dry.
			5		FILL - silty sand, gray, fine grained, well sorted, some fly ash, minor medium slag fragments, dry. Wet at 6.5 feet.
0					
0.1			10		CLAY - gray, soft, medium to high plasticity, minor fine to medium gravel, brown mottling, damp.
0.1					CLAY - brown, soft, medium plasticity, some medium gravel, gray mottling, dry.
			15		TOTAL DEPTH = 13.5 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6.5

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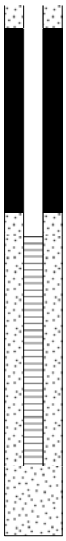
LOG OF J-MW68

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	04/07/2015
GEOLOGIST:	DAL
COMPLETION DATE:	04/07/2015



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - sand, black, coarse grained, poorly sorted, some medium gravel and slag fragments, clay binder, dry.
0			5		FILL - clay, brown, soft, high plasticity, some medium gravel and slag fragments, dry.
			10		FILL - gravelly sand, black, medium to coarse grained, poorly sorted, some medium gravel and slag, dry. Wet at 6 feet.
0					FILL - clay, gray, soft, high plasticity, some medium to coarse gravel, damp.
			15		FILL - gravel, brown, coarse grained, poorly sorted, cement, brick, and wood fragments, wet.
					TOTAL DEPTH = 13.5 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

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LOG OF J-69

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	04/07/2015
GEOLOGIST:	DAL
COMPLETION DATE:	04/07/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - sand, black, coarse grained, poorly sorted, fine to medium slag fragments, clay binder, dry.
0			5		FILL - sand, brown, well sorted, fine grained, damp.
0			10		CLAY - brown, soft, medium plasticity, some fine to medium gravel, dry.
0			15		CLAY - gray, soft, medium plasticity, some fine gravel, dry.
					TOTAL DEPTH = 16 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 5 feet.

Set monitoring well at 4 - 9 feet. Well produced no water and was abandoned.

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LOG OF J-70

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/21/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/21/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
			5		SAND - brown, fine to medium grained, well sorted, with some silt, little fine gravel, dry, wet at 6 feet.
0					SAND - dark brown, fine grained, well sorted, with some silt, little fine gravel, wet.
			10		CLAY - gray, soft to firm, low plasticity, with little fine gravel, dry.
0					TOTAL DEPTH = 13.5 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 6 feet and 13 feet.

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LOG OF J-72

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/21/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/21/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - sand, brown, fine grained, poorly sorted, with some fine to medium gravel, dry.
			5		FILL - gravelly sand, brown, fine to medium grained, poorly sorted, with fine to medium gravel and cinders, dry
0					SAND - brown, fine grained, well sorted, with some silt, little fine gravel, wet.
			10		CLAY - gray, soft to firm, low plasticity, with trace fine gravel, dry.
0			15		TOTAL DEPTH = 15 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 6 feet and 15 feet.

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LOG OF J-73

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/21/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/21/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.**
0					**FILL - gravelly sand, dark brown, fine to coarse grained, poorly sorted, with fine to medium gravel and cinders, dry, wet at 8 feet.**
			5		
0					
			10		
					SILTY SAND - grayish brown, very fine to fine grained, well sorted, with silt, wet.
0					**CLAY - gray, soft, high plasticity, with trace fine gravel, slightly damp.**
			15		
0					
					TOTAL DEPTH = 19 FEET
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8

Soil sample collected at 17 feet.

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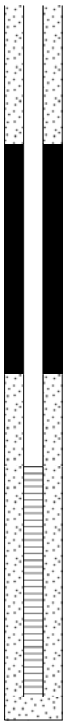
LOG OF J-MW-74

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/21/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/13/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to coarse gravel, dry.
0			5		FILL - gravelly sand, dark brown, fine to coarse grained, poorly sorted, with fine to medium gravel and cinders, dry, wet at 8 feet.
0			10		
0			15		SILTY SAND - gray, very fine to fine grained, well sorted, with silt, trace clay binder, little fine to medium gravel, wet.
0			20		CLAY - gray, soft, high plasticity, with trace fine gravel, slightly damp.
			25		TOTAL DEPTH = 25 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8

Soil samples collected at 18 feet and 24 feet.

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LOG OF J-75

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/21/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/21/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
0					FILL - silty sand, dark brown, fine grained, well sorted, with silt, little fine to medium gravel and coal fragments, dry.
			5		
0					SILTY SAND - brown, fine grained, well sorted, with some fine to medium gravel, dry, wet at 8.5 feet.
			10		
0					CLAY - gray, soft, low to medium plasticity, with some fine sand, wet.
			15		SAND - brown, fine to medium grained, well sorted, wet.
0					CLAY - gray, soft, high plasticity, with trace fine gravel, slightly damp.
			20		
0					CLAY - gray, soft, high plasticity, with little fine to medium gravel, slightly damp.
			25		TOTAL DEPTH = 24 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8.5

Soil samples collected at 9 feet, 15 feet and 24 feet.

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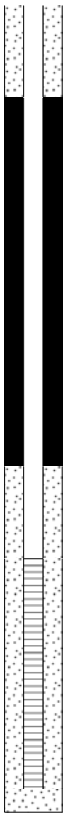
LOG OF J-MW-76

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/21/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/13/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
0					FILL - sand, brown, fine to medium grained, well sorted, with some silt, little fine to medium gravel, dry.
			5		
					CLAY - gray, soft, medium plasticity, slightly damp.
0					SAND - dark brown, fine to medium grained, well sorted, with some organic material, little fine to medium gravel, wet.
					SAND - light brown, fine grained, well sorted, with little silt, wet.
			10		
0					SILTY SAND - gray, very fine to fine grained, well sorted, with silt, little fine to medium gravel, wet, strong odor and black staining observed.
			15		
2.1					CLAY - gray, soft, medium to high plasticity, with trace fine gravel, slightly damp.
			20		
0					
			25		TOTAL DEPTH = 25 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 7

Soil samples collected at 9 feet, 16 feet and 22 feet.

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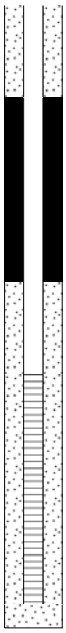
LOG OF J-MW-77

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/21/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/13/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - sand, brown, fine to medium grained, well sorted, with some fine to medium gravel, dry.
					FILL - sand, dark brown, fine to medium grained, poorly sorted, with some organic material, some concrete fragments, dry.
			5		FILL - gravelly sand, brown, fine to medium grained, poorly sorted, with fine to medium gravel and brick fragments, dry.
0					FILL - silty sand, gray, very fine to fine grained, well sorted, with silt, damp, wet at 8.5 feet.
			10		FILL - coal, black, with little fine to medium sand, little fine gravel, dry.
0					CLAY - gray, soft, low to medium plasticity, with some fine to medium gravel, wet.
					CLAY - gray. soft, high plasticity, with little silt, slightly damp.
			15		
0					SILTY SAND - brownish gray, very fine to fine grained, well sorted, with silt, little clay binder, wet.
					CLAY - brownish gray, soft, high plasticity, with trace fine gravel, slightly damp.
			20		
0					
			25		TOTAL DEPTH = 25 FEET

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8.5

Soil samples collected at 4.5 feet, 17 feet and 24 feet.

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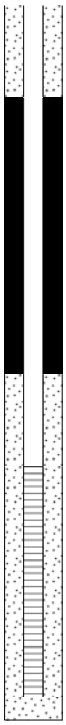
LOG OF J-MW-78

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/21/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/13/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to coarse gravel and concrete pieces, dry.
0			5		FILL - gravelly sand, dark brown, fine to coarse grained, poorly sorted, with fine to medium gravel and cinders, dry, wet at 8 feet.
0			10		
0			15		SILTY SAND - brownish gray, very fine to fine grained, well sorted, with silt, little clay binder, wet.
					CLAY - gray, soft, low plasticity, with some fine to medium sand, trace fine gravel, wet.
0					CLAYEY SAND - gray, very fine to fine grained, well sorted, with clay binder, wet.
					CLAY - gray, soft, high plasticity, with trace fine gravel, slightly damp.
			20		TOTAL DEPTH = 20 FEET
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 8

Soil sample collected at 20 feet.

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LOG OF J-80

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		FILL - gravelly sand, brown, fine grained, poorly sorted, with fine to medium gravel, dry.
					FILL - gravelly sand, brown, fine to coarse grained, poorly sorted, with fine to medium gravel, little clay binder, dry.
					FILL - clay, brown, soft to firm, low plasticity, with little fine gravel, little fine sand, dry.
			5		FILL - gravelly sand, black, fine to coarse grained, poorly sorted, with fine to coarse gravel, cinders, and coal fragments, dry.
0					FILL - silty sand, gray, very fine to fine grained, well sorted, with silt, little fine to medium gravel and cinders, dry.
					SILTY SAND - gray, very fine to fine grained, well sorted, with silt, little fine to medium gravel, little clay binder, damp.
			10		CLAYEY SAND - gray, very fine to fine grained, poorly sorted, with clay binder, some fine to coarse gravel, damp, wet at 14 feet.
0					
			15		CLAY - gray, soft, high plasticity, with little fine gravel, slightly damp.
0					
			20		TOTAL DEPTH = 20 FEET
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 14

Soil samples collected at 10 feet and 20 feet.

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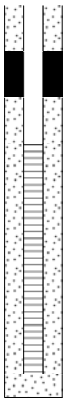
LOG OF J-MW-81

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/24/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/14/2014



PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, gray, fine grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		SAND - brownish gray, fine to medium grained, well sorted, slightly damp.
0					ORGANIC MATERIAL - peat. black, slightly damp.
					SILTY SAND - brown, fine grained, well sorted, with silt, little clay binder, damp, wet at 6.5 feet.
					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
0			10		
					TOTAL DEPTH = 13 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6.5

Soil samples collected at 1 foot, 6 feet, and 12.5 feet.

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LOG OF J-82

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/24/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/24/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
0					**FILL - sand, dark gray, fine grained, well sorted, with little fine gravel and coal fragments, dry.**
			5		**SAND - brown, fine grained, well sorted, with some silt, dry, wet at 6 feet.**
0					**CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.**
			10		**TOTAL DEPTH = 10 FEET**
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 6

Soil samples collected at 1 foot, 5 feet, and 10 feet.

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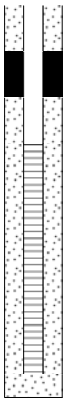
LOG OF J-MW-83

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/14/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, dark gray, fine grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		ORGANIC MATERIAL - peat, black, dry.
					SAND - brown, fine grained, well sorted, with little silt, dry, wet at 5.5 feet.
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		



ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5.5

Soil samples collected at 0.5 feet, 6 feet, and 10 feet.

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LOG OF J-84

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	08/14/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, dark gray, fine grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		ORGANIC MATERIAL - peat, black, dry.
0					SILTY SAND - brown, very fine to fine grained, well sorted, with trace fine gravel, wet.
					CLAY - brown, with gray mottling, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: 5.5

Soil samples collected at 1 foot, 4 feet, and 10 feet.

Set monitoring well at 3 - 8 feet. Well produced no water and was abandoned.

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LOG OF J-85

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
0					SAND - brown, fine to medium grained, well sorted, with little fine to medium gravel, dry.
					SAND - light brown, fine grained, well sorted, dry.
			5		SILTY SAND - brown, fine grained, well sorted, with silt, dry.
0					CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
					TOTAL DEPTH = 9 FEET
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 1 foot, 4.5 feet, and 9 feet.

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LOG OF J-86

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					SILTY SAND - brown, fine grained, well sorted, with silt dry.
0					SAND - light brown, fine grained, well sorted, dry.
			5		CLAY - gray, soft to firm, low plasticity, with little fine to medium gravel, dry.
0					
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 4 feet and 10 feet.

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LOG OF J-87

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					SAND - light brown, fine grained, well sorted, with little fine gravel, dry.
0					CLAYEY SAND - brown, fine grained, well sorted, with clay binder, dry.
					CLAY - brown with gray mottling, soft, low plasticity, with little fine gravel, dry.
			5		
0					CLAY - brown, soft to firm, low plasticity, with little fine to medium gravel, dry.
					TOTAL DEPTH = 9 FEET
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 2 feet and 8 feet.

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LOG OF J-88

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					SAND - brown, fine grained, well sorted, with little fine to medium gravel, dry.
0					ORGANIC MATERIAL - peat, black, dry.
					SILTY SAND - brown, fine to medium grained, well sorted, with silt, dry.
					SAND - light brown, fine grained, well sorted, dry.
			5		
					CLAY - brown, soft to firm, low plasticity, with little fine to medium gravel, dry.
0					
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 4 feet and 10 feet.

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LOG OF J-89

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
0					FILL - sand, brown, fine to medium grained, well sorted, with little fine to medium gravel, dry.
					FILL - gravelly sand, brown, fine ot medium grained, poorly sorted, with fine gravel and coal fragments, dry.
			5		CLAY - brown, soft, low plasticity, with little fine sand, little fine gravel, dry.
					SAND - brown, fine grained, well sorted, with little silt, dry.
0					CLAY - brown, soft, low plasticity, with little fine gravel, dry.
					CLAY - gray with brown mottling, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 1 foot, 4.5 feet, and 10 feet.

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LOG OF J-90

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	WMD
START DATE:	07/23/2014
GEOLOGIST:	RLW
COMPLETION DATE:	07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, dark gray, fine grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		ORGANIC MATERIAL - peat, black, dry.
					SAND - brown, fine grained, well sorted, with little silt, dry.
0					CLAY - gray with brown mottling, soft to firm, low plasticity, with little fine to medium gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 1 foot, 3.5 feet, 5.5 feet, and 10 feet.

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LOG OF J-91

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO: WMD | START DATE: 07/23/2014

GEOLOGIST: RLW | COMPLETION DATE: 07/23/2014

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
0			0		TOPSOIL
					FILL - sand, dark gray, fine grained, well sorted, with little fine to medium gravel and coal fragments, dry.
			5		SAND - brown, fine grained, well sorted, with little silt, dry.
0					CLAY - gray with brown mottling, soft to firm, low plasticity, with little fine gravel, dry.
			10		TOTAL DEPTH = 10 FEET
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil samples collected at 0.5 feet, 3.5 feet, 6 feet, and 10 feet.

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LOG OF J-92

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO:

START DATE: 04/6/2015

GEOLOGIST: DAL

COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-93

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO:

START DATE: 04/6/2015

GEOLOGIST: DAL

COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-94

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	START DATE: 04/6/2015
GEOLOGIST: DAL	COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-95

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	START DATE: 04/6/2015
GEOLOGIST: DAL	COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-96

CLIENT:	SCCBRA/140190
LOCATION:	Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI
DRILLING CO:	START DATE: 04/6/2015
GEOLOGIST: DAL	COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		TOPSOIL
					SAND - dark brown, fine grained, well sorted, wet at 1.5 feet.
					TOTAL DEPTH = 1.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-97

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO:

START DATE: 04/6/2015

GEOLOGIST: DAL

COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

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LOG OF J-98

CLIENT: SCCBRA/140190

LOCATION: Marysville Oil Terminal, 3227 Ravenswood Road, Marysville, MI

DRILLING CO:

START DATE: 04/6/2015

GEOLOGIST: DAL

COMPLETION DATE: 04/6/2015

PID READING	SAMPLING RESISTANCE	SAMPLES	Feet	SYMBOL	DESCRIPTION
			0		**TOPSOIL**
					FILL - sand, light gray, fine grained, well sorted, with some medium slag fragments, dry.
					TOTAL DEPTH = 3.5 FEET
			5		
			10		
			15		
			20		
			25		

ELEVATIONS
SURFACE:
TOP OF CASING:
STATIC WATER LEVEL:
WATER LEVEL AT TIME OF DRILLING: NA

Soil sample collected at 0.5 feet.

APPENDIX D

ANALYTICAL DATA TABLES

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	acetone µg/kg	acrylonitrile µg/kg	benzene µg/kg	bromo- benzene µg/kg	bromodichloro- methane µg/kg	bromoform µg/kg	bromo- methane µg/kg	2-butanone µg/kg	n- butylbenzene µg/kg	sec- butylbenzene µg/kg	tert- butylbenzene µg/kg	carbon disulfide µg/kg	carbon tetrachloride µg/kg	chloro- benzene µg/kg	chloro- ethane µg/kg	chloroform µg/kg	chloro- methane µg/kg	dibromochloro- methane µg/kg	dibromo- methane µg/kg
Tier 1 (Non-Residential) Criteria																			
Chemical Abstract Service Number	*67641*	*107131*	*71432*	*108861*	*75274*	*75252*	*74839*	*78933*	*104518*	*135988*	*98066*	*75150*	*56235*	*108907*	*75003*	*67663*	*74873*	*124481*	*74953*
Groundwater Surface Water Interface Protection	*34,000*	*100 (M); 40*	*4,000 (X)*	*NA*	*ID*	*ID*	*700*	*44,000*	*ID*	*ID*	*ID*	*ID*	*900 (X)*	*500*	*22,000 (X)*	*7,000*	*ID*	*ID*	*NA*
Soil Volatilization to Indoor Air Inhalation	*5.4E+8 (C)*	*35,000*	*8,400*	*5.80E+05*	*6,400*	*7.70E+05*	*1,600*	*9.9E+7 (C)*	*ID*	*ID*	*ID*	*1.40E+05*	*990*	*2.20E+05*	*5.3E+6 (C)*	*38,000*	*10,000*	*21,000*	*ID*
Infinite Source Volatile Soil Inhalation	*1.60E+08*	*17,000*	*45,000*	*5.40E+05*	*31,000*	*3.10E+06*	*13,000*	*3.50E+07*	*ID*	*ID*	*ID*	*1.60E+06*	*12,000*	*9.20E+05*	*3.60E+07*	*1.50E+05*	*1.20E+05*	*80,000*	*ID*
Particulate Soil Inhalation	*1.70E+11*	*5.80E+07*	*4.7E+08*	*2.40E+08*	*1.10E+08*	*3.60E+09*	*1.50E+08*	*2.90E+10*	*8.80E+08*	*1.80E+08*	*2.90E+08*	*2.10E+10*	*1.70E+08*	*2.10E+09*	*2.90E+11*	*1.60E+09*	*2.60E+09*	*1.60E+08*	*ID*
Direct Contact	*7.30E+07*	*74,000*	*8.4E+5 (C)*	*1.7E+6 (C)*	*4.90E+05*	*3.8E+6 (C)*	*1.00E+06*	*7.0E+8 (C,DD)*	*8.00E+06*	*8.00E+06*	*8.00E+06*	*4.3E+7 (C,DD)*	*4.4E+5 (C)*	*1.4E+7 (C)*	*1.2E+7 (C)*	*5.5E+6 (C)*	*7.4E+6 (C)*	*5.00E+05*	*8.0E+6 (C)*
Soil Saturation Concentration	*1.10E+08*	*8.30E+06*	*400,000*	*7.60E+05*	*1.50E+06*	*8.70E+05*	*2.20E+06*	*2.70E+07*	*1.00E+07*	*1.00E+07*	*1.00E+07*	*2.80E+05*	*3.90E+05*	*2.60E+05*	*9.50E+05*	*1.50E+06*	*1.10E+06*	*6.10E+05*	*2.00E+06*
Non-Residential Vapor Intrusion Screening Levels	*5.23E+06*	*137*	*85*	*12,900*	*104*	*11,400*	*200*	*3.04E+06*	*7,560*	*738*	*1,290*	*3,800*	*50*	*5,850*	*67,200*	*340*	*323*	*266*	*NA*
Sample ID (Depth) Sample Date: 8/14-10/14																			
J-25@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-25@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-26@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-26@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-27@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW28@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW28@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-29@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**51**	**130**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-29@9'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-MW30@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31@8.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-MW31@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@4' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-62@4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-62@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-62@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-70@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-70@13'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-72@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-72@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-73@17'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW74@18' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW74@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@15' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76@16' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77@17' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW78@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Phase II ESA Soil Analytical Data (Sampled: 11/14)																			
J-1@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-2@5-6'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-3@10-11'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-4@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	acetone µg/kg	acrylonitrile µg/kg	benzene µg/kg	bromo- benzene µg/kg	bromodichloro- methane µg/kg	bromoform µg/kg	bromo- methane µg/kg	2-butanone µg/kg	n- butylbenzene µg/kg	sec- butylbenzene µg/kg	tert- butylbenzene µg/kg	carbon disulfide µg/kg	carbon tetrachloride µg/kg	chloro- benzene µg/kg	chloro- ethane µg/kg	chloroform µg/kg	chloro- methane µg/kg	dibromochloro- methane µg/kg	dibromo- methane µg/kg
Tier 1 (Non-Residential) Criteria																			
Chemical Abstract Service Number	*67641*	*107131*	*71432*	*108861*	*75274*	*75252*	*74839*	*78933*	*104518*	*135988*	*98066*	*75150*	*56235*	*108907*	*75003*	*67663*	*74873*	*124481*	*74953*
Groundwater Surface Water Interface Protection	*34,000*	*100 (M); 40*	*4,000 (X)*	*NA*	*ID*	*ID*	*700*	*44,000*	*ID*	*ID*	*ID*	*ID*	*900 (X)*	*500*	*22,000 (X)*	*7,000*	*ID*	*ID*	*NA*
Soil Volatilization to Indoor Air Inhalation	*5.4E+8 (C)*	*35,000*	*8,400*	*5.80E+05*	*6,400*	*7.70E+05*	*1,600*	*9.9E+7 (C)*	*ID*	*ID*	*ID*	*1.40E+05*	*990*	*2.20E+05*	*5.3E+6 (C)*	*38,000*	*10,000*	*21,000*	*ID*
Infinite Source Volatile Soil Inhalation	*1.60E+08*	*17,000*	*45,000*	*5.40E+05*	*31,000*	*3.10E+06*	*13,000*	*3.50E+07*	*ID*	*ID*	*ID*	*1.60E+06*	*12,000*	*9.20E+05*	*3.60E+07*	*1.50E+05*	*1.20E+05*	*80,000*	*ID*
Particulate Soil Inhalation	*1.70E+11*	*5.80E+07*	*4.7E+08*	*2.40E+08*	*1.10E+08*	*3.60E+09*	*1.50E+08*	*2.90E+10*	*8.80E+08*	*1.80E+08*	*2.90E+08*	*2.10E+10*	*1.70E+08*	*2.10E+09*	*2.90E+11*	*1.60E+09*	*2.60E+09*	*1.60E+08*	*ID*
Direct Contact	*7.30E+07*	*74,000*	*8.4E+5 (C)*	*1.7E+6 (C)*	*4.90E+05*	*3.8E+6 (C)*	*1.00E+06*	*7.0E+8 (C,DD)*	*8.00E+06*	*8.00E+06*	*8.00E+06*	*4.3E+7 (C,DD)*	*4.4E+5 (C)*	*1.4E+7 (C)*	*1.2E+7 (C)*	*5.5E+6 (C)*	*7.4E+6 (C)*	*5.00E+05*	*8.0E+6 (C)*
Soil Saturation Concentration	*1.10E+08*	*8.30E+06*	*400,000*	*7.60E+05*	*1.50E+06*	*8.70E+05*	*2.20E+06*	*2.70E+07*	*1.00E+07*	*1.00E+07*	*1.00E+07*	*2.80E+05*	*3.90E+05*	*2.60E+05*	*9.50E+05*	*1.50E+06*	*1.10E+06*	*6.10E+05*	*2.00E+06*
Non-Residential Vapor Intrusion Screening Levels	*5.23E+06*	*137*	*85*	*12,900*	*104*	*11,400*	*200*	*3.04E+06*	*7,560*	*738*	*1,290*	*3,800*	*50*	*5,850*	*67,200*	*340*	*323*	*266*	*NA*
J-5@4-5'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-6@4-5'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-7@4-5'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-8@4-5'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-9@6-7'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-10@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-11@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-12@7-8' (▼)	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-13@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-14@7-8' (▼)	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15@4-5'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15A@5-6' (▼)	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15B@12-13' (▼)	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15C@9-10'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-16@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-17@6-8'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-18@5-6'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-19@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-20@3-4'	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria*
7. *(--) - Indicates parameter not analyzed*
8. *(C) - Criterion exceeds Csat screening levels; (D) - criterion exceeds 100 percent, therefore it is reduced to 100 percent or 1.0E+9 parts per billion; (DD) - Substance causes developmental effects; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water protection standard of 1,600 ug/kg; (X) - Criteria is not protective of surface water used as a drinking water source*

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	1,2-dichloro-benzene µg/kg	1,3-dichloro benzene µg/kg	1,4-dichloro benzene µg/kg	dichlorodi-fluoromethane µg/kg	1,1-dichloro-ethane µg/kg	1,2-dichloro-ethane µg/kg	1,1-dichloro-ethene µg/kg	cis-1,2-di-chloroethene µg/kg	trans-1,2-di-chloroethene µg/kg	1,2-dichloro-propane µg/kg	1,3-dichloro-propane µg/kg	ethyl-benzene µg/kg	ethylene dibromide µg/kg	2-hexanone µg/kg	isopropyl-benzene µg/kg	methylene chloride µg/kg	4-methyl-2-pentanone µg/kg	MTBE µg/kg
Tier 1 (Non-Residential) Criteria																		
Chemical Abstract Service Number	*95501*	*541731*	*106467*	*75718*	*75343*	*107062*	*75354*	*156592*	*156605*	*78875*	*542756*	*100414*	*106934*	*591786*	*98828*	*75092*	*108101*	*1634044*
Groundwater Surface Water Interface Protection	*280*	*680*	*360*	*ID*	*15,000*	*7,200 (X)*	*2,600*	*12,000*	*30,000 (X)*	*4,600 (X)*	*180 (X)*	*360*	*110 (X)*	*ID*	*3,200*	*30,000 (X)*	*ID*	*1.4E+5 (X)*
Soil Volatilization to Indoor Air Inhalation	*2.0E+7 (C)*	*48,000*	*1.00E+05*	*1.70E+06*	*4.30E+05*	*11,000*	*330*	*41,000*	*43,000*	*7,400*	*5,400*	*4.6E+5 (C)*	*3,600*	*1.80E+06*	*7.3E+5 (C)*	*2.40E+05*	*6.9E+7 (C)*	*1.8E+7 (C)*
Infinite Source Volatile Soil Inhalation	*4.60E+07*	*94,000*	*2.60E+05*	*6.30E+07*	*2.50E+06*	*21,000*	*3,700*	*2.10E+05*	*3.30E+05*	*30,000*	*60,000*	*2.40E+06*	*5,800*	*1.30E+06*	*2.00E+06*	*7.00E+05*	*5.30E+07*	*3.0E+07*
Particulate Soil Inhalation	*4.40E+10*	*8.80E+07*	*5.70E+08*	*1.50E+12*	*1.50E+10*	*1.50E+08*	*7.80E+07*	*1.00E+09*	*2.10E+09*	*1.20E+08*	*5.90E+08*	*1.30E+10*	*1.80E+07*	*1.20E+09*	*2.60E+09*	*8.30E+09*	*6.00E+10*	*8.80E+10*
Direct Contact	*6.3E+7 (C)*	*6.6E+5 (C)*	*1.90E+06*	*1.7E+8 (C)*	*8.7E+7 (C)*	*4.20E+05*	*6.6E+5 (C)*	*8.0E+6 (C)*	*1.2E+7 (C)*	*6.6E+5 (C)*	*2.40E+05*	*7.1E+7 (C)*	*430*	*1.0E+8 (C)*	*8.0E+7 (C)*	*5.8E+6 (C)*	*1.8E+8 (C)*	*7.1E+6 (C)*
Soil Saturation Concentration	*2.10E+05*	*1.70E+05*	*NA*	*1.00E+06*	*8.90E+05*	*1.20E+06*	*5.70E+05*	*6.40E+05*	*1.40E+06*	*5.50E+05*	*6.20E+05*	*140,000*	*8.90E+05*	*2.50E+06*	*3.90E+05*	*2.30E+06*	*2.70E+06*	*5.9E+06*
Non-Residential Vapor Intrusion Screening Levels	*96,900*	*740*	*1,420*	*68,200*	*7,330*	*83.7*	*1,230*	***165***	*760*	*151*	*305*	*3,990*	*20*	*16,900*	*304*	*1,540*	*1.04E+06*	*238,000*
Sample ID (Depth) Sample Date: 8/14-10/14																		
J-25@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-25@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-26@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-26@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-27@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW28@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW28@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-29@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-29@9'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW30@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW30@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31@8.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31@13.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-59@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-60@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@4' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW61@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-62@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-72@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-73@17'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
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J-MW74@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@15' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-75@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76@16' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**820**	<RL	<RL	<RL	**78**	<RL	<RL	<RL	<RL	<RL	<RL
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J-MW77@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77@17' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW78@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Phase II ESA Soil Analytical Data (Sampled: 11/14)																		
J-1@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-2@5-6'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	1,2-dichloro-benzene µg/kg	1,3-dichloro benzene µg/kg	1,4-dichloro benzene µg/kg	dichlorodi-fluoromethane µg/kg	1,1-dichloro-ethane µg/kg	1,2-dichloro-ethane µg/kg	1,1-dichloro-ethene µg/kg	cis-1,2-di-chloroethene µg/kg	trans-1,2-di-chloroethene µg/kg	1,2-dichloro-propane µg/kg	1,3-dichloro-propane µg/kg	ethyl-benzene µg/kg	ethylene dibromide µg/kg	2-hexanone µg/kg	isopropyl-benzene µg/kg	methylene chloride µg/kg	4-methyl-2-pentanone µg/kg	MTBE µg/kg
Tier 1 (Non-Residential) Criteria																		
Chemical Abstract Service Number	*95501*	*541731*	*106467*	*75718*	*75343*	*107062*	*75354*	*156592*	*156605*	*78875*	*542756*	*100414*	*106934*	*591786*	*98828*	*75092*	*108101*	*1634044*
Groundwater Surface Water Interface Protection	*280*	*680*	*360*	*ID*	*15,000*	*7,200 (X)*	*2,600*	*12,000*	*30,000 (X)*	*4,600 (X)*	*180 (X)*	*360*	*110 (X)*	*ID*	*3,200*	*30,000 (X)*	*ID*	*1.4E+5 (X)*
Soil Volatilization to Indoor Air Inhalation	*2.0E+7 (C)*	*48,000*	*1.00E+05*	*1.70E+06*	*4.30E+05*	*11,000*	*330*	*41,000*	*43,000*	*7,400*	*5,400*	*4.6E+5 (C)*	*3,600*	*1.80E+06*	*7.3E+5 (C)*	*2.40E+05*	*6.9E+7 (C)*	*1.8E+7 (C)*
Infinite Source Volatile Soil Inhalation	*4.60E+07*	*94,000*	*2.60E+05*	*6.30E+07*	*2.50E+06*	*21,000*	*3,700*	*2.10E+05*	*3.30E+05*	*30,000*	*60,000*	*2.40E+06*	*5,800*	*1.30E+06*	*2.00E+06*	*7.00E+05*	*5.30E+07*	*3.0E+07*
Particulate Soil Inhalation	*4.40E+10*	*8.80E+07*	*5.70E+08*	*1.50E+12*	*1.50E+10*	*1.50E+08*	*7.80E+07*	*1.00E+09*	*2.10E+09*	*1.20E+08*	*5.90E+08*	*1.30E+10*	*1.80E+07*	*1.20E+09*	*2.60E+09*	*8.30E+09*	*6.00E+10*	*8.80E+10*
Direct Contact	*6.3E+7 (C)*	*6.6E+5 (C)*	*1.90E+06*	*1.7E+8 (C)*	*8.7E+7 (C)*	*4.20E+05*	*6.6E+5 (C)*	*8.0E+6 (C)*	*1.2E+7 (C)*	*6.6E+5 (C)*	*2.40E+05*	*7.1E+7 (C)*	*430*	*1.0E+8 (C)*	*8.0E+7 (C)*	*5.8E+6 (C)*	*1.8E+8 (C)*	*7.1E+6 (C)*
Soil Saturation Concentration	*2.10E+05*	*1.70E+05*	*NA*	*1.00E+06*	*8.90E+05*	*1.20E+06*	*5.70E+05*	*6.40E+05*	*1.40E+06*	*5.50E+05*	*6.20E+05*	*140,000*	*8.90E+05*	*2.50E+06*	*3.90E+05*	*2.30E+06*	*2.70E+06*	*5.9E+06*
Non-Residential Vapor Intrusion Screening Levels	*96,900*	*740*	*1,420*	*68,200*	*7,330*	*83.7*	*1,230*	***165***	*760*	*151*	*305*	*3,990*	*20*	*16,900*	*304*	*1,540*	*1.04E+06*	*238,000*
J-3@10-11'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-4@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-5@4-5'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-6@4-5'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-7@4-5'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-8@4-5'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-9@6-7'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-10@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-11@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-12@7-8' (▼)	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-13@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-14@7-8' (▼)	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15@4-5'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15A@5-6' (▼)	--	--	--	--	--	--	--	--	--	--	--	**150**	--	--	--	--	--	--
J-15B@12-13' (▼)	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15C@9-10'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-16@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-17@6-8'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-18@5-6'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-19@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-20@3-4'	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--

Notes:

1. All laboratory extractions and analyses were performed within the required period

2. (<RL) - Indicates parameter not detected above the reporting limit

3. Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013

4. Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013

5. Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs

6. (NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria

7. (--) - Indicates parameter not analyzed

8. (C) - Criterion exceeds Csat screening levels; (D) - criterion exceeds 100 percent, therefore it is reduced to 100 percent or 1.0E+9 parts per billion; (DD) - Substance causes developmental effects; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water protection standard of 1,600 ug/kg; (X) - Criteria is not protective of surface water used as a drinking water source

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	n-propyl-benzene µg/kg	styrene µg/kg	1,1,1,1-tetra-chloroethane µg/kg	1,1,2,2-tetra-chloroethane µg/kg	tetra-chloroethene µg/kg	toluene µg/kg	1,2,4-trichloro-benzene µg/kg	1,1,1-trichloro-ethane µg/kg	1,1,2-trichloro-ethane µg/kg	trichloroethene µg/kg	trichloro-fluoromethane µg/kg	1,2,3-trichloro-propane µg/kg	1,2,3-TMB µg/kg	1,2,4-TMB µg/kg	1,3,5-TMB µg/kg	vinyl chloride µg/kg	xylenes µg/kg
Tier 1 (Non-Residential) Criteria																	
Chemical Abstract Service Number	*103651*	*100425*	*630206*	*79345*	*127184*	*108883*	*120821*	*71556*	*79005*	*79016*	*75694*	*96184*	*526738*	*95636*	*108678*	*75014*	*1330207*
Groundwater Surface Water Interface Protection	*ID*	*2,100 (X)*	*ID*	*1,600 (X)*	*1,200 (X)*	*5,400*	*5,900 (X)*	*1,800*	*6,600 (X)*	***4,000 (580,X)***	*NA*	*NA*	*NA*	*570*	***1,100***	*260 (X)*	*820*
Soil Volatilization to Indoor Air Inhalation	*ID*	*1.3E+6 (C)*	*33,000*	*23,000*	*21,000*	*6.1E+5 (C)*	*1.8E+7 (C)*	*4.60E+05*	*24,000*	*1,900*	*5.1E+6(C)*	*7,500*	*NA*	*8.0E+6 (C)*	*4.8E+6 (C)*	*2,800*	*1.2E+7 (C)*
Infinite Source Volatile Soil Inhalation	*ID*	*3.30E+06*	*1.20E+05*	*34,000*	*2.10E+05*	*3.3E+06*	*3.40E+07*	*4.50E+06*	*57,000*	*14,000*	*1.10E+08*	*11,000*	*NA*	*2.5E+07*	*1.9E+07*	*29,000*	*5.4E+07*
Particulate Soil Inhalation	*5.90E+08*	*6.90E+09*	*5.30E+08*	*6.80E+07*	*1.20E+09*	*1.2E+10*	*1.10E+10*	*2.90E+10*	*2.50E+08*	*5.90E+07*	*1.70E+12*	*8.80E+06*	*NA*	*3.60E+10*	*3.6E+10*	*8.90E+08*	*1.3E+11*
Direct Contact	*8.00E+06*	*1.9E+6 (C)*	*2.2E+6 (C)*	*2.40E+05*	*9.3E+5 (C)*	*1.6E+8 (C)*	*5.8E+6 (C,DD)*	*1.0E+9 (C,D)*	*8.40E+05*	*6.6E+5 (C,DD)*	*2.6E+8 (C)*	*4.2E+6 (C)*	*NA*	*1.0E+8 (C)*	*1.0E+8 (C)*	*34,000*	*1.0E+9 (C,D)*
Soil Saturation Concentration	*1.00E+07*	*5.20E+05*	*4.40E+05*	*8.70E+05*	*88,000*	*2.50E+05*	*1.10E+06*	*4.60E+05*	*9.20E+05*	*5.00E+05*	*5.60E+05*	*8.30E+05*	*NA*	*1.10E+05*	*94,000*	*4.90E+05*	*1.50E+05*
Non-Residential Vapor Intrusion Screening Levels	*2,370*	*30,200*	*292*	*230*	*1,030*	*169,000*	*5.86E+03*	*66,600*	*365*	***50***	*118,000*	*NA*	*NA*	*36,900*	*27,900*	*40*	*4,890*
Sample ID (Depth) Sample Date: 8/14-10/14																	
J-25@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-25@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-26@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-26@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-27@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW28@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW28@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-29@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-29@9'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31@8.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31@13.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-59@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-59@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-59@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-60@5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-60@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-60@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW61@4' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW61@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW61@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-62@4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-62@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-62@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-70@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-70@13'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-72@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-72@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-73@17'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW74@18' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW74@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-75@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-75@15' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-75@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76@9' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76@16' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**870**	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77@4.5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77@17' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW78@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
Phase II ESA Soil Analytical Data (Sampled: 11/14)																	
J-1@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-2@5-6'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL

Table 1A **Greenwood Oil Terminal** **Summary of VOC Soil Analytical Results**	n-propyl-benzene µg/kg	styrene µg/kg	1,1,1,1-tetra-chloroethane µg/kg	1,1,2,2-tetra-chloroethane µg/kg	tetra-chloroethene µg/kg	toluene µg/kg	1,2,4-trichloro-benzene µg/kg	1,1,1-trichloro-ethane µg/kg	1,1,2-trichloro-ethane µg/kg	trichloroethene µg/kg	trichloro-fluoromethane µg/kg	1,2,3-trichloro-propane µg/kg	1,2,3-TMB µg/kg	1,2,4-TMB µg/kg	1,3,5-TMB µg/kg	vinyl chloride µg/kg	xylenes µg/kg
Tier 1 (Non-Residential) Criteria																	
Chemical Abstract Service Number	*103651*	*100425*	*630206*	*79345*	*127184*	*108883*	*120821*	*71556*	*79005*	*79016*	*75694*	*96184*	*526738*	*95636*	*108678*	*75014*	*1330207*
Groundwater Surface Water Interface Protection	*ID*	*2,100 (X)*	*ID*	*1,600 (X)*	*1,200 (X)*	*5,400*	*5,900 (X)*	*1,800*	*6,600 (X)*	***4,000 (580,X)***	*NA*	*NA*	*NA*	*570*	***1,100***	*260 (X)*	*820*
Soil Volatilization to Indoor Air Inhalation	*ID*	*1.3E+6 (C)*	*33,000*	*23,000*	*21,000*	*6.1E+5 (C)*	*1.8E+7 (C)*	*4.60E+05*	*24,000*	*1,900*	*5.1E+6(C)*	*7,500*	*NA*	*8.0E+6 (C)*	*4.8E+6 (C)*	*2,800*	*1.2E+7 (C)*
Infinite Source Volatile Soil Inhalation	*ID*	*3.30E+06*	*1.20E+05*	*34,000*	*2.10E+05*	*3.3E+06*	*3.40E+07*	*4.50E+06*	*57,000*	*14,000*	*1.10E+08*	*11,000*	*NA*	*2.5E+07*	*1.9E+07*	*29,000*	*5.4E+07*
Particulate Soil Inhalation	*5.90E+08*	*6.90E+09*	*5.30E+08*	*6.80E+07*	*1.20E+09*	*1.2E+10*	*1.10E+10*	*2.90E+10*	*2.50E+08*	*5.90E+07*	*1.70E+12*	*8.80E+06*	*NA*	*3.60E+10*	*3.6E+10*	*8.90E+08*	*1.3E+11*
Direct Contact	*8.00E+06*	*1.9E+6 (C)*	*2.2E+6 (C)*	*2.40E+05*	*9.3E+5 (C)*	*1.6E+8 (C)*	*5.8E+6 (C,DD)*	*1.0E+9 (C,D)*	*8.40E+05*	*6.6E+5 (C,DD)*	*2.6E+8 (C)*	*4.2E+6 (C)*	*NA*	*1.0E+8 (C)*	*1.0E+8 (C)*	*34,000*	*1.0E+9 (C,D)*
Soil Saturation Concentration	*1.00E+07*	*5.20E+05*	*4.40E+05*	*8.70E+05*	*88,000*	*2.50E+05*	*1.10E+06*	*4.60E+05*	*9.20E+05*	*5.00E+05*	*5.60E+05*	*8.30E+05*	*NA*	*1.10E+05*	*94,000*	*4.90E+05*	*1.50E+05*
Non-Residential Vapor Intrusion Screening Levels	*2,370*	*30,200*	*292*	*230*	*1,030*	*169,000*	*5.86E+03*	*66,600*	*365*	***50***	*118,000*	*NA*	*NA*	*36,900*	*27,900*	*40*	*4,890*
J-3@10-11'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-4@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-5@4-5'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-6@4-5'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-7@4-5'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-8@4-5'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-9@6-7'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-10@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-11@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-12@7-8' (▼)	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-13@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-14@7-8' (▼)	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-15@4-5'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-15A@5-6' (▼)	**1,000**	--	--	--	--	<RL	--	--	--	--	--	--	<RL	**500**	**2,200**	--	<RL
J-15B@12-13' (▼)	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-15C@9-10'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-16@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-17@6-8'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-18@5-6'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-19@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-20@3-4'	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria*
7. *(--) - Indicates parameter not analyzed*
8. *(C) - Criterion exceeds Csat screening levels; (D) - criterion exceeds 100 percent, therefore it is reduced to 100 percent or 1.0E+9 parts per billion; (DD) - Substance causes developmental effects; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water protection standard of 1,600 ug/kg; (X) - Criteria is not protective of surface water used as a drinking water source*

Table 1B **Greenwood Oil Terminal** **Summary of PNA Soil Analytical Results**	acenaphthene µg/kg	acenaphthylene µg/kg	anthracene µg/kg	benzo(a)anthracene µg/kg	benzo(a)pyrene µg/kg	benzo(b)fluoranthene µg/kg	benzo(ghi)perylene µg/kg	benzo(k)fluoranthene µg/kg	chrysene µg/kg	dibenzo(ah)anchracene µg/kg	fluoranthene µg/kg	fluorene µg/kg	indeno (123-cd) pyrene µg/kg	1-methyl naphthalene	2-methyl naphthalene µg/kg	naph-thalene µg/kg	phenan-threne µg/kg	pyrene µg/kg
Tier 1 (Non-Residential) Criteria																		
Chemical Abstract Service Number	*83329*	*208968*	*120127*	*56553*	*50328*	*205992*	*191242*	*207089*	*218019*	*53703*	*206440*	*86737*	*193395*	*90120*	*91576*	*91203*	*85018*	*129000*
Groundwater Surface Water Interface Protection	*8,700*	*ID*	*ID*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	***5,500***	*5,300*	*NLL*	*NA*	*4,200*	***730***	***2,100***	*ID*
Soil Volatilization to Indoor Air Inhalation	*3.50E+08*	*3.0E+06*	*1.0E+9 (D)*	*NLV*	*NLV*	*ID*	*NLV*	*NLV*	*ID*	*NLV*	*1.0E+9 (D)*	*1.0E+9 (D)*	*NLV*	*NA*	*4.9E+06*	*4.70E+05*	*5.10E+06*	*1.0E+9 (D)*
Infinite Source Volatile Soil Inhalation	*9.70E+07*	*2.7E+06*	*1.60E+09*	*NLV*	*NLV*	*ID*	*NLV*	*NLV*	*ID*	*NLV*	*8.90E+08*	*1.50E+08*	*NLV*	*NA*	*1.8E+06*	*3.50E+05*	*1.90E+05*	*7.80E+08*
Particulate Soil Inhalation	*6.20E+09*	*1.00E+09*	*2.90E+10*	*ID*	*1.90E+06*	*ID*	*3.50E+08*	*ID*	*ID*	*ID*	*4.10E+09*	*4.10E+09*	*ID*	*NA*	*2.9E+08*	*8.8E+07*	*2.90E+06*	*2.90E+09*
Direct Contact	*1.30E+08*	*5.2E+06*	*7.3E+08*	*80,000*	***8,000***	*80,000*	*7.00E+06*	*8.00E+05*	*8.00E+06*	*8,000*	*1.30E+08*	*8.70E+07*	*80,000*	*NA*	*2.6E+07*	*5.2E+07*	*5.20E+06*	*8.40E+07*
Soil Saturation Concentration	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Non-Residential Vapor Intrusion Screening Levels	*7.26E+06*	*2.82E+06*	*5.98E+08*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*1.19E+07*	*NA*	*NA*	*126,000*	*8,940*	*86,300*	*1.09E+09*
Sample ID (Depth) Sample Date: 8/14-10/14																		
J-25@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-25@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-26@3'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-26@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-27@10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW28@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW28@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-29@4.5'	**480**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**550**	<RL	--	<RL	<RL	<RL	<RL
J-29@9'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30@12'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31@8.5' (▼)	<RL	<RL	<RL	**420**	<RL	**490**	<RL	<RL	**410**	<RL	**1,100**	<RL	<RL	--	**1,500**	<RL	**1,300**	**890**
J-MW31@13.5' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-59@3'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-59@9' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-59@15'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-60@5' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-60@9' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-60@15'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-MW61@4' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-MW61@9' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-MW61@15'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-62@4'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-62@9' (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-62@15'	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-70@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-70@13'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-72@6' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-72@15'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-73@17'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW74@18' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW74@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-75@9' (▼)	<RL	<RL	<RL	**330**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	**1,100**	<RL	**680**	**330**
J-75@15' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-75@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76@9' (▼)	**2,400**	<RL	**4,700**	**8,700**	**8,800**	**10,000**	**4,800**	**3,700**	**9,200**	**1,300**	**22,000**	**2,500**	**5,100**	--	**1,700**	<RL	**16,000**	**16,000**
J-MW76@16' (▼)	**830**	**400**	**640**	<RL	**490**	**830**	**490**	<RL	<RL	<RL	**3,700**	**1,400**	<RL	--	**890**	<RL	**1,600**	**4,900**
J-MW76@16' (Duplicate) (▼)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-MW76@22'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77@4.5'	<RL	<RL	<RL	**480**	<RL	**440**	<RL	<RL	<RL	<RL	**840**	<RL	<RL	--	<RL	<RL	<RL	**650**
J-MW77@17' (▼)	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL

Table 1B **Greenwood Oil Terminal** **Summary of PNA Soil Analytical Results**	acenaphthene µg/kg	acenaphthylene µg/kg	anthracene µg/kg	benzo(a) anthracene µg/kg	benzo(a) pyrene µg/kg	benzo(b) fluoranthene µg/kg	benzo(ghi) perylene µg/kg	benzo(k) fluoranthene µg/kg	chrysene µg/kg	dibenzo(ah) anchracene µg/kg	fluoranthene µg/kg	fluorene µg/kg	indeno (123-cd) pyrene µg/kg	1-methyl naphthalene	2-methyl naphthalene µg/kg	naph-thalene µg/kg	phenan-threne µg/kg	pyrene µg/kg
Tier 1 (Non-Residential) Criteria																		
Chemical Abstract Service Number	*83329*	*208968*	*120127*	*56553*	*50328*	*205992*	*191242*	*207089*	*218019*	*53703*	*206440*	*86737*	*193395*	*90120*	*91576*	*91203*	*85018*	*129000*
Groundwater Surface Water Interface Protection	*8,700*	*ID*	*ID*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	*NLL*	***5,500***	*5,300*	*NLL*	*NA*	*4,200*	***730***	***2,100***	*ID*
Soil Volatilization to Indoor Air Inhalation	*3.50E+08*	*3.0E+06*	*1.0E+9 (D)*	*NLV*	*NLV*	*ID*	*NLV*	*NLV*	*ID*	*NLV*	*1.0E+9 (D)*	*1.0E+9 (D)*	*NLV*	*NA*	*4.9E+06*	*4.70E+05*	*5.10E+06*	*1.0E+9 (D)*
Infinite Source Volatile Soil Inhalation	*9.70E+07*	*2.7E+06*	*1.60E+09*	*NLV*	*NLV*	*ID*	*NLV*	*NLV*	*ID*	*NLV*	*8.90E+08*	*1.50E+08*	*NLV*	*NA*	*1.8E+06*	*3.50E+05*	*1.90E+05*	*7.80E+08*
Particulate Soil Inhalation	*6.20E+09*	*1.00E+09*	*2.90E+10*	*ID*	*1.90E+06*	*ID*	*3.50E+08*	*ID*	*ID*	*ID*	*4.10E+09*	*4.10E+09*	*ID*	*NA*	*2.9E+08*	*8.8E+07*	*2.90E+06*	*2.90E+09*
Direct Contact	*1.30E+08*	*5.2E+06*	*7.3E+08*	*80,000*	***8,000***	*80,000*	*7.00E+06*	*8.00E+05*	*8.00E+06*	*8,000*	*1.30E+08*	*8.70E+07*	*80,000*	*NA*	*2.6E+07*	*5.2E+07*	*5.20E+06*	*8.40E+07*
Soil Saturation Concentration	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Non-Residential Vapor Intrusion Screening Levels	*7.26E+06*	*2.82E+06*	*5.98E+08*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*1.19E+07*	*NA*	*NA*	*126,000*	*8,940*	*86,300*	*1.09E+09*
J-MW77@24'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW78@20'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
Phase II ESA Soil Analytical Data (Sampled: 11/14)																		
J-1@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-2@5-6'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-3@10-11'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-4@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-5@4-5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-6@4-5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-7@4-5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-8@4-5'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-9@6-7'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-10@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-11@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-12@7-8'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-13@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-14@7-8'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-15@4-5'	<RL	<RL	<RL	**400**	**400**	**300**	<RL	**300**	**400**	<RL	**800**	<RL	<RL	<RL	<RL	<RL	**700**	**700**
J-15A@5-6'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**1,000**	**900**	<RL	**3,700**	<RL	<RL	**3,300**	**1,800**
J-15B@12-13'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-15C@9-10'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-16@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-17@6-8'	**1,600**	**500**	**2,200**	**4,200**	**4,600**	**4,200**	**2,300**	**3,600**	**4,300**	**400**	**13,800**	**1,300**	**2,200**	<RL	<RL	**1,000**	**11,700**	**10,000**
J-18@5-6'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-19@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-20@3-4'	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit; (--) - Indicates parameter not analyzed; (▼) - Indicates a saturated soil sample*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (NLV) indicates parameter not likely to volatilize; (ID) - Indicates that there is insufficient data to develop the criteria*
7. *D) - criterion exceeds 100 percent, therefore it is reduced to 100 percent or 1.0E+9 parts per billion*

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Sample ID (Depth) Sample Date: 8/14-10/14													
J-MW21@3'	**1,700**	**33,000**	--	**250**	**9,400**	**5,100**	**6,700**	--	<RL	<RL	<RL	**32,000**	--
J-MW21@10'	**9,000**	**81,000**	--	**650**	**18,000**	**21,000**	**9,700**	--	<RL	**680**	<RL	**80,000**	--
J-22@5'	**1,100**	**15,000**	--	**75**	**4,200**	**4,200**	**2,100**	--	<RL	<RL	<RL	**29,000**	--
J-22@10'	**4,800**	**63,000**	--	**170**	**18,000**	**17,000**	**7,300**	--	<RL	**300**	<RL	**42,000**	--
J-23@3'	**560**	**5,900**	--	<RL	**2,800**	**1,900**	**1,900**	--	<RL	<RL	<RL	**6,600**	--
J-23@10'	**3,900**	**74,000**	--	**76**	**21,000**	**17,000**	**7,400**	--	<RL	**220**	<RL	**39,000**	--
J-24@1'	**12,000**	**72,000**	--	**190**	**5,600**	**19,000**	**24,000**	--	**97**	**2,300**	<RL	**27,000**	--
J-24@4'	**1,500**	**26,000**	--	<RL	**6,500**	**4,600**	**3,900**	--	<RL	**310**	<RL	**14,000**	--
J-24@12'	**5,800**	**75,000**	--	**170**	**20,000**	**18,000**	**7,800**	--	<RL	**310**	<RL	**45,000**	--
J-25@3'	**5,500**	**70,000**	--	**250**	**18,000**	**16,000**	**8,100**	--	<RL	**260**	<RL	**45,000**	--
J-25@10'	**6,500**	**74,000**	--	**270**	**15,000**	**20,000**	**11,000**	--	<RL	**380**	<RL	**55,000**	--
J-26@3'	**4,900**	**56,000**	--	**110**	**10,000**	**11,000**	**7,200**	--	<RL	**460**	<RL	**37,000**	--
J-26@10'	**2,300**	**81,000**	--	**110**	**19,000**	**17,000**	**6,800**	--	<RL	**200**	<RL	**40,000**	--
J-27@10'	**5,100**	**67,000**	--	**210**	**20,000**	**19,000**	**8,000**	--	<RL	**2,700**	<RL	**53,000**	--
J-MW28@6' (▼)	**570**	**5,900**	--	<RL	**2,500**	**2,000**	<RL	--	<RL	<RL	<RL	**10,000**	--
J-MW28@12'	**5,100**	**54,000**	--	**280**	**14,000**	**19,000**	**9,800**	--	<RL	**330**	<RL	**56,000**	--
J-29@4.5'	**2,100**	**60,000**	--	**560**	**12,000**	**15,000**	**7,700**	--	<RL	**260**	<RL	**74,000**	--
J-29@9'	**6,000**	**68,000**	--	**220**	**18,000**	**18,000**	**7,600**	--	<RL	**540**	<RL	**46,000**	--
J-MW30@6' (▼)	**4,400**	**26,000**	--	**280**	**3,400**	**4,400**	**2,600**	--	<RL	**620**	<RL	**61,000**	--
J-MW30@12'	**4,700**	**110,000**	--	**190**	**22,000**	**21,000**	**8,600**	--	<RL	<RL	<RL	**51,000**	--
J-MW31@8.5' (▼)	**18,000**	**70,000**	--	**390**	**16,000**	**70,000**	**54,000**	--	**80**	**3,800**	<RL	**140,000**	--
J-MW31@13.5' (▼)	**4,200**	**55,000**	--	**390**	**11,000**	**20,000**	**7,400**	--	<RL	**420**	<RL	**61,000**	--
J-MW31@20'	**10,000**	**75,000**	--	**600**	**18,000**	**21,000**	**10,000**	--	<RL	**710**	<RL	**73,000**	--
J-32@7.5'	**4,700**	**54,000**	--	**460**	**13,000**	**9,200**	**8,700**	--	<RL	**2,400**	<RL	**55,000**	--
J-32@14'	**5,200**	**33,000**	--	**260**	**14,000**	**20,000**	**11,000**	--	<RL	**290**	<RL	**57,000**	--
J-33@1'	**4,700**	**98,000**	--	**110**	**24,000**	**17,000**	**8,300**	--	<RL	**350**	<RL	**52,000**	--
J-33@9' (▼)	**110,000**	**380,000**	--	**300**	**14,000**	**40,000**	**16,000**	--	**410**	**4,900**	<RL	**17,000**	--
J-33@15'	**5,400**	**130,000**	--	**200**	**20,000**	**18,000**	**7,200**	--	<RL	**310**	<RL	**46,000**	--
J-37@1'	**4,500**	**72,000**	--	**170**	**14,000**	**16,000**	**8,900**	--	<RL	**290**	<RL	**80,000**	--
J-37@8' (▼)	**91,000**	**440,000**	--	**240**	**11,000**	**43,000**	**14,000**	--	**500**	**12,000**	<RL	**14,000**	--
J-37@12.5' (▼)	**6,700**	**86,000**	--	**180**	**17,000**	**17,000**	**7,400**	--	<RL	**530**	<RL	**45,000**	--
J-37@18.5'	**12,000**	**53,000**	--	**610**	**15,000**	**23,000**	**11,000**	--	<RL	**890**	<RL	**72,000**	--
J-MW38@9' (▼)	**93,000**	**450,000**	--	**280**	**9,200**	**35,000**	**13,000**	--	**490**	**3,900**	<RL	**17,000**	--
J-MW38@14' (▼)	**10,000**	**55,000**	--	**160**	**4,800**	**3,400**	**3,200**	--	<RL	**5,900**	<RL	**29,000**	--
J-MW38@20'	**7,300**	**51,000**	--	**500**	**16,000**	**21,000**	**9,900**	--	<RL	**720**	<RL	**67,000**	--
J-MW40@5'	**6,700**	**330,000**	--	**180**	**23,000**	**20,000**	**9,600**	--	<RL	**450**	<RL	**55,000**	--
J-MW40@9' (▼)	**150,000**	**240,000**	--	<RL	**5,400**	**24,000**	**8,500**	--	**190**	**9,300**	<RL	**7,400**	--
J-MW40@15'	**6,600**	**85,000**	--	**180**	**17,000**	**21,000**	**11,000**	--	<RL	**320**	<RL	**61,000**	--
J-MW41@4'	**3,800**	**71,000**	--	**150**	**18,000**	**17,000**	**7,300**	--	<RL	**260**	<RL	**41,000**	--

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
J-MW41@9' (▼)	**2,100**	**34,000**	--	**300**	**7,400**	**9,100**	**5,000**	--	<RL	**210**	<RL	**27,000**	--
J-MW41@13'	**7,300**	**71,000**	--	**260**	**16,000**	**22,000**	**11,000**	--	<RL	**370**	<RL	**61,000**	--
J-42@3'	**6,700**	**72,000**	--	**180**	**14,000**	**17,000**	**11,000**	--	<RL	**370**	<RL	**43,000**	--
J-42@8'	**5,800**	**86,000**	--	**230**	**18,000**	**18,000**	**7,600**	--	<RL	**310**	<RL	**46,000**	--
J-43@2'	**25,000**	**140,000**	--	<RL	**3,700**	**20,000**	**10,000**	--	**84**	**820**	<RL	**5,400**	--
J-43@7'	**2,000**	**52,000**	--	**63**	**12,000**	**13,000**	**5,300**	--	**51**	**290**	<RL	**40,000**	--
J-44@3'	**1,900**	**9,900**	--	**92**	**4,800**	**4,800**	**7,600**	--	<RL	<RL	<RL	**16,000**	--
J-44@8'	**2,200**	**25,000**	--	**110**	**4,100**	**3,500**	**3,700**	--	<RL	<RL	<RL	**14,000**	--
J-44@15'	**4,000**	**85,000**	--	**250**	**20,000**	**18,000**	**7,400**	--	<RL	**860**	<RL	**49,000**	--
J-45@0.5'	**11,000**	**210,000**	--	<RL	**2,000**	**10,000**	**8,100**	--	**200**	**2,500**	<RL	**1,700**	--
J-45@3'	**15,000**	**180,000**	--	<RL	**3,000**	**13,000**	**7,300**	--	**160**	**4,100**	<RL	**1,700**	--
J-45@6'	**4,400**	**11,000**	--	<RL	**1,900**	**1,000**	<RL	--	<RL	**370**	<RL	**3,500**	--
J-46@2'	**5,100**	**43,000**	--	**130**	**4,900**	**18,000**	**15,000**	--	**59**	**1,000**	<RL	**15,000**	--
J-46@5.5'	**769**	**6,100**	--	<RL	**5,200**	**2,800**	**1,300**	--	<RL	<RL	<RL	**5,800**	--
J-MW47@6.5' (▼)	**710**	**11,000**	--	**160**	**3,800**	**3,000**	**1,900**	--	<RL	**210**	<RL	**11,000**	--
J-MW47@13'	**4,700**	**71,000**	--	**230**	**19,000**	**17,000**	**7,000**	--	<RL	**380**	<RL	**45,000**	--
J-48@4' (▼)	**1,600**	**12,000**	--	<RL	**3,800**	**1,000**	**1,300**	--	<RL	<RL	<RL	**42,000**	--
J-48@10'	**7,200**	**67,000**	--	**210**	**19,000**	**17,000**	**6,800**	--	<RL	**220**	<RL	**45,000**	--
J-49@5' (▼)	**1,500**	**15,000**	--	<RL	**3,300**	**2,900**	**1,400**	--	<RL	<RL	<RL	**17,000**	--
J-49@10'	**11,000**	**66,000**	--	**190**	**19,000**	**18,000**	**6,600**	--	<RL	<RL	<RL	**43,000**	--
J-50@5' (▼)	**5,600**	**63,000**	--	**210**	**20,000**	**18,000**	**7,000**	--	<RL	**350**	<RL	**48,000**	--
J-50@10'	**11,000**	**31,000**	--	<RL	**4,900**	**2,300**	**1,600**	--	<RL	<RL	<RL	**8,500**	--
J-51@4' (▼)	**6,500**	**19,000**	--	**270**	**6,500**	<RL	**1,400**	--	<RL	<RL	<RL	**14,000**	--
J-51@10'	**4,000**	**65,000**	--	**180**	**18,000**	**17,000**	**6,400**	--	<RL	**350**	<RL	**45,000**	--
J-52@3' (▼)	**21,000**	**54,000**	--	<RL	**9,800**	**18,000**	**6,100**	--	**57**	**9,700**	<RL	**10,000**	--
J-52@6' (▼)	**1,400**	**8,700**	--	<RL	**1,600**	<RL	<RL	--	<RL	**310**	<RL	**3,300**	--
J-52@12.5'	**6,000**	**74,000**	--	**220**	**18,000**	**17,000**	**6,900**	--	<RL	**360**	<RL	**51,000**	--
J-53@2.5'	**11,000**	**7,000**	--	<RL	**2,200**	**1,800**	**1,000**	--	<RL	**400**	<RL	**4,200**	--
J-53@7' (▼)	**890**	**6,700**	--	<RL	**2,000**	**1,600**	<RL	--	<RL	<RL	<RL	**13,000**	--
J-53@14'	**4,500**	**73,000**	--	**180**	**18,000**	**16,000**	**6,200**	--	<RL	**240**	<RL	**41,000**	--
J-54@3'	**1,100**	**8,200**	--	<RL	**3,600**	**2,500**	<RL	--	<RL	<RL	<RL	**5,300**	--
J-54@7.5' (▼)	**390**	**8,800**	--	<RL	**1,900**	**1,700**	<RL	--	<RL	<RL	<RL	**9,200**	--
J-54@15'	**4,000**	**67,000**	--	**180**	**18,000**	**17,000**	**6,400**	--	<RL	**260**	<RL	**43,000**	--
J-MW55@3.5'	**1,700**	**14,000**	--	<RL	**4,300**	**2,100**	**1,700**	--	<RL	<RL	<RL	**5,700**	--
J-MW55@8' (▼)	**1,100**	**5,300**	--	<RL	**2,000**	**1,500**	<RL	--	<RL	<RL	<RL	**7,200**	--
J-MW55@15'	**4,100**	**100,000**	--	**110**	**21,000**	**18,000**	**7,400**	--	<RL	**280**	<RL	**46,000**	--
J-56@3'	<RL	**4,200**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	**1,000**	--
J-56@7.5' (▼)	**470**	**9,000**	--	<RL	**2,400**	**2,600**	**1,200**	--	<RL	<RL	<RL	**9,600**	--
J-56@18'	**4,400**	**76,000**	--	**200**	**18,000**	**17,000**	**6,500**	--	<RL	**230**	<RL	**46,000**	--
J-57@3'	**1,100**	**5,100**	--	<RL	**3,000**	**1,400**	**1,400**	--	<RL	<RL	<RL	**9,200**	--

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
J-57@8' (▼)	**810**	**12,000**	--	<RL	**2,500**	**2,500**	**1,400**	--	<RL	<RL	<RL	**8,900**	--
J-57@15'	**3,500**	**72,000**	--	**320**	**18,000**	**17,000**	**6,700**	--	<RL	<RL	<RL	**47,000**	--
J-58@3.5'	**4,900**	**2,900**	--	<RL	**800**	<RL	<RL	--	<RL	<RL	<RL	**4,600**	--
J-58@8' (▼)	**630**	**11,000**	--	**58**	**1,900**	**3,100**	<RL	--	<RL	<RL	<RL	**12,000**	--
J-58@15'	**3,900**	**71,000**	--	**140**	**16,000**	**19,000**	**8,900**	--	<RL	**200**	<RL	**50,000**	--
J-59@3'	**3,400**	**8,300**	--	<RL	**2,400**	**1,100**	<RL	--	<RL	<RL	<RL	**4,600**	--
J-59@9' (▼)	**1,600**	**6,900**	--	<RL	**1,600**	**1,600**	<RL	--	<RL	<RL	<RL	**8,800**	--
J-59@15'	**5,300**	**74,000**	--	**220**	**18,000**	**17,000**	**6,700**	--	<RL	**350**	<RL	**44,000**	--
J-60@5' (▼)	**1,700**	**12,000**	--	<RL	**4,200**	<RL	**1,400**	--	<RL	<RL	<RL	**15,000**	--
J-60@9' (▼)	**1,600**	**15,000**	--	**95**	**4,400**	**4,900**	**2,600**	--	<RL	<RL	<RL	**16,000**	--
J-60@15'	**4,800**	**67,000**	--	**370**	**18,000**	**17,000**	**6,700**	--	<RL	**390**	<RL	**48,000**	--
J-MW61@4' (▼)	**3,700**	**8,100**	--	**100**	**4,100**	**7,100**	**3,500**	--	<RL	**580**	<RL	**22,000**	--
J-MW61@9' (▼)	**1,500**	**8,000**	--	<RL	**2,000**	**2,200**	**1,100**	--	<RL	<RL	<RL	**19,000**	--
J-MW61@15'	**4,400**	**73,000**	--	**200**	**18,000**	**17,000**	**6,900**	--	<RL	**350**	<RL	**44,000**	--
J-62@4'	**2,800**	**19,000**	--	**420**	**3,600**	**8,400**	**13,000**	--	<RL	**300**	<RL	**41,000**	--
J-62@9' (▼)	**1,800**	**5,100**	--	<RL	**2,000**	**2,000**	**1,100**	--	<RL	<RL	<RL	**10,000**	--
J-62@15'	**4,500**	**70,000**	--	**190**	**18,000**	**17,000**	**6,900**	--	<RL	**360**	<RL	**46,000**	--
J-63@14'	**8,900**	**83,000**	--	**230**	**18,000**	**16,000**	**20,000**	--	<RL	**790**	<RL	**52,000**	--
J-63@18' (▼)	**150,000**	**370,000**	--	**240**	**11,000**	**34,000**	**14,000**	--	**490**	**5,900**	<RL	**27,000**	--
J-63@23.5'	**6,100**	**88,000**	--	**160**	**20,000**	**19,000**	**7,600**	--	<RL	**220**	<RL	**44,000**	--
J-64@12'	**4,100**	**85,000**	--	**130**	**23,000**	**17,000**	**8,300**	--	<RL	**360**	<RL	**51,000**	--
J-64@15' (▼)	**750**	**13,000**	--	<RL	**3,600**	**2,000**	**1,500**	--	<RL	<RL	<RL	**9,300**	--
J-64@19'	**5,800**	**60,000**	--	**210**	**18,000**	**17,000**	**6,700**	--	<RL	<RL	<RL	**47,000**	--
J-65@11.5'	**6,900**	**120,000**	--	**120**	**22,000**	**16,000**	**8,000**	--	<RL	**310**	<RL	**54,000**	--
J-65@16.5' (▼)	**1,700**	**4,300**	--	**67**	**2,500**	**2,700**	**1,500**	--	<RL	<RL	<RL	**8,600**	--
J-65@19'	**5,100**	**65,000**	--	**190**	**17,000**	**17,000**	**6,700**	--	<RL	**300**	<RL	**43,000**	--
J-66@13.5'	**5,000**	**140,000**	--	**130**	**23,000**	**19,000**	**8,600**	--	<RL	**300**	<RL	**52,000**	--
J-66@17' (▼)	**480**	**13,000**	--	<RL	**3,300**	**2,200**	**1,900**	--	<RL	<RL	<RL	**13,000**	--
J-66@19.5'	**4,600**	**70,000**	--	**260**	**20,000**	**18,000**	**7,000**	--	<RL	**280**	<RL	**43,000**	--
J-70@6' (▼)	**360**	**9,100**	--	<RL	**2,100**	<RL	**1,000**	**2,000**	<RL	<RL	<RL	**9,600**	--
J-70@13'	**5,400**	**77,000**	--	**160**	**19,000**	**17,000**	**7,500**	**16,000**	<RL	**360**	<RL	**42,000**	--
J-72@6' (▼)	**3,500**	**14,000**	--	**380**	**4,800**	**5,000**	**3,000**	**4,200**	<RL	**620**	<RL	**85,000**	--
J-72@15'	**9,300**	**77,000**	--	**290**	**18,000**	**22,000**	**9,600**	**16,000**	<RL	**450**	<RL	**64,000**	--
J-73@17'	**6,000**	**66,000**	--	**230**	**15,000**	**18,000**	**9,400**	**14,000**	<RL	**320**	<RL	**52,000**	--
J-MW74@18' (▼)	**1,200**	**31,000**	--	**270**	**6,400**	**5,500**	**4,000**	**4,700**	<RL	**310**	<RL	**25,000**	--
J-MW74@24'	**7,700**	**72,000**	--	**480**	**16,000**	**21,000**	**9,400**	**16,000**	<RL	**520**	<RL	**64,000**	--
J-75@9' (▼)	**7,400**	**38,000**	--	**180**	**4,600**	**19,000**	**7,300**	**2,900**	**77**	**7,600**	<RL	**16,000**	--
J-75@15' (▼)	**2,000**	**47,000**	--	**760**	**7,500**	**19,000**	**10,000**	**8,300**	<RL	**320**	<RL	**78,000**	--
J-75@22'	**7,800**	**41,000**	--	**530**	**17,000**	**23,000**	**11,000**	**16,000**	<RL	**660**	<RL	**68,000**	--
J-MW76@9' (▼)	**4,800**	**6,600**	--	<RL	**3,400**	**85,000**	**1,800**	**19,000**	<RL	<RL	<RL	**16,000**	--

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
J-MW76@16' (▼)	**33,000**	**730,000**	--	**3.60E+06**	**33,000**	**150,000**	**110,000**	**25,000**	**110**	**1,000**	<RL	**430,000**	--
J-MW76@16' (Duplicate) (▼)	**4,800**	**3.10E+06**	--	**7,500**	**16,000**	**68,000**	**42,000**	**9,600**	**110**	**700**	<RL	**310,000**	--
J-MW76@22'	**9,700**	**47,000**	--	**900**	**15,000**	**24,000**	**11,000**	**15,000**	<RL	**830**	<RL	**78,000**	--
J-MW77@4.5'	**18,000**	**65,000**	--	**150**	**5,400**	**12,000**	**17,000**	**3,700**	**80**	**1,300**	<RL	**30,000**	--
J-MW77@17' (▼)	**1,100**	**24,000**	--	**190**	**5,600**	**5,400**	**3,800**	**5,200**	<RL	<RL	<RL	**21,000**	--
J-MW77@24'	**7,900**	**63,000**	--	**520**	**16,000**	**21,000**	**9,500**	**17,000**	<RL	**680**	<RL	**69,000**	--
J-MW78@20'	**8,200**	**68,000**	--	**470**	**17,000**	**20,000**	**11,000**	**17,000**	<RL	**560**	<RL	**62,000**	--
J-80@10'	**16,000**	**110,000**	--	**240**	**7,100**	**23,000**	**32,000**	--	**160**	**3,000**	<RL	**50,000**	--
J-80@20'	**6,200**	**76,000**	--	**360**	**17,000**	**22,000**	**9,600**	--	<RL	**660**	<RL	**68,000**	--
J-MW81@1'	**9,500**	**47,000**	--	**230**	**5,300**	**19,000**	**25,000**	**--**	**72**	**1,100**	<RL	**36,000**	--
J-MW81@3'	**51,000**	**160,000**	--	<RL	**3,200**	**17,000**	**16,000**	--	**500**	**4,400**	<RL	**4,500**	--
J-MW81@6'	**14,000**	**31,000**	--	<RL	**10,000**	**14,000**	**13,000**	--	<RL	**1,500**	<RL	**26,000**	--
J-MW81@12.5'	**8,800**	**66,000**	--	**250**	**18,000**	**19,000**	**8,100**	--	<RL	**270**	<RL	**45,000**	--
J-82@1'	**20,000**	**120,000**	--	<RL	**4,000**	**10,000**	**16,000**	**--**	**300**	**1,900**	<RL	**5,800**	--
J-82@5'	**18,000**	**22,000**	--	<RL	**4,400**	**4,600**	**2,600**	--	<RL	**270**	<RL	**6,200**	--
J-82@10'	**4,700**	**58,000**	--	**220**	**18,000**	**17,000**	**7,500**	--	<RL	**370**	<RL	**44,000**	--
J-MW83@0.5'	**14,000**	**210,000**	--	<RL	**2,300**	**11,000**	**6,500**	**--**	**110**	**1,600**	<RL	**5,400**	--
J-MW83@6' (▼)	**49,000**	**22,000**	--	<RL	**5,700**	**3,400**	**1,700**	--	<RL	**3,400**	<RL	**5,200**	--
J-MW83@10'	**7,000**	**60,000**	--	**230**	**20,000**	**18,000**	**7,900**	--	<RL	**310**	<RL	**44,000**	--
J-84@1'	**34,000**	**120,000**	--	<RL	**5,500**	**28,000**	**19,000**	--	<RL	**2,400**	<RL	**13,000**	--
J-84@7'	**7,900**	**30,000**	--	<RL	**5,300**	**5,800**	**2,600**	--	<RL	**270**	<RL	**12,000**	--
J-84@10'	**4,700**	**79,000**	--	**230**	**20,000**	**16,000**	**8,200**	--	<RL	**280**	<RL	**44,000**	--
J-85@1'	**2,000**	**14,000**	--	**62**	**3,900**	**4,400**	**4,600**	**--**	<RL	**280**	<RL	**8,000**	--
J-85@4.5'	**1,100**	**14,000**	--	<RL	**3,200**	**6,000**	**3,600**	--	<RL	**460**	<RL	**8,200**	--
J-85@9'	**5,400**	**78,000**	--	**250**	**19,000**	**18,000**	**8,700**	--	<RL	**310**	<RL	**47,000**	--
J-86@4'	**390**	**5,900**	--	<RL	**2,100**	**1,400**	**1,900**	--	<RL	<RL	<RL	**7,400**	--
J-86@10'	**5,400**	**59,000**	--	**220**	**18,000**	**17,000**	**7,900**	--	<RL	**330**	<RL	**43,000**	--
J-87@2'	**1,200**	**22,000**	--	<RL	**4,600**	**3,400**	**2,300**	--	<RL	<RL	<RL	**16,000**	--
J-87@8'	**4,400**	**110,000**	--	**200**	**20,000**	**19,000**	**7,500**	--	<RL	**380**	<RL	**56,000**	--
J-88@4'	**640**	**9,800**	--	<RL	**2,600**	**1,600**	**1,800**	--	<RL	<RL	<RL	**8,800**	--
J-88@10'	**8,600**	**80,000**	--	**210**	**18,000**	**17,000**	**6,800**	--	<RL	**250**	<RL	**47,000**	--
J-89@1'	**14,000**	**31,000**	--	**130**	**5,900**	**17,000**	**19,000**	--	<RL	**750**	<RL	**27,000**	--
J-89@4.5'	**1,500**	**41,000**	--	**94**	**7,300**	**4,100**	**5,200**	--	<RL	**780**	<RL	**21,000**	--
J-89@10'	**6,400**	**75,000**	--	**210**	**20,000**	**19,000**	**9,100**	--	<RL	**300**	<RL	**43,000**	--
J-90@1'	**36,000**	**150,000**	--	<RL	**7,200**	**21,000**	**15,000**	--	**66**	**2,600**	<RL	**8,800**	--
J-90@3.5'	**23,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-90@5.5'	**6,400**	**10,000**	--	<RL	**2,400**	**1,800**	<RL	--	<RL	<RL	<RL	**5,100**	--
J-90@10'	**4,600**	**71,000**	--	**210**	**20,000**	**19,000**	**8,000**	--	<RL	**320**	<RL	**44,000**	--
J-91@0.5'	**38,000**	**160,000**	--	<RL	**3,400**	**16,000**	**5,600**	**--**	**51**	**3,300**	<RL	**2,900**	--
J-91@3.5'	**13,000**	--	--	--	--	--	--	--	--	--	--	--	--

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
J-91@6'	**24,000**	**68,000**	--	<RL	**5,700**	**5,200**	**3,500**	--	<RL	**760**	<RL	**56,000**	--
J-91@10'	**5,100**	**60,000**	--	**190**	**19,000**	**17,000**	**7,700**	--	<RL	**380**	<RL	**42,000**	--
J-92@0.5'	**40,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-93@0.5'	**23,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-94@0.5'	**34,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-95@0.5'	**23,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-96@0.5'	**1,900**	--	--	--	--	--	--	--	--	--	--	--	--
J-97@0.5'	**24,000**	--	--	--	--	--	--	--	--	--	--	--	--
J-98@0.5'	**12,000**	--	--	--	--	--	--	--	--	--	--	--	--
Phase II ESA Soil Analytical Data (Sampled: 11/14)													
J-1@0-1'	**2,650**	**75,500**	<RL	**510**	**2,570**	**10,700**	**7,600**	**3,600**	<RL	<RL	<RL	**22,200**	--
J-1@3-4'	**1,540**	**63,400**	<RL	**230**	**3,910**	**5,680**	**6,420**	**2,800**	<RL	<RL	<RL	**13,500**	**114,000**
J-2@0-1'	**2,790**	**50,400**	<RL	**320**	**3,740**	**11,700**	**11,800**	**2,500**	<RL	<RL	<RL	**22,500**	--
J-2@5-6'	**720**	**8,160**	<RL	<RL	**24,900**	**4,270**	**1,860**	<RL	<RL	<RL	<RL	**5,780**	<RL
J-3@1-2'	**420**	**6,640**	<RL	<RL	**630**	**2,300**	**1,510**	<RL	<RL	<RL	<RL	**3,770**	<RL
J-3@10-11'	**1,330**	**11,900**	<RL	<RL	**940**	**2,710**	**2,270**	<RL	<RL	<RL	<RL	**4,400**	--
J-4@0-1'	**3,340**	**100,000**	**2,500**	<RL	**8,330**	**14,700**	**9,910**	**9,700**	<RL	<RL	<RL	**78,000**	--
J-4@3-4'	**710**	**9,530**	<RL	<RL	**1,100**	**1,920**	**1,720**	<RL	<RL	<RL	<RL	**3,330**	**63,000**
J-5@0-1'	**3,040**	**89,100**	**3,100**	**200**	**5,550**	**10,400**	**8,310**	**5,900**	<RL	<RL	<RL	**373,000**	--
J-5@4-5'	**3,590**	**35,700**	**2,500**	**240**	**3,340**	**13,000**	**6,000**	**3,100**	**94**	<RL	<RL	**29,500**	<RL
J-6@0-1'	**580**	**3,140**	<RL	<RL	<RL	**1,430**	**1,010**	<RL	<RL	<RL	<RL	**2,890**	--
J-6@4-5'	**340**	**5,650**	<RL	<RL	**500**	**1,730**	**1,120**	<RL	<RL	<RL	<RL	**2,500**	<RL
J-7@0-1'	**4,440**	**99,700**	**3,200**	<RL	**6,710**	**13,200**	**9,260**	**8,400**	<RL	<RL	<RL	**27,700**	--
J-7@4-5'	**530**	**4,470**	<RL	<RL	**590**	**2,180**	**1,400**	<RL	<RL	<RL	<RL	**4,330**	<RL
J-8@0-1'	**8,290**	**63,000**	<RL	**230**	**7,770**	**20,100**	**12,000**	**6,100**	**52**	**420**	<RL	**37,800**	--
J-8@4-5'	**2,700**	**44,100**	<RL	<RL	**3,350**	**13,400**	**9,120**	**2,400**	<RL	<RL	<RL	**20,400**	**92,000**
J-9@1-2'	**2,850**	**24,100**	<RL	<RL	**2,330**	**6,730**	**10,400**	**1,000**	<RL	<RL	<RL	**15,400**	<RL
J-9@6-7'	**450**	**23,100**	<RL	<RL	**2,120**	**730**	**1,620**	<RL	<RL	<RL	<RL	**3,550**	**94,000**
J-10@1-2'	**1,570**	**77,900**	<RL	**200**	**4,140**	**10,200**	**8,030**	**3,000**	<RL	<RL	<RL	**31,700**	<RL
J-10@3-4'	**880**	**35,600**	<RL	<RL	**1,230**	**3,440**	**2,970**	**1,000**	<RL	<RL	<RL	**5,470**	**65,000**
J-11@1-2'	**1,870**	**21,000**	<RL	<RL	**2,600**	**13,500**	**4,780**	<RL	<RL	<RL	<RL	**7,310**	--
J-11@3-4'	**2,080**	**13,000**	<RL	<RL	**1,600**	**4,400**	**1,600**	<RL	<RL	<RL	<RL	**1,840**	<RL
J-12@1-2'	**6,920**	**42,500**	<RL	<RL	**2,250**	**10,500**	**41,400**	<RL	<RL	<RL	<RL	**13,500**	<RL
J-12@7-8' (▼)	**2,200**	**7,170**	<RL	<RL	**560**	**1,560**	**1,030**	**1,700**	**81**	<RL	<RL	**11,100**	<RL
J-13@0-1'	**5,510**	**24,400**	<RL	<RL	**1,810**	**8,830**	**14,000**	<RL	<RL	**520**	<RL	**9,090**	<RL
J-13@3-4'	**950**	**6,770**	<RL	<RL	**2,140**	**4,380**	**1,210**	<RL	<RL	<RL	<RL	<RL	<RL
J-14@0-1'	**1,390**	**21,800**	<RL	<RL	**2,050**	**9,200**	**5,240**	<RL	<RL	<RL	<RL	**8,390**	<RL
J-14@7-8' (▼)	**3,650**	**44,440**	<RL	<RL	**3,970**	**3,100**	**2,520**	<RL	<RL	<RL	<RL	**13,600**	**66,000**
J-15@0-1'	**2,310**	**8,140**	**2,100**	<RL	**1,150**	**4,030**	**3,150**	<RL	<RL	**450**	<RL	**7,760**	**234,000**
J-15@4-5'	**88,100**	**343,000**	**11,000**	<RL	**4,330**	**12,800**	**8,210**	**6,000**	**881**	**17,800**	<RL	**9,710**	**139,000**

Table 1C **Greenwood Oil Terminal** **Summary of Metal Soil Analytical Results**	Arsenic µg/kg	Barium µg/kg	Boron µg/kg	Cadmium µg/kg	Chromium µg/kg	Copper µg/kg	Lead µg/kg	Lithium µg/kg	Mercury µg/kg	Selenium µg/kg	Silver µg/kg	Zinc µg/kg	Sulfate µg/kg
Tier 1 (Non-Residential) Criteria													
Chemical Abstract Service Number	*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Statewide Default Background Levels	*5,800*	*75,000*	*NA*	*1,200*	*18,000*	*32,000*	*21,000*	***9,800***	***130***	*410*	*1,000*	*47,000*	*NA*
Typical Range of Data - Upper Values [7]	***22,800***	*1.72E+05*	*NA*	*2,000*	*55,600*	*50,600*	*38,900*	*37,900*	*500*	***1,300***	*1,400*	*1.18E+05*	*NA*
Material Specific Background Levels - Sand [8]	26,300	*1.99E+05*	*NA*	2,000	**30,400**	23,500	24,100	*9,600*	120	3,900	**1,200**	85,800	*NA*
Material Specific Background Levels - Clay [9]	*36,646*	*2.77E+05*	*NA*	*2,900*	*62,820*	*48,159*	*30,341*	*40,400*	*630*	***720***	*3,100*	*1.10E+07*	*NA*
Residential Drinking Water Protection	***4,600***	*1.30E+06*	*10,000*	*6,000*	*30,000*	*5.80E+06*	*7.00E+05*	*3,400*	*1,700*	*4,000*	*4,500*	*2.40E+06*	*5.00E+06*
Groundwater Surface Water Interface Protection	***4,600***	***4.4E+05(G)***	*1.40E+05 (X)*	***3,000(G,X)***	***3,300***	***75,000(G)***	*2.5E+06(G,X)*	***8,800***	***50 (M); 1.2***	***400***	***100 (M); 27***	***1.7E+05(G)***	*NA*
Soil Volatilization to Indoor Air Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*89,000*	*NLV*	*NLV*	*NLV*	*NLV*
Infinite Source Volatile Soil Inhalation	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*62,000*	*NLV*	*NLV*	*NLV*	*NLV*
Particulate Soil Inhalation	*9.10E+05*	*1.50E+08*	*ID*	*2.20E+06*	*2.40E+05*	*5.90E+07*	*4.40E+07*	*1.00E+09*	*8.80E+06*	*5.90E+07*	*2.90E+06*	*ID*	*ID*
Direct Contact	***37,000***	*1.30E+08*	*3.50E+08*	*2.10E+06*	*9.20E+06*	*7.30E+07*	*9.0E+5 (DD)*	*3.1E+07(DD)*	*5.80E+05*	*9.60E+06*	*9.00E+06*	*6.30E+08*	*ID*
Non-Residential Vapor Intrusion Screening Levels	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
J-15A@5-6' (▼)	**51,100**	**186,000**	**5,200**	<RL	**4,740**	**23,400**	**10,000**	**2,200**	**385**	**17,100**	<RL	**14,500**	**2.56E+06**
J-15B@12-13' (▼)	**18,100**	**28,700**	**28,000**	**2,940**	**3,470**	**53,500**	**13,700**	**150,000**	<RL	**690**	<RL	**258,000**	<RL
J-15C@9-10'	**330**	**75,600**	<RL	**220**	**4,260**	**9,490**	**8,000**	**2,000**	<RL	<RL	<RL	**19,300**	**87,000**
J-16@0-1'	**18,000**	**84,800**	<RL	<RL	**2,930**	**14,400**	**14,300**	**2,300**	**192**	**550**	<RL	**24,700**	<RL
J-16@3-4'	**8,390**	**64,700**	**2,500**	**260**	**2,740**	**17,100**	**19,000**	**4,100**	**95**	**650**	<RL	**27,300**	**182,000**
J-17@0-1'	**8,790**	**99,000**	**2,600**	**420**	**4,740**	**31,100**	**46,900**	**4,400**	**114**	**540**	<RL	**95,000**	**311,000**
J-17@6-8'	**22,800**	**141,000**	**8,200**	**1,040**	**18,900**	**138,000**	**289,000**	**3,200**	**1,490**	**670**	**2,020**	**3.13E+06**	**238,000**
J-18@0-1'	**6,850**	**114,000**	**2,900**	**200**	**7,990**	**22,900**	**17,200**	**8,300**	**274**	<RL	<RL	**46,300**	**76,000**
J-18@5-6'	**134,000**	**287,000**	**13,000**	<RL	**6,290**	**23,000**	**7,410**	**4,300**	**691**	**3,240**	<RL	**12,000**	**215,000**
J-19@0-1'	**650**	**15,900**	<RL	<RL	**1,820**	**1,910**	**3,580**	<RL	<RL	<RL	<RL	**8,940**	<RL
J-19@3-4'	**710**	**14,000**	<RL	<RL	**930**	**3,560**	**1,490**	<RL	<RL	<RL	<RL	**7,710**	**530,000**
J-20@0-1'	**6,140**	**104,000**	**3,700**	<RL	**1,610**	**8,730**	**8,260**	<RL	**450**	**560**	<RL	**2,740**	**111,000**
J-20@3-4'	**950**	**52,400**	**2,200**	<RL	**960**	**3,720**	**3,970**	<RL	<RL	<RL	<RL	<RL	**110,000**

Notes:

1. All laboratory extractions and analyses were performed within the required period

2. (<RL) - Indicates parameter not detected above the reporting limit; (--) - Indicates parameter not analyzed; (▼) - Indicates a saturated soil sample

3. Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013

4. Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013

5. Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs

6. (NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria; (NLV) - Indicates parameter not likely to volatilize

7. Criteria from Table 1 of the MDEQ-WHMD Michigan Background Soil Survey, 2015

8. Criteria from Table 3 of the MDEQ-WHMD Michigan Background Soil Survey, 2015

9. Criteria from Table 4 of the MDEQ-WHMD Michigan Background Soil Survey, 2015

10. (G) - Value depends upon pH or hardness of receiving stream; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit;
(X) - Criteria is not protective of surface water used as a drinking water source; (DD) - Substance causes developmental effects.

Table 2A **Greenwood Oil Terminal** **Summary of VOC Groundwater Analytical Results**		acetone µg/L	acrylonitrile µg/L	benzene µg/L	bromo-benzene µg/L	bromodichloro-methane µg/L	bromoform µg/L	bromo-methane µg/L	2-butanone µg/L	n-butylbenzene µg/L	sec-butylbenzene µg/L	tert-butylbenzene µg/L	carbon disulfide µg/L	carbon tetrachloride µg/L	chloro-benzene µg/L	chloro-ethane µg/L	chloroform µg/L	chloro-methane µg/L	dibromochloro-methane µg/L	dibromo-methane µg/L
Tier 1 (Non-Residential) Criteria																					
Chemical Abstract Service Number		*67641*	*107131*	*71432*	*108861*	*75274*	*75252*	*74839*	*78933*	*104518*	*135988*	*98066*	*75150*	*56235*	*108907*	*75003*	*67663*	*74873*	*124481*	*74953*
Groundwater Surface Water Interface		*1,700*	*2.0 (M); 1.2*	*200 (X)*	*NA*	*ID*	*ID*	*35*	*2,200*	*ID*	*ID*	*ID*	*ID*	*45 (X)*	*25*	*1,100 (X)*	*350*	*ID*	*ID*	*NA*
Non-Residential GVIIC		*1.0E+9 (D,S)*	*1.90E+05*	*35,000*	*3.90E+05*	*37,000*	*3.1E+6 (S)*	*9,000*	*2.4E+8 (S)*	*ID*	*ID*	*ID*	*5.50E+05*	*2,400*	*4.7E+5 (S)*	*5.7E+6 (S)*	*1.80E+05*	*45,000*	*1.10E+05*	*ID*
Water Solubility		*1.00E+09*	*7.50E+07*	*1.75E+06*	*4.13E+05*	*6.74E+06*	*3.10E+06*	*1.45E+07*	*2.40E+08*	*NA*	*NA*	*NA*	*1.19E+06*	*7.93E+05*	*4.72E+05*	*5.74E+06*	*7.92E+06*	*6.34E+06*	*2.60E+06*	*1.10E+07*
Flamability and Explositivity		*1.50E+07*	*6.40E+06*	*68,000*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*13,000*	*ID*	*1.60E+05*	*1.10E+05*	*ID*	*36,000*	*ID*	*ID*
Non-Residential Vapor Intrusion Screening Levels		*34,000*	*2.0*	*5.0*	*4.9*	*80*	*80*	*5.0*	*18,000*	*1.0*	*1.0*	*1.0*	*9.9*	*5.0*	*100*	*180*	*80*	*5.0*	*80*	*NA*
Sample ID (Depth, ft. bgl)	**Sample Date**																			
J-MW28 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW30 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31 (7.0'-12.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW34 (2.0'-7.0')	2-24-16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-MW61 (5.0'-10.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW74 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76 (12.0'-17.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77 (8.0'-13.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW78 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Phase II ESA Groundwater Analytical Data																				
J-1 (5.0'-10.0')	11-5-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-2 (5.0'-10.0')	11-6-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-3 (15.0'-20.0')	11-6-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-4 (5.0'-10.0')	11-6-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-5 (5.0'-10.0')	11-7-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15A (5.0'-10.0')	11-13-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15B (5.0'-10.0')	11-13-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-15C (8.0'-13.0')	11-13-12	--	--	<RL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria; (--) - Indicates parameter not analyzed*
7. *(A) - Michigan Drinking Water Standard; (D) - Calculated criteria exceeds 100%, thus criteron has been reduced to 100%; (E) - Value represents Aesthetic Drinking Water Value; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (S) - Criterion defaults to the hazardous substance-specific water solubility limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water standard of 80 ug/L; (X) - Criteria is not protective of surface water used as a drinking water source*

Table 2A **Greenwood Oil Terminal** **Summary of VOC Groundwater Analytical Results**		1,2-dichloro-benzene µg/L	1,3-dichloro benzene µg/L	1,4-dichloro benzene µg/L	dichlorodi-fluoromethane µg/L	1,1-dichloro-ethane µg/L	1,2-dichloro-ethane µg/L	1,1-dichloro-ethene µg/L	cis-1,2-di-chloroethene µg/L	trans-1,2-di-chloroethene µg/L	1,2-dichloro-propane µg/L	1,3-dichloro-propane µg/L	ethyl-benzene µg/L	ethylene dibromide µg/L	2-hexanone µg/L	isopropyl-benzene µg/L	methylene chloride µg/L	4-methyl-2-pentanone µg/L	MTBE µg/L
Tier 1 (Non-Residential) Criteria																			
Chemical Abstract Service Number		*95501*	*541731*	*106467*	*75718*	*75343*	*107062*	*75354*	*156592*	*156605*	*78875*	*542756*	*100414*	*106934*	*591786*	*98828*	*75092*	*108101*	*1634044*
Groundwater Surface Water Interface		*13*	*28*	*17*	*ID*	*740*	*360 (X)*	*130*	*620*	*1,500 (X)*	*230 (X)*	*9.0 (X)*	*18*	*5.7 (X)*	*ID*	*28*	*1,500 (X)*	*ID*	*7,100 (X)*
Non-Residential GVIIC		*1.6E+5 (S)*	*41,000*	*74,000 (S)*	*3.0E+5 (S)*	*2.30E+06*	*59,000*	*1,300*	*2.10E+05*	*2.00E+05*	*36,000*	*26,000*	*1.7E+5 (S)*	*15,000*	*8.70E+06*	*56,000 (S)*	*1.40E+06*	*2.0E+7 (S)*	*4.7E+7 (S)*
Water Solubility		*1.56E+05*	*1.11E+05*	*73,800*	*3.00E+05*	*5.06E+06*	*8.52E+06*	*2.25E+06*	*3.50E+06*	*6.30E+06*	*2.80E+06*	*2.80E+06*	*1.69E+05*	*4.20E+06*	*1.60E+07*	*56,000*	*1.70E+07*	*2.00E+07*	*4.68E+07*
Flamability and Explositivity		*NA*	*ID*	*NA*	*ID*	*3.80E+05*	*2.50E+06*	*97,000*	*5.30E+05*	*2.30E+05*	*5.50E+05*	*1.30E+05*	*43,000*	*ID*	*NA*	*29,000*	*ID*	*ID*	*ID*
Non-Residential Vapor Intrusion Screening Levels		*600*	*1.0*	*75*	*29*	*18*	*5.0*	*7.0*	*70*	*100*	*5.0*	*1.0*	*700*	*500*	*67*	*5.0*	*5.0*	*4,400*	*1,000*
Sample ID (Depth, ft. bgl)	**Sample Date**																		
J-MW28 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW30 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**6.3**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW31 (7.0'-12.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW34 (2.0'-7.0')	2-24-16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-MW61 (5.0'-10.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW74 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW76 (12.0'-17.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**1.6**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW77 (8.0'-13.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
J-MW78 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Phase II ESA Groundwater Analytical Data																			
J-1 (5.0'-10.0')	11-5-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-2 (5.0'-10.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-3 (15.0'-20.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-4 (5.0'-10.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-5 (5.0'-10.0')	11-7-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15A (5.0'-10.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15B (5.0'-10.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--
J-15C (8.0'-13.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	--	<RL	--	--	--	--	--	--

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria; (--) - Indicates parameter not analyzed*
7. *(A) - Michigan Drinking Water Standard; (D) - Calculated criteria exceeds 100%, thus criteron has been reduced to 100%; (E) - Value represents Aesthetic Drinking Water Value; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (S) - Criterion defaults to the hazardous substance-specific water solubility limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water standard of 80 ug/L; (X) - Criteria is not protective of surface water used as a drinking water source*

Table 2A **Greenwood Oil Terminal** **Summary of VOC Groundwater Analytical Results**		n-propyl-benzene µg/L	styrene µg/L	1,1,1,1-tetra-chloroethane µg/L	1,1,2,2-tetra-chloroethane µg/L	tetra-chloroethene µg/L	toluene µg/L	1,2,4-trichloro-benzene µg/L	1,1,1-trichloro-ethane µg/L	1,1,2-trichloro-ethane µg/L	trichloroethene µg/L	trichloro-fluoromethane µg/L	1,2,3-trichloro-propane µg/L	1,2,3-TMB µg/L	1,2,4-TMB µg/L	1,3,5-TMB µg/L	vinyl chloride µg/L	xylenes µg/L
Tier 1 (Non-Residential) Criteria																		
Chemical Abstract Service Number		*103651*	*100425*	*630206*	*79345*	*127184*	*108883*	*120821*	*71556*	*79005*	*79016*	*75694*	*96184*	*526738*	*95636*	*108678*	*75014*	*1330207*
Groundwater Surface Water Interface		*ID*	*80 (X)*	*ID*	*78 (X)*	*60 (X)*	*270*	*99 (X)*	*89*	*330 (X)*	*200 (X)*	*NA*	*NA*	*NA*	*17*	*45*	*13 (X)*	*41*
Non-Residential GVIIC		*ID*	*3.1E+5 (S)*	*96,000*	*77,000*	*1.70E+05*	*5.3E+5 (S)*	*3.0E+5 (S)*	*1.3E+6 (S)*	*1.10E+05*	*4,900*	*1.1E+6 (S)*	*18,000*	*NA*	*56,000 (S)*	*61,000 (S)*	*13,000*	*1.9E+5 (S)*
Water Solubility		*NA*	*3.10E+05*	*1.10E+06*	*2.97E+06*	*2.00E+05*	*5.26E+05*	*3.00E+05*	*1.33E+06*	*4.42E+06*	*1.10E+06*	*1.10E+06*	*1.90E+06*	*NA*	*55,890*	*61,150*	*2.76E+06*	*186,000*
Flamability and Explositivity		*ID*	*1.40E+05*	*ID*	*ID*	*ID*	*61,000*	*NA*	*ID*	*NA*	*ID*	*ID*	*NA*	*NA*	*56,000 (S)*	*ID*	*33,000*	*70,000*
Non-Residential Vapor Intrusion Screening Levels		*1.0*	*100*	*1.0*	*1.0*	*5.0*	*1,000*	*70*	*200*	*5.0*	*5.0*	*120*	*NA*	*NA*	*7.3*	*5.1*	*2.0*	*10,000*
Sample ID (Depth, ft. bgl)	**Sample Date**																	
J-MW28 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**1.8**	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31 (7.0'-12.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW34 (2.0'-7.0')	2-24-16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-MW61 (5.0'-10.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW74 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76 (12.0'-17.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77 (8.0'-13.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW78 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
Phase II ESA Groundwater Analytical Data																		
J-1 (5.0'-10.0')	11-5-12	<RL	--	--	--	--	<RL	--	<RL	--	--	--	--	<RL	<RL	<RL	--	<RL
J-2 (5.0'-10.0')	11-6-12	<RL	--	--	--	--	<RL	--	<RL	--	--	--	--	<RL	<RL	<RL	--	<RL
J-3 (15.0'-20.0')	11-6-12	<RL	--	--	--	--	<RL	--	<RL	--	--	--	--	<RL	<RL	<RL	--	<RL
J-4 (5.0'-10.0')	11-6-12	<RL	--	--	--	--	<RL	--	<RL	--	--	--	--	<RL	<RL	<RL	--	<RL
J-5 (5.0'-10.0')	11-7-12	<RL	--	--	--	--	<RL	--	<RL	--	--	--	--	<RL	<RL	<RL	--	<RL
J-15A (5.0'-10.0')	11-13-12	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	**2**	--	<RL
J-15B (5.0'-10.0')	11-13-12	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL
J-15C (8.0'-13.0')	11-13-12	<RL	--	--	--	--	<RL	--	--	--	--	--	--	<RL	<RL	<RL	--	<RL

Notes:

1. *All laboratory extractions and analyses were performed within the required period*
2. *(<RL) - Indicates parameter not detected above the reporting limit*
3. *Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013*
4. *Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013*
5. *Results Bolded where detected, Underlined where above Tier 1 Non-Residential RBSLs*
6. *(NA) - Indicates Criterion not applicable; (ID) - Indicates that there is insufficient data to develop the criteria; (--) - Indicates parameter not analyzed*
7. *(A) - Michigan Drinking Water Standard; (D) - Calculated criteria exceeds 100%, thus criteron has been reduced to 100%; (E) - Value represents Aesthetic Drinking Water Value; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (S) - Criterion defaults to the hazardous substance-specific water solubility limit; (W) - Trihalomethane concentrations shall be added together to determine compliance with the drinking water standard of 80 ug/L; (X) - Criteria is not protective of surface water used as a drinking water source*

Table 2B **Greenwood Oil Terminal** **Summary of PNA Groundwater Analytical Results**		acenaphthene µg/L	acenaphthylene µg/L	anthracene µg/L	benzo(a)anthracene µg/L	benzo(a)pyrene µg/L	benzo(b)fluoranthene µg/L	benzo(ghi)perylene µg/L	benzo(k)fluoranthene µg/L	chrysene µg/L	dibenzo(ah)anchracene µg/L	fluoranthene µg/L	fluorene µg/L	indeno (123-cd) pyrene µg/L	1-methyl naphthalene µg/L	2-methyl naphthalene µg/L	naphthalene µg/L	phenanthrene µg/L	pyrene µg/L
Tier 1 (Non-Residential) Criteria																			
Chemical Abstract Service Number		*83329*	*208968*	*120127*	*56553*	*50328*	*205992*	*191242*	*207089*	*218019*	*53703*	*206440*	*86737*	*193395*	*90120*	*91576*	*91203*	*85018*	*129000*
Groundwater Surface Water Interface		*38*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*NA*	*ID*	*ID*	*1.6*	*12*	*ID*	*NA*			*2.0 (M); 1.4*	*ID*
Non-Residential GVIIC		*4,200 (S)*	*3,900 (S)*	*43 (S)*	*NLV*	*NLV*	*ID*	*NLV*	*NLV*	*ID*	*NLV*	*210 (S)*	*2,000 (S)*	*NLV*	*NA*	*25,000 (S)*	*31,000 (S)*	*1,000 (S)*	*140 (S)*
Water Solubility		*4,240*	*3,930*	*43.4*	*9.4*	*1.62*	*1.5*	*0.26*	*0.8*	*1.6*	*2.49*	*206*	*1,980*	*0.022*	*NA*	*24,600*	*31,000*	*1,000*	*135*
Flamability and Explositivity		*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*NA*	*ID*	*NA*	*ID*	*ID*
Non-Residential Vapor Intrusion Screening Levels		*230*	*62*	*3,700*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*300*	*NA*	*NA*	*5.0*	*5.0*	*2.0*	*1,700*
Sample ID (Depth, ft. bgl)	**Sample Date**																		
J-MW28 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW30 (3.0'-8.0')	8-28-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW31 (7.0'-12.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW34 (2.0'-7.0')	2-24-16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
J-MW61 (5.0'-10.0')	8-28-14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<RL	<RL	--	--
J-MW74 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW76 (12.0'-17.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW77 (8.0'-13.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
J-MW78 (10.0'-15.0')	8-29-14	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL
Phase II ESA Groundwater Analytical Data																			
J-1 (5.0'-10.0')	11-5-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-2 (5.0'-10.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-3 (15.0'-20.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-4 (5.0'-10.0')	11-6-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-5 (5.0'-10.0')	11-7-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-15A (5.0'-10.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	**10**	<RL	<RL	--	--
J-15B (5.0'-10.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--
J-15C (8.0'-13.0')	11-13-12	--	--	--	--	--	--	--	--	--	--	<RL	--	--	<RL	<RL	<RL	--	--

Notes:

*1. All laboratory extractions and analyses were performed within the required period; Results **Bolded** where detected, **<u>Underlined</u>** where above Tier 1 Non-Residential RBSLs; (--) - Indicates parameter not analyzed*

2. (<RL) - Indicates parameter not detected above the reporting limit; (NA) - Indicates Criterion not applicable; (NLV) indicates parameter not likely to volatilize; (ID) - Indicates that there is insufficient data to develop the criteria

3. Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013

4. Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013

5. (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit; (S) - Criterion defaults to the hazardous substance-specific water solubility limit

Table 2C **Greenwood Oil Terminal** **Summary of Metals Groundwater/Porewater Analytical Results**		Arsenic µg/L	Barium µg/L	Boron µg/L	Cadmium µg/L	Total Chromium µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Total Mercury µg/L	Selenium µg/L	Silver µg/L	Zinc µg/L	Sulfate µg/L
Tier 1 (Non-Residential) Criteria														
Chemical Abstract Service Number		*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Residential Drinking Water (Generic)		***10***	*2000*	*500*	*5*	*100*	*1400*	*4*	*170*	*2 (A)*	*50*	*34*	*2400*	*NA*
Groundwater Surface Water Interface		***10***	*670 (G)*	*7,200 (X)*	***2.5 (G,X)***	***11***	***13 (G)***	***14 (G,X)***	*440*	*0.0013*	***5***	***0.2 (M); 0.06***	***170 (G)***	*NA*
Non-Residential GVIIC		*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*56 (S)*	*NLV*	*NLV*	*NLV*	*NLV*
Water Solubility		*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*56*	*NA*	*NA*	*NA*	*NA*
Flamability and Explositivity		*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*
Non-Residential Vapor Intrusion Screening Levels		*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NC*	*NLV*	*NLV*	*NLV*	*NLV*
Sample ID (Depth, ft. bgl)	**Sample Date**													
J-MW21 (1.0'-6.0')	8-27-14	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	**<RL (0.25)**	<RL	--
J-MW28 (3.0'-8.0')	8-28-14	**<RL (5.9)**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
	4-13-15	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW30 (3.0'-8.0')	8-28-14	**5.1 (5.5)**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
	4-13-15	**6.8**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW31 (7.0'-12.0')	8-29-14	**11**	**110**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
	4-13-15	**7.4**	**100**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW34 (2.0'-7.0')	2-24-16	<RL	--	--	--	--	--	--	--	--	--	--	--	--
J-MW38 (8.0'-13.0')	8-28-14	**55 (52)**	**140**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
	4-13-15	**42**	**110**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW40 (8.0'-13.0')	4-14-15	**35**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW41 (5.0'-10.0')	4-14-15	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	**6.7**	<RL	<RL	--
J-MW47 (3.0'-8.0')	8-27-14	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW55 (5.0'-10.0')	8-27-14	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW61 (5.0'-10.0')	8-28-14	<RL	**100**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW67 (5.0'-10.0')	4-14-15	**14**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW68 (5.0'-10.0')	4-14-15	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	**5.7**	<RL	<RL	--
J-MW74 (10.0'-15.0')	8-29-14	**170 (150)**	**160**	--	<RL	<RL	<RL	<RL	**37 (40)**	<RL	<RL	<RL	<RL	--
	4-14-15	**200**	**210**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW76 (12.0'-17.0')	8-29-14	**13 (12)**	<RL	--	**2.5 (<RL)**	<RL	<RL	<RL	**180**	<RL	<RL	<RL	<RL	--
	4-14-15	**17**	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW77 (8.0'-13.0')	8-29-14	**11 (9.9)**	<RL	--	<RL	<RL	<RL	**15 (<RL)**	**160 (150)**	<RL	<RL	<RL	<RL	--
	4-14-15	**9.4**	<RL	--	<RL	<RL	<RL	**5.6**	--	<RL	<RL	<RL	<RL	--
J-MW78 (10.0'-15.0')	8-29-14	**140 (130)**	**150 (140)**	--	<RL	<RL	<RL	<RL	**46 (43)**	<RL	<RL	<RL	<RL	--
	4-14-15	**40**	**130**	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
J-MW81 (3.0'-8.0')	8-27-14	<RL	<RL	--	**21 (23)**	<RL	**47 (38)**	<RL	--	<RL	<RL	<RL	**1,800 (2,000)**	--
J-MW83 (3.0'-8.0')	8-27-14	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	**60 (75)**	--
PW-1	10-29-14	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
	4-15-15	<RL	<RL	--	<RL	<RL	<RL	<RL	--	<RL	<RL	<RL	<RL	--
PW-2	10-29-14	**5.7**	**110**	--	<RL	<RL	<RL	**6.7**	--	<RL	<RL	<RL	<RL	--
	4-15-15	**11**	**200**	--	<RL	<RL	<RL	**4.9**	--	<RL	<RL	<RL	<RL	--
PW-3	10-29-14	<RL	**100**	--	<RL	<RL	<RL	**7.8**	--	<RL	<RL	<RL	**62**	--
	4-15-15	<RL	**120**	--	<RL	<RL	<RL	**6.1**	--	<RL	<RL	<RL	<RL	--
PW-4	10-29-14	**5.8**	**130**	--	<RL	<RL	<RL	**12**	--	<RL	<RL	<RL	**62**	--
PW-5	4-15-15	<RL	<RL	--	<RL	<RL	**5.8**	**7.6**	--	<RL	<RL	<RL	<RL	--
PW-6	4-15-15	**5.5**	**140**	--	<RL	**10**	**13**	**17**	--	<RL	<RL	<RL	**59**	--

Table 2C **Greenwood Oil Terminal** **Summary of Metals Groundwater/Porewater Analytical Results**		Arsenic µg/L	Barium µg/L	Boron µg/L	Cadmium µg/L	Total Chromium µg/L	Copper µg/L	Lead µg/L	Lithium µg/L	Total Mercury µg/L	Selenium µg/L	Silver µg/L	Zinc µg/L	Sulfate µg/L
Tier 1 (Non-Residential) Criteria														
Chemical Abstract Service Number		*7440382*	*7440393*	*7440428*	*7440439*	*18540299*	*7440508*	*7439921*	*7439932*	*Varies*	*7782492*	*7440224*	*7440666*	*14808798*
Residential Drinking Water (Generic)		***10***	*2000*	*500*	*5*	*100*	*1400*	*4*	*170*	*2 (A)*	*50*	*34*	*2400*	*NA*
Groundwater Surface Water Interface		***10***	*670 (G)*	*7,200 (X)*	***2.5 (G,X)***	***11***	***13 (G)***	***14 (G,X)***	*440*	*0.0013*	***5***	***0.2 (M); 0.06***	***170 (G)***	*NA*
Non-Residential GVIIC		*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*56 (S)*	*NLV*	*NLV*	*NLV*	*NLV*
Water Solubility		*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*56*	*NA*	*NA*	*NA*	*NA*
Flamability and Explositivity		*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*	*ID*
Non-Residential Vapor Intrusion Screening Levels		*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NLV*	*NC*	*NLV*	*NLV*	*NLV*	*NLV*
Phase II ESA Groundwater Analytical Data														
J-1 (5.0'-10.0')	11-5-12	**10**	**419**	**250**	**1**	**17**	**16**	**16**	<RL	--	<RL	--	**40**	**283,000**
J-2 (5.0'-10.0')	11-6-12	**7**	**84**	**420**	<RL	<RL	<RL	<RL	**20**	--	<RL	--	<RL	**1.10E+06**
J-3 (15.0'-20.0')	11-6-12	**10**	**68**	**150**	<RL	<RL	<RL	<RL	<RL	--	<RL	--	**50**	**35,000**
J-4 (5.0'-10.0')	11-6-12	**127**	**108**	**800**	<RL	<RL	<RL	<RL	**190**	--	<RL	--	**37**	**316,000**
J-5 (5.0'-10.0')	11-7-12	**20**	**86**	**770**	<RL	<RL	<RL	<RL	**150**	--	**14**	--	**9**	**294,000**
J-15A (5.0'-10.0')	11-13-12	**437**	**62**	**1,000**	<RL	<RL	<RL	<RL	**410**	--	<RL	--	**15**	**1.24E+06**
J-15B (5.0'-10.0')	11-13-12	**68**	**244**	**1,900**	<RL	<RL	<RL	<RL	**160**	--	<RL	--	<RL	**78,000**
J-15C (8.0'-13.0')	11-13-12	**59**	**140**	**850**	<RL	<RL	<RL	<RL	**80**	--	<RL	--	<RL	**62,000**

Notes:

1. All laboratory extractions and analyses were performed within the required period

2. (<RL) - Indicates parameter not detected above the reporting limit; (--) - Indicates parameter not analyzed

3. Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013

4. Vapor Intrusion Screening Levels from MDEQ-RRD Guidance Document for the Vapor Intrusion Pathway, May, 2013

*5. Results **Bolded** where detected, **Underlined** where above Tier 1 Non-Residential RBSLs*

6. (NA) - Indicates Criterion not applicable; (NLV) indicates parameter not likely to volatilize; (ID) - Indicates that there is insufficient data to develop the criteria

7. Additional assessment results in (brackets) are dissolved; included if a disparity occurred between total and dissolved values, likely due to tubidity above 20 NTU. Concentrations from the Phase II ESA are reported as dissolved.

8. (A) - Michigan Drinking Water Standard; (E) - Value represents Aesthetic Drinking Water Value; (F) - Criterion is based on adverse impacts on plant life and phytotoxicity
(G) - Value depends upon pH or hardness of receiving stream; (L) - Criteria are calculated using a biologically based model; (M) - Calculated criterion is below analytical detection limit, thus defaulting to detection limit;
(S) - Criterion defaults to the hazardous substance-specific water solubility limit; (X) - Criteria is not protective of surface water used as a drinking water source

Table 3
Greenwood Oil Terminal
Static Water Levels

Well	Date	Ground Elevation	TOC Elevation	Well Depth (w/ pro-cover)	Depth to Water (ft)	Saturated Thickness	Water Table Elevation (ft)
Stream Gauge	10/30/2014	--	579.85	3.33	2.79	--	577.06
	4/8/2015	--	--	--	-0.17	--	580.02
J-MW21	8/27/2014	581.76	585.26	8.95	8.34	0.61	576.92
	4/13/2015	--	--	--	6.37	2.58	578.89
J-MW28	8/27/2014	594.63	597.33	10.9	9.24	1.66	588.09
	4/13/2015	--	--	--	7.59	3.31	589.74
	2/24/2016	--	--	--	7.56	3.34	589.77
J-MW30	8/27/2014	593.17	596.34	10.95	7.13	3.82	589.21
	4/13/2015	--	--	--	5.83	5.12	590.51
	2/24/2016	--	--	--	5.78	5.17	590.56
J-MW31	8/27/2014	594.58	597.40	14.95	10.49	4.46	586.91
	4/13/2015	--	--	--	9.24	5.71	588.16
	2/24/2016	--	--	--	9.18	5.77	588.22
J-MW34	2/24/2016	--	--	10.0	5.4	4.6	--
J-MW38	8/27/2014	593.64	596.22	15.75	12.03	3.72	584.19
	4/13/2015	--	--	--	11.37	4.38	584.85
	2/24/2016	--	--	--	11.52	4.23	584.70
J-MW40	4/13/2015	591.69	594.03	15.65	9.91	5.74	584.12
	2/24/2016	--	--	--	9.9	5.75	584.13
J-MW41	4/13/2015	594.36	597.72	12.95	9.8	3.15	587.92
	2/24/2016	--	--	--	10.0	3.0	587.72
J-MW47	8/27/2014	599.03	602.09	11.2	10.77	0.43	591.32
	4/13/2015	--	--	--	6.38	4.82	595.71
J-MW55	8/27/2014	599.38	602.17	12.45	7	5.45	595.17
	4/13/2015	--	--	--	3.62	8.83	598.55
J-MW61	8/27/2014	599.02	601.82	12.65	6.34	6.31	595.48
	4/13/2015	--	--	--	3.94	8.71	597.88
J-MW67	4/13/2015	595.94	598.77	12.95	10.63	2.32	588.14
	2/24/2016	--	--	--	10.67	2.28	588.10
J-MW68	4/13/2015	595.54	598.59	12.7	8.7	4	589.89
J-MW74	8/27/2014	596.30	599.34	17.95	9.68	8.27	589.66
	4/13/2015	--	--	--	9.43	8.52	589.91
J-MW76	8/27/2014	596.29	599.28	19.95	9.67	10.28	589.61
	4/13/2015	--	--	--	9.15	10.8	590.13
J-MW77	8/27/2014	596.61	599.54	19.95	9.92	10.03	589.62
	4/13/2015	--	--	--	9.55	10.4	589.99
J-MW78	8/27/2014	596.02	599.13	17.9	9.49	8.41	589.64
	4/13/2015	--	--	--	9.26	8.64	589.87
J-MW81	8/27/2014	595.75	598.42	11	9.89	1.11	588.53
	4/13/2015	--	--	--	8.39	2.61	590.03
J-MW83	8/27/2014	596.41	598.84	10.6	9.89	0.71	588.95
	4/13/2015	--	--	--	7.55	3.05	591.29

Table 4 **Greenwood Oil Terminal** **AOI-J (1) Southern Woodlot** **Summary of VSR Soil Analytical Results**		**Metals** Arsenic µg/kg
Tier 1 (Non-Residential) Criteria		
Chemical Abstract Service Number		*7440382*
Statewide Default Background Levels		***5,800***
Particulate Soil Inhalation		*9.10E+05*
Direct Contact		***37,000***
Sample ID	**Sample Date**	
1SW-S	9/28/2015	20,000
2SW-W	9/28/2015	**37,000**
3SW-W	9/28/2015	23,000
4SW-N	9/28/2015	34,000
5SW-E	9/28/2015	20,000
6SW-E	9/28/2015	24,000
7SW-S	9/30/2015	**61,000**
8SW-W	9/30/2015	24,000
9SW-W	9/30/2015	19,000
10SW-W	10/6/2015	**39,000**
11SW-S	10/6/2015	**45,000**
12SW-S	10/6/2015	26,000
13SW-W	10/6/2015	16,000

Notes:

1. All laboratory extractions and analyses were performed within the required period
2. Tier 1 RBSLs from MDEQ-RRD Operational Memorandum #1, December 31, 2013
3. Results **Bolded** where detected, **Underlined** where above Tier 1 Non-Residential RBSLs

APPENDIX E

ANALYTICAL REPORTS

Fibertec
environmental
services

Monday, September 14, 2015

Fibertec Project Number:	69627
Project Identification:	Marysville Power Plant (150288) /150288
Submittal Date:	09/08/2015

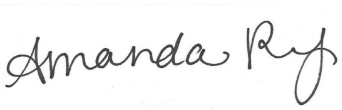
Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



By Amanda Petrovsky at 2:26 PM, Sep 14, 2015

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**Bunce Creek**	Chain of Custody:	**144537**
Client Project Name:	**Marysville Power Plant (150288)**	Sample No:	**1**	Collect Date:	**09/08/15**
Client Project No:	**150288**	Sample Matrix:	**Surface Water**	Collect Time:	**10:15**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/MS, Total Recoverable (EPA 0200.8-M/EPA 0200.8) **Aliquot ID: 69627-001** **Matrix: Surface Water**
Description: Bunce Creek

	Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
	1. Calcium	**79000**		µg/L	1000	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH
‡	2. Hardness, Total (as CaCO3)	**270000**		µg CaCO3/L	10000	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH
	3. Magnesium	**18000**		µg/L	300	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**St. Clair River**	Chain of Custody:	**144537**
Client Project Name:	**Marysville Power Plant (150288)**	Sample No:	**2**	Collect Date:	**09/08/15**
Client Project No:	**150288**	Sample Matrix:	**Surface Water**	Collect Time:	**11:55**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/MS, Total Recoverable (EPA 0200.8-M/EPA 0200.8) **Aliquot ID: 69627-002** **Matrix: Surface Water**
Description: St. Clair River

							Preparation		Analysis		
	Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
	1. Calcium	**27000**		µg/L	1000	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH
‡	2. Hardness, Total (as CaCO3)	**99000**		µg CaCO3/L	10000	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH
	3. Magnesium	**7700**		µg/L	300	10	09/10/15	PT15I10E	09/10/15	T415I10A	JLH

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number(s):

T104704518-15-3 (TX)

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Aqueous

Batch ID: PT15I10E
Page: 1 of 1
Date: 09/14/15

Preparation Batch: PT15I10E **Preparation Date: 09/10/15**

	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
	Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
Parameter	µg/L	µg/L	Q	µg/L	µg/L	%	%	Q	%	%	%	Q	**MB**	**LCS**	**LCD**
1. Calcium	U	1000		16,632	15,000	111	85 - 115						MB-1	LCS-1	
2. Magnesium	U	300		5,349	5,000	107	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T415I10A	09/10/15 13:12
LCS-1	T415I10A	09/10/15 13:14

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Amanda Ry

By Amanda Petrovsky at 2:29 PM, Sep 14, 2015

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 144537
PAGE 1 of 1

Client Name: Enviologic Technologies, Inc.
Contact Person: Dave Warwick & Derrick Lingle
Project Name/ Number: Marysville Power Plant / 150288
QUOTE#
Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: Hardness
	9-8-15	1015		Bunce Creek	W	1	Y	X
	↓	1155		St. Clair River	W	1	Y	X

Turnaround:
- [ ] 24 hour RUSH (surcharge applies)
- [ ] 48 hour RUSH (surcharge applies)
- [ ] 72 hour RUSH (surcharge applies)
- [x] Standard (5-7 bus. days)
- [ ] Other: Specify _____

Matrix Code: S Soil; A Air; O Oil; P Wipe; GW Ground Water; SW Surface Water; WW Waste Water; X Other: Specify _____

- [ ] FES Drilling Services

Remarks:

Deliverables:
- [ ] Level 2
- [ ] Level 3
- [ ] Level 4
- [ ] EDD

Comments: Please send the invoice & a copy of results to Adam Peetz (EnviroAnalytics Group)

Relinquished By:	Date/ Time 9-8-15 16:58	Received By:
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number: 69627
Laboratory Tracking:
Temperature at Receipt: 5.5°C RCV'D ON ICE

RCVD BY LAB
SEP 08 2015

COC Revision: February 2013

TERMS & CONDITIONS ON BACK

Initial: DBC

Fibertec
environmental
services

Tuesday, September 29, 2015

Fibertec Project Number: 69913
Project Identification: Greenwood Oil Terminal (150323) /150323
Submittal Date: 09/28/2015

Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Amanda Petrovsky

By Amanda Petrovsky at 3:37 PM, Sep 29, 2015

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**1SW-S**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**1**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:15**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-001** **Matrix: Soil/Solid**
Description: 1SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**12**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-001** **Matrix: Soil/Solid**
Description: 1SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**20000**	F	µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**2SW-W**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**2**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:20**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-002** **Matrix: Soil/Solid**
Description: 2SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7.3**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-002** **Matrix: Soil/Solid**
Description: 2SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**37000**		µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**3SW-W**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**3**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:25**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-003** **Matrix: Soil/Solid**
Description: 3SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**8.7**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-003** **Matrix: Soil/Solid**
Description: 3SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**23000**		µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Analytical Laboratory Report
Laboratory Project Number: 69913
Laboratory Sample Number: 69913-004

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**4SW-N**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**4**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:30**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-004** **Matrix: Soil/Solid**
Description: 4SW-N

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**8.9**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-004** **Matrix: Soil/Solid**
Description: 4SW-N

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**34000**		µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**5SW-E**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**5**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:35**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-005** **Matrix: Soil/Solid**
Description: 5SW-E

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**8.1**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-005** **Matrix: Soil/Solid**
Description: 5SW-E

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**20000**		µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**6SW-E**	Chain of Custody:	**126943**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**6**	Collect Date:	**09/28/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**13:40**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69913-006** **Matrix: Soil/Solid**
Description: 6SW-E

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**7.2**		%	0.1	1.0	09/28/15	MC150928	09/29/15	MC150928	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69913-006** **Matrix: Soil/Solid**
Description: 6SW-E

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**24000**		µg/kg	100	20	09/29/15	PT15I29A	09/29/15	T415I29C	JWS

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

F : Recovery from the spiked aliquot failed the expected range (matrix spike or matrix spike duplicate)

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number(s):

T104704518-15-3 (TX)

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 126943
PAGE 1 of 1

Client Name: Envirologic Technologies, Inc.
Contact Person: Dave Warwick & Derrick Lingle
Project Name/ Number: Greenwood Oil Terminal / 150323
QUOTE#
Purchase Order#

Turnaround: [X] 24 hour RUSH (surcharge applies); [ ] 48 hour RUSH (surcharge applies); [ ] 72 hour RUSH (surcharge applies); [ ] Standard (5-7 bus. days); [ ] Other: Specify
Matrix Code: S Soil; A Air; O Oil; P Wipe; GW Ground Water; SW Surface Water; WW Waste Water; X Other: Specify
[ ] FES Drilling Services
Deliverables: [ ] Level 2; [ ] Level 3; [ ] Level 4; [ ] EDD

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: Arsenic
	9-28-15	115		1SW-S	S	1	N	X
	"	120		2SW-W	S	1	N	X
		125		3SW-W	S	1	N	X
		130		4SW-N	S	1	N	X
		135		5SW-E	S	1	N	X
	↓	140		6SW-E	S	1	N	X

Remarks:

Comments: please include laboratory MS/MSD
send invoice & a copy of results to Adam Peetz (EnviroAnalytics Group)

Relinquished By:	Date/ Time 9-28-15 16:05	Received By:
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number:
Laboratory Tracking: 69913
Temperature at Receipt: 12.9°C

RCVD ON ICE

RCVD BY LAB
COC Revision: February 2013
SEP 28 2015

TERMS & CONDITIONS ON BACK

Initial: KF

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Soil/Solid

Batch ID: PT15I29A
Page: 1 of 1
Date: 09/29/15

Preparation Batch: PT15I29A **Preparation Date: 09/29/15**

		Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
		Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
	Parameter	µg/kg	µg/kg	Q	µg/kg	µg/kg	%	%	Q	%	%	%	Q	**MB**	**LCS**	**LCD**
1.	Arsenic	U	100		9,944	10,000	99	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T415I29C	09/29/15 09:53
LCS-1	T415I29C	09/29/15 09:54

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Amanda Petrovsky at 3:38 PM, Sep 29, 2015

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

Fibertec
environmental
services

Thursday, October 01, 2015

Fibertec Project Number:	69950
Project Identification:	Greenwood Oil Terminal (150323) /150323
Submittal Date:	09/30/2015

Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Amanda Petrovsky

By Amanda Petrovsky at 4:46 PM, Oct 01, 2015

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**7SW-S**	Chain of Custody:	**126944**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**1**	Collect Date:	**09/30/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:40**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69950-001** **Matrix: Soil/Solid**
Description: 7SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**9.3**		%	0.1	1.0	09/30/15	MC150930	10/01/15	MC150930	KRF

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69950-001** **Matrix: Soil/Solid**
Description: 7SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**61000**		µg/kg	100	20	10/01/15	PT15J01C	10/01/15	T415J01C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**8SW-S**	Chain of Custody:	**126944**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**2**	Collect Date:	**09/30/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:45**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69950-002** **Matrix: Soil/Solid**
Description: 8SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**12**		%	0.1	1.0	09/30/15	MC150930	10/01/15	MC150930	KRF

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69950-002** **Matrix: Soil/Solid**
Description: 8SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**24000**		µg/kg	100	20	10/01/15	PT15J01C	10/01/15	T415J01C	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**9SW-S**	Chain of Custody:	**126944**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**3**	Collect Date:	**09/30/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**12:50**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 69950-003** **Matrix: Soil/Solid**
Description: 9SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**8.9**		%	0.1	1.0	09/30/15	MC150930	10/01/15	MC150930	KRF

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 69950-003** **Matrix: Soil/Solid**
Description: 9SW-S

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**19000**		µg/kg	100	20	10/01/15	PT15J01C	10/01/15	T415J01C	JWS

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number(s):

T104704518-15-3 (TX)

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 126944

PAGE 1 of 1

Client Name: Envirologic Technologies, Inc.

Contact Person: Dave Warwick & Derrick Lingle

Project Name/ Number: Greenwood Oil Terminal / 150323

QUOTE#

Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: Arsenic
	9-30-15	1240		7SW-S	S	1	N	X
	↓	1245		8SW-W	S	1	N	X
	↓	1250		9SW-W	S	1	N	X

Turnaround:
- X 24 hour RUSH (surcharge applies)
- 48 hour RUSH (surcharge applies)
- 72 hour RUSH (surcharge applies)
- Standard (5-7 bus. days)
- Other: Specify

Remarks:

Matrix Code:
- S Soil
- A Air
- O Oil
- P Wipe
- GW Ground Water
- SW Surface Water
- WW Waste Water
- X Other: Specify

☐ FES Drilling Services

Deliverables:
- ☐ Level 2
- ☐ Level 3
- ☐ Level 4
- ☐ EDD

Comments: Please include laboratory MS/MSD
send invoice and a copy of results to Adam Peetz (EnviroAnalytics Group)

Relinquished By:	Date/ Time 9-30-15 15:23	Received By:
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number:
Laboratory Tracking: 69950
Temperature at Receipt: 2.4°C

COC Revision: February, 2013

TERMS & CONDITIONS ON BACK

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Soil/Solid

Batch ID: PT15J01C
Page: 1 of 1
Date: 10/01/15

Preparation Batch: PT15J01C **Preparation Date: 10/01/15**

		Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
		Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
	Parameter	µg/kg	µg/kg	Q	µg/kg	µg/kg	%	%	Q	%	%	%	Q	**MB**	**LCS**	**LCD**
1.	Arsenic	U	100		9,977	10,000	100	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T415J01C	10/01/15 12:22
LCS-1	T415J01C	10/01/15 12:24

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Amanda Petrovsky at 4:47 PM, Oct 01, 2015

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

Fibertec
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Tuesday, October 06, 2015

Fibertec Project Number:	70005
Project Identification:	Greenwood Oil Terminal (150323) /150323
Submittal Date:	10/05/2015

Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Amanda Petrovsky

By Amanda Petrovsky at 11:23 AM, Oct 06, 2015

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**10SW-W**	Chain of Custody:	**144530**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**1**	Collect Date:	**10/05/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 70005-001** **Matrix: Soil/Solid**
Description: 10SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**20**		%	0.1	1.0	10/05/15	MC151005	10/06/15	MC151005	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 70005-001** **Matrix: Soil/Solid**
Description: 10SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**39000**		µg/kg	100	20	10/06/15	PT15J06A	10/06/15	T415J06A	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**11SW-W**	Chain of Custody:	**144530**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**2**	Collect Date:	**10/05/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 70005-002** **Matrix: Soil/Solid**
Description: 11SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**14**		%	0.1	1.0	10/05/15	MC151005	10/06/15	MC151005	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 70005-002** **Matrix: Soil/Solid**
Description: 11SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**45000**		µg/kg	100	20	10/06/15	PT15J06A	10/06/15	T415J06A	JWS

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

Accreditation Number(s):

T104704518-15-3 (TX)

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive
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Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 144530
PAGE 1 of 1

Client Name: Envirologic Technologies, Inc.
Contact Person: Dave Warwick & Derrick Lingle
Project Name/ Number: Greenwood Oil Terminal / 150323
QUOTE#
Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: Arsenic	Remarks
	10/5/15			105W-W	S	1	N	X	
	↓			115W-S	S	1	N	X	
				125W-S	S	1	N	X	Hold
	↓			135W-W	S	1	N	X	Hold

Turnaround:
- [X] 24 hour RUSH (surcharge applies)
- [ ] 48 hour RUSH (surcharge applies)
- [ ] 72 hour RUSH (surcharge applies)
- [ ] Standard (5-7 bus. days)
- [ ] Other: Specify ____

Matrix Code: S Soil, A Air, O Oil, P Wipe, GW Ground Water, SW Surface Water, WW Waste Water, X Other: Specify ____

[ ] FES Drilling Services

Deliverables:
- [ ] Level 2
- [ ] Level 3
- [ ] Level 4
- [ ] EDD

Comments: please include laboratory MS/MSD
send invoice and a copy of results to Adam Peetz (EnviroAnalytics Group)

	Date/ Time	
Relinquished By:	10/5/15	Received By:
Relinquished By:	10/5/15 10:50	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number: 70005
Laboratory Tracking:
Temperature at Receipt: 12.0°C

RCVD ON ICE

RCVD BY LAB OCT 05 2015

COC Revision: February 2013

TERMS & CONDITIONS ON BACK

Initial: KF

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Soil/Solid

Batch ID: PT15J06A
Page: 1 of 1
Date: 10/06/15

Preparation Batch: PT15J06A **Preparation Date: 10/06/15**

		Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
		Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
	Parameter	µg/kg	µg/kg	Q	µg/kg	µg/kg	%	%	Q	%	%	%	Q	**MB**	**LCS**	**LCD**
1.	Arsenic	U	100		10,085	10,000	101	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T415J06A	10/06/15 10:08
LCS-1	T415J06A	10/06/15 10:10

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Amanda Petrovsky at 11:24 AM, Oct 06, 2015

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

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Wednesday, October 07, 2015

Fibertec Project Number:	70005 Supplemental
Project Identification:	Greenwood Oil Terminal (150323) /150323
Submittal Date:	10/05/2015

Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Stacy Kotecki

By Stacy Kotecki at 11:33 AM, Oct 07, 2015

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**12SW-W**	Chain of Custody:	**144530**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**3**	Collect Date:	**10/05/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 70005-003** **Matrix: Soil/Solid**
Description: 12SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**20**		%	0.1	1.0	10/06/15	MC151006	10/07/15	MC151006	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 70005-003** **Matrix: Soil/Solid**
Description: 12SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**26000**		µg/kg	100	20	10/07/15	PT15J07A	10/07/15	T415J07A	JWS

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**13SW-W**	Chain of Custody:	**144530**
Client Project Name:	**Greenwood Oil Terminal (150323)**	Sample No:	**4**	Collect Date:	**10/05/15**
Client Project No:	**150323**	Sample Matrix:	**Soil/Solid**	Collect Time:	**NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87) **Aliquot ID: 70005-004** **Matrix: Soil/Solid**
Description: 13SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1. Percent Moisture (Water Content)	**12**		%	0.1	1.0	10/06/15	MC151006	10/07/15	MC151006	BMG

Trace Elements by ICP/MS (EPA 0200.2-M/EPA 6020A) **Aliquot ID: 70005-004** **Matrix: Soil/Solid**
Description: 13SW-W

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Arsenic	**16000**		µg/kg	100	20	10/07/15	PT15J07A	10/07/15	T415J07A	JWS

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

Accreditation Number(s):

T104704518-15-3 (TX)

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Soil/Solid

Batch ID: PT15J07A
Page: 1 of 1
Date: 10/07/15

Preparation Batch: PT15J07A **Preparation Date: 10/07/15**

		Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
		Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
	Parameter	µg/kg	µg/kg	Q	µg/kg	µg/kg	%	%	Q	%	%	%	Q	MB	LCS	LCD
1.	Arsenic	U	100		10,133	10,000	101	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T415J07A	10/07/15 10:02
LCS-1	T415J07A	10/07/15 10:03

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Stacy Kotecki at 11:35 AM, Oct 07, 2015

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

Fibertec
environmental
services

Thursday, March 03, 2016

Fibertec Project Number:	72003
Project Identification:	CDC/150323 /150323
Submittal Date:	02/26/2016

Mr. David Warwick
Envirologic Technologies, Inc.
2960 Interstate Parkway
Kalamazoo, MI 49048

Dear Mr. Warwick,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 14 days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Amanda Petrovsky

By Amanda Petrovsky at 3:27 PM, Mar 03, 2016

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Fibertec environmental services

Analytical Laboratory Report
Laboratory Project Number: 72003
Laboratory Sample Number: 72003-001

Client Identification:	**Envirologic Technologies, Inc.**	Sample Description:	**J-MW-34**	Chain of Custody:	**135128**
Client Project Name:	**CDC/150323**	Sample No:	**1**	Collect Date:	**02/24/16**
Client Project No:	**150323**	Sample Matrix:	**Ground Water**	Collect Time:	**13:55**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/MS, Total Recoverable **Aliquot ID: 72003-001** **Matrix: Ground Water**
Method: EPA 3005A (Total Recoverable)/EPA 6020A **Description: J-MW-34**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	10	03/03/16	PT16C03A	03/03/16	T416C03B	JWS

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

ACCREDITED IN ACCORDANCE WITH nelac

Accreditation Number(s):

T104704518-16-5 (TX)

Fibertec environmental services

Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

Industrial Hygiene Services, Inc.
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0382
email: asbestos@fibertec.us

Geoprobe
11766 E. Grand River
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody # 135128

Client Name: Envirologic Technologies
Contact Person: Dave Warwick attention Layle
Project Name/ Number: CDC/150323
QUOTE#
Purchase Order#

Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PRESERVED (Y/N)	PARAMETERS: total arsenic
	2/24/16	1:55p		J-MW-34	W	1	Y	+

Turnaround:
- ☐ 24 hour RUSH (surcharge applies)
- ☐ 48 hour RUSH (surcharge applies)
- ☐ 72 hour RUSH (surcharge applies)
- ☒ Standard (5-7 bus. days)
- ☐ Other: Specify _____

Matrix Code: S Soil; A Air; O Oil; P Wipe; GW Ground Water; SW Surface Water; WW Waste Water; X Other: Specify _____

☐ FES Drilling Services

Remarks:

Deliverables: ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD _____

Comments: Please include batch run MS/MSD results with report

Relinquished By:	Date/ Time	Received By:
[signature]	2/24/16 13:45	[signature]
Relinquished By:	Date/ Time	Received By:
Relinquished By:	Date/ Time	Received By Laboratory:

LAB USE ONLY:
Fibertec project number:
Laboratory Tracking:
Temperature at Receipt:

COC Revision: February, 2013

TERMS & CONDITIONS ON BACK

Fibertec environmental services

Quality Control Report
Preparation Batch QC Summary
Inductively Coupled Plasma - Mass Spectrometry
Aqueous

Batch ID: PT16C03A
Page: 1 of 1
Date: 03/03/16

Preparation Batch: PT16C03A **Preparation Date: 03/03/16**

		Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
		Result	RL		Result	Spike	Rec.	LCL - UCL		Rec.	RPD	UCL				
	Parameter	µg/L	µg/L	Q	µg/L	µg/L	%	%	Q	%	%	%	Q	**MB**	**LCS**	**LCD**
1.	Arsenic	U	5.0		99.0	100	99	85 - 115						MB-1	LCS-1	

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	T416C03B	03/03/16 11:44
LCS-1	T416C03B	03/03/16 11:45

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Amanda Petrovsky at 3:29 PM, Mar 03, 2016

1914 Holloway Drive *Holt, MI 48842* *T: (517) 699-0345* *F: (517) 699-0388*
11766 E. Grand River *Brighton, MI 48116* *T: (810) 220-3300* *F: (810) 220-3311*
8660 S. Mackinaw Trail *Cadillac, MI 49601* *T: (231) 775-8368* *F: (231) 775-8584*

lab@fibertec.us

APPENDIX F

SOIL DISPOSAL SUMMARY

AP

APPROVED BY _____

DATE APPROVED _____

Smiths Creek Landfill

6779 Smiths Creek Road
Smiths Creek, MI 48074
Phone: (810) 985-2443 Fax:(810) 367-3062

Invoice: 11486

Page 1

MARYSV | 6395 | 38.227.81 | 2991-1

CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

2554
Attention:
Contract: **All Contracts**
P.O.
Rep.

RECEIVED
OCT 13 2015
BY:_____

Terms: **NET 30** Invoice Date: **9/30/2015** Due Date: **11/1/2015**

	P.O.	Ticket	Date	Quantity	UOM	Rate	Total
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411125	9/21/15	61.57	Tons	$18.58	$1,143.85
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411130	9/21/15	62.53	Tons	$18.58	$1,161.61
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411147	9/21/15	37.77	Tons	$18.63	$703.55
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411150	9/21/15	43.47	Tons	$18.61	$808.99
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411171	9/21/15	44.57	Tons	$18.61	$829.35
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411182	9/21/15	52.23	Tons	$18.59	$971.05
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411203	9/21/15	49.33	Tons	$18.60	$917.40
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411211	9/21/15	53.98	Tons	$18.59	$1,003.43
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411225	9/21/15	53.85	Tons	$18.59	$1,001.02
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411229	9/21/15	53.57	Tons	$18.59	$995.84
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411252	9/21/15	48.16	Tons	$18.60	$895.76
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411596	9/24/15	42.32	Tons	$18.61	$787.72
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411611	9/24/15	51.54	Tons	$18.59	$958.29
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411613	9/24/15	32.94	Tons	$18.59	$612.39
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411628	9/24/15	54.28	Tons	$18.59	$1,008.98
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411652	9/24/15	39.50	Tons	$18.62	$735.55
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411654	9/24/15	30.24	Tons	$18.60	$562.44
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411674	9/24/15	34.66	Tons	$18.59	$644.21
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411684	9/24/15	53.68	Tons	$18.59	$997.88
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411694	9/24/15	32.75	Tons	$18.59	$608.87
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411709	9/24/15	47.97	Tons	$18.60	$892.25
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411715	9/24/15	34.78	Tons	$18.59	$646.43
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411739	9/24/15	53.16	Tons	$18.59	$988.26
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL		1411764	9/25/15	48.61	Tons	$18.60	$904.08
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL		1411784	9/25/15	52.04	Tons	$18.59	$967.54
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL		1411799	9/25/15	59.72	Tons	$18.58	$1,109.62
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL		1411815	9/25/15	53.41	Tons	$18.59	$992.89
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411995	9/28/15	38.29	Tons	$18.63	$713.17
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1411999	9/28/15	37.31	Tons	$18.63	$695.04
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412019	9/28/15	40.43	Tons	$18.62	$752.75
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412022	9/28/15	39.37	Tons	$18.62	$733.14
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412042	9/28/15	39.04	Tons	$18.62	$727.04
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412045	9/28/15	41.16	Tons	$18.62	$766.26
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412070	9/28/15	37.76	Tons	$18.63	$703.36

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
Phone: (810) 985-2443 Fax:(810) 367-3062

Invoice: 11486

CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

2554
Attention:
Contract: **All Contracts**
P.O.
Rep.

Terms: **NET 30** Invoice Date: **9/30/2015** Due Date: **11/1/2015**

	P.O.	Ticket	Date	Quantity	UOM	Rate	Total
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412074	9/28/15	42.06	Tons	$18.61	$782.91
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412096	9/28/15	41.86	Tons	$18.61	$779.21
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412099	9/28/15	39.34	Tons	$18.62	$732.59
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412111	9/28/15	37.94	Tons	$18.63	$706.69
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412116	9/28/15	39.03	Tons	$18.62	$726.86
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412136	9/28/15	44.25	Tons	$18.61	$823.43
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412149	9/28/15	39.64	Tons	$18.62	$738.14
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412171	9/29/15	35.76	Tons	$18.63	$666.36
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412176	9/29/15	36.69	Tons	$18.63	$683.56
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412184	9/29/15	31.90	Tons	$18.65	$594.95
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412193	9/29/15	37.88	Tons	$18.63	$705.58
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412354	9/30/15	34.32	Tons	$18.64	$639.72
14 - 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412378	9/30/15	38.00	Tons	$18.63	$707.80

2054.66

Sub-Total $38,227.81

Account Summary

Current	$218,656.92
Over 30	$0.00
Over 60	$0.00
Over 90	$0.00
Over 120	$0.00

Total Account Balance: $ 218,656.92

Invoice Total **$38,227.81**

FREE ELECTRONIC RECYCLING!!! OCTOBER 17, 2015 AT GOODELLS COUNTY PARK FROM 9AM TO 2PM
We will be replacing our existing truck scale and will be using a temporary scale during this period. Traffic will be congested, your patience will be appreciated.

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411125**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/21/2015**
Ref. Tick#:
Printed by: **bbarnes2**

Vehicle: **160012951296**
Check #:
Gross Wt.: **177,520.00**
Tare Wt.: **54,380.00**
Net Wt.: **123,140.00**
Yard/Ton: **40.00** **61.57**

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **7:36:02AM**
Land Out: **8:10:16AM**

Comments:
15-093

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/21/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**61.57**		**$1,143.85**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$1,143.85**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411130
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: bbarnes2

Vehicle: 160118421843
Check #:
Gross Wt.: 178,580.00
Tare Wt.: 53,520.00
Net Wt.: 125,060.00
Yard/Ton: 40.00 62.53

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 7:53:30AM
Land Out: 7:53:40AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	62.53		$1,161.61
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$1,161.61

(38

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411147
Manifest:
P.O.#: 2991

Port Huron , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 160012951296
Check #:
Gross Wt.: 129,920.00
Tare Wt.: 54,380.00
Net Wt.: 75,540.00
Yard/Ton: 40.00 37.77

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:00:25AM
Land Out: 9:00:37AM

Comments:
15-091

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	37.77		$703.55
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$703.55

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411150**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/21/2015**
Ref. Tick#:
Printed by: **madcock**

Vehicle: **160118421843**
Check #:
Gross Wt.: **140,460.00**
Tare Wt.: **53,520.00**
Net Wt.: **86,940.00**
Yard/Ton: **40.00** **43.47**

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **9:07:58AM**
Land Out: **9:08:07AM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/21/2015** Signature _____
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**43.47**		**$808.99**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$808.99**

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411171
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 143,520.00
Tare Wt.: 54,380.00
Net Wt.: 89,140.00
Yard/Ton: 40.00 44.57

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 10:20:28AM
Land Out: 10:20:57AM

Comments:
15-091

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	44.57		$829.35
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$829.35

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443

LANDFILL TICKET IN-BOUND

Ticket: **1411182**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/21/2015**
Ref. Tick#:
Printed by: **barnold**

Vehicle: **160118421843**
Check #:
Gross Wt.: **157,980.00**
Tare Wt.: **53,520.00**
Net Wt.: **104,460.00**
Yard/Ton: **40.00** **52.23**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **10:48:12AM**
Land Out: **10:48:22AM**

Comments:
15-091

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/21/2015** **Signature** _____
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**52.23**		**$971.05**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$971.05**

BSV

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411203
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 153,040.00
Tare Wt.: 54,380.00
Net Wt.: 98,660.00
Yard/Ton: 40.00 49.33

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:33:34AM
Land Out: 11:33:44AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	49.33		$917.40
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$917.40

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411211
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160118421843
Check #:
Gross Wt.: 161,480.00
Tare Wt.: 53,520.00
Net Wt.: 107,960.00
Yard/Ton: 40.00 53.98

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:55:41AM
Land Out: 11:56:03AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	53.98		$1,003.43
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$1,003.43

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **12:51:43PM**
Land Out: **12:51:51PM**

Comments:
15-091

Ticket: **1411225**
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

Date: **9/21/2015**
Ref. Tick#:
Printed by: **madcock**

Vehicle: **160012951296**
Check #:
Gross Wt.: **162,080.00**
Tare Wt.: **54,380.00**
Net Wt.: **107,700.00**
Yard/Ton: **40.00** **53.85**

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/21/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**53.85**		**$1,001.02**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$1,001.02**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411229**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/21/2015**
Ref. Tick#:
Printed by: **madcock**

Vehicle: **160118421843**
Check #:
Gross Wt.: **160,660.00**
Tare Wt.: **53,520.00**
Net Wt.: **107,140.00**
Yard/Ton: **40.00** **53.57**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **1:04:54PM**
Land Out: **1:05:03PM**

Comments:
15-091

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/21/2015** **Signature** _____
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**53.57**		**$995.84**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$995.84**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411252
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/21/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 150,700.00
Tare Wt.: 54,380.00
Net Wt.: 96,320.00
Yard/Ton: 40.00 48.16

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 2:06:18PM
Land Out: 2:06:26PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/21/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	48.16		$895.76
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$895.76

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411596
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: bbarnes2

Vehicle: 160012951296
Check #:
Gross Wt.: 139,020.00
Tare Wt.: 54,380.00
Net Wt.: 84,640.00
Yard/Ton: 40.00 42.32

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 7:46:10AM
Land Out: 7:46:22AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	42.32		$787.72
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$787.72

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411611
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 160012951296
Check #:
Gross Wt.: 157,460.00
Tare Wt.: 54,380.00
Net Wt.: 103,080.00
Yard/Ton: 40.00 51.54

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 8:52:37AM
Land Out: 8:52:45AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	51.54		$958.29
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$958.29

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411613
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 16015929
Check #:
Gross Wt.: 109,260.00
Tare Wt.: 43,380.00
Net Wt.: 65,880.00
Yard/Ton: 25.00 32.94

161 TOM WARD & SONS, INC
10246 ST. CLAIR HWY
CASCO, MI 48064

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 8:56:22AM
Land Out: 8:56:30AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): TOM WARD & SONS, INC
Address

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	32.94		$612.39
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 3.00		Fee	
		TOTAL DUE:	$612.39

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411628
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 162,940.00
Tare Wt.: 54,380.00
Net Wt.: 108,560.00
Yard/Ton: 40.00 54.28

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:50:34AM
Land Out: 9:50:43AM

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	54.28		$1,008.98
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$1,008.98

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411652
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 133,380.00
Tare Wt.: 54,380.00
Net Wt.: 79,000.00
Yard/Ton: 40.00 39.50

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:00:44AM
Land Out: 11:00:55AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.50		$735.55
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$735.55

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411654
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: parnold

Vehicle: 16015929
Check #:
Gross Wt.: 103,860.00
Tare Wt.: 43,380.00
Net Wt.: 60,480.00
Yard/Ton: 25.00 30.24

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:07:09AM
Land Out: 11:07:31AM

Comments:

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature _____
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	30.24		$562.44
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 3.00		Fee	
		TOTAL DUE:	$562.44

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411674
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 16015929
Check #:
Gross Wt.: 112,700.00
Tare Wt.: 43,380.00
Net Wt.: 69,320.00
Yard/Ton: 25.00 34.66

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 12:04:26PM
Land Out: 12:04:38PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	34.66		$644.21
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 3.00		Fee	
		TOTAL DUE:	$644.21

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411684
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 161,740.00
Tare Wt.: 54,380.00
Net Wt.: 107,360.00
Yard/Ton: 40.00 53.68

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 12:24:18PM
Land Out: 12:24:28PM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	53.68		$997.88
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$997.88

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411694
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 16015929
Check #:
Gross Wt.: 108,880.00
Tare Wt.: 43,380.00
Net Wt.: 65,500.00
Yard/Ton: 25.00 32.75

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 12:56:40PM
Land Out: 12:56:49PM

Comments:
15-080

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	32.75		$608.87
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 3.00		Fee	
		TOTAL DUE:	$608.87

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411709
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/24/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 160012951296
Check #:
Gross Wt.: 150,320.00
Tare Wt.: 54,380.00
Net Wt.: 95,940.00
Yard/Ton: 40.00 47.97

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 1:31:35PM
Land Out: 1:31:45PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	47.97		$892.25
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$892.25

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443

LANDFILL TICKET IN-BOUND

Ticket: 1411715
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 16015929
Check #:
Gross Wt.: 112,940.00
Tare Wt.: 43,380.00
Net Wt.: 69,560.00
Yard/Ton: 25.00 34.78

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 1:45:32PM
Land Out: 1:45:46PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	34.78		$646.43
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 3.00		Fee	
		TOTAL DUE:	$646.43

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411739
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/24/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 160,700.00
Tare Wt.: 54,380.00
Net Wt.: 106,320.00
Yard/Ton: 40.00 53.16

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 2:42:08PM
Land Out: 2:42:18PM

Comments:
15-080

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/24/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	53.16		$988.26
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$988.26

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411764**
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: **9/25/2015**
Ref. Tick#:
Printed by: **skeais**

Vehicle: **160160124311**
Check #:
Gross Wt.: **149,620.00**
Tare Wt.: **52,400.00**
Net Wt.: **97,220.00**
Yard/Ton: **40.00** **48.61**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **7:40:55AM**
Land Out: **7:41:35AM**

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/25/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**48.61**		**$904.08**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$904.08**

136

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1411784
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: 9/25/2015
Ref. Tick#:
Printed by: skeais

Vehicle: 160160124311
Check #:
Gross Wt.: 156,480.00
Tare Wt.: 52,400.00
Net Wt.: 104,080.00
Yard/Ton: 40.00 52.04

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 8:51:23AM
Land Out: 8:51:30AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/25/2015 Signature
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	52.04		$967.54
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$967.54

137

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411799**
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: **9/25/2015**
Ref. Tick#:
Printed by: **skeais**

Vehicle: **160160124311**
Check #:
Gross Wt.: **171,840.00**
Tare Wt.: **52,400.00**
Net Wt.: **119,440.00**
Yard/Ton: **40.00** **59.72**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **10:01:01AM**
Land Out: **10:01:39AM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/25/2015** Signature _____
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**59.72**		**$1,109.62**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$1,109.62**

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1411815**
Manifest:
P.O.#:

Port Huron , MI, USA

ORIGINAL

Date: **9/25/2015**
Ref. Tick#:
Printed by: **skeais**

Vehicle: **160160124311**
Check #:
Gross Wt.: **159,220.00**
Tare Wt.: **52,400.00**
Net Wt.: **106,820.00**
Yard/Ton: **40.00** **53.41**

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **11:01:13AM**
Land Out: **11:01:25AM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/25/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**53.41**		**$992.89**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$992.89**

130

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443

LANDFILL TICKET IN-BOUND

Ticket: **1411995**
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: **9/28/2015**
Ref. Tick#:
Printed by: **bbarnes2**

Vehicle: **160012951296**
Check #:
Gross Wt.: **130,960.00**
Tare Wt.: **54,380.00**
Net Wt.: **76,580.00**
Yard/Ton: **40.00** **38.29**

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **7:40:21AM**
Land Out: **7:41:35AM**

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/28/2015** Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-091

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**38.29**		**$713.17**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$713.17**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443

LANDFILL TICKET IN-BOUND

Ticket: 1411999
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: bbarnes2

Vehicle: 160160124311
Check #:
Gross Wt.: 127,020.00
Tare Wt.: 52,400.00
Net Wt.: 74,620.00
Yard/Ton: 40.00 37.31

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **8:00:57AM**
Land Out: **8:01:08AM**

Comments:
15-091

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/28/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**37.31**		**$695.04**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$695.04**

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412019
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: parnold

Vehicle: 160012951296
Check #:
Gross Wt.: 135,240.00
Tare Wt.: 54,380.00
Net Wt.: 80,860.00
Yard/Ton: 40.00 40.43

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:11:54AM
Land Out: 9:12:05AM

Comments:

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	40.43		$752.75
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$752.75

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412022
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160160124311
Check #:
Gross Wt.: 131,140.00
Tare Wt.: 52,400.00
Net Wt.: 78,740.00
Yard/Ton: 40.00 39.37

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:21:56AM
Land Out: 9:22:05AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.37		$733.14
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$733.14

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412042
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 132,460.00
Tare Wt.: 54,380.00
Net Wt.: 78,080.00
Yard/Ton: 40.00 39.04

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 10:30:55AM
Land Out: 10:31:04AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.04		$727.04
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$727.04

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412045
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: parnold

Vehicle: 160160124311
Check #:
Gross Wt.: 134,720.00
Tare Wt.: 52,400.00
Net Wt.: 82,320.00
Yard/Ton: 40.00 41.16

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 10:36:36AM
Land Out: 10:36:45AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	41.16		$766.26
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$766.26

'38

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412070
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 129,900.00
Tare Wt.: 54,380.00
Net Wt.: 75,520.00
Yard/Ton: 40.00 37.76

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:41:56AM
Land Out: 11:42:05AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	37.76		$703.36
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$703.36

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412074
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160160124311
Check #:
Gross Wt.: 136,520.00
Tare Wt.: 52,400.00
Net Wt.: 84,120.00
Yard/Ton: 40.00 42.06

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:51:33AM
Land Out: 11:52:03AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	42.06		$782.91
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$782.91

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1412096**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/28/2015**
Ref. Tick#:
Printed by: **barnold**

Vehicle: **160012951296**
Check #:
Gross Wt.: **138,100.00**
Tare Wt.: **54,380.00**
Net Wt.: **83,720.00**
Yard/Ton: **40.00** **41.86**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **1:00:28PM**
Land Out: **1:00:36PM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/28/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**41.86**		**$779.21**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$779.21**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412099
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: madcock

Vehicle: 160160124311
Check #:
Gross Wt.: 131,080.00
Tare Wt.: 52,400.00
Net Wt.: 78,680.00
Yard/Ton: 40.00 39.34

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 1:08:27PM
Land Out: 1:08:36PM

Comments:
15-080

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.34		$732.59
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$732.59

38

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412111
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160012951296
Check #:
Gross Wt.: 130,260.00
Tare Wt.: 54,380.00
Net Wt.: 75,880.00
Yard/Ton: 40.00 37.94

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 1:59:47PM
Land Out: 1:59:59PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	37.94		$706.69
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$706.69

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412116
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160160124311
Check #:
Gross Wt.: 130,460.00
Tare Wt.: 52,400.00
Net Wt.: 78,060.00
Yard/Ton: 40.00 39.03

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 2:13:53PM
Land Out: 2:14:03PM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.03		$726.86
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$726.86

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1412136**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/28/2015**
Ref. Tick#:
Printed by: **barnold**

Vehicle: **160012951296**
Check #:
Gross Wt.: **142,880.00**
Tare Wt.: **54,380.00**
Net Wt.: **88,500.00**
Yard/Ton: **40.00** **44.25**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **3:10:29PM**
Land Out: **3:10:38PM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/28/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**44.25**		**$823.43**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$823.43**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412149
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 9/28/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 160160124311
Check #:
Gross Wt.: 131,680.00
Tare Wt.: 52,400.00
Net Wt.: 79,280.00
Yard/Ton: 40.00 39.64

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 3:35:16PM
Land Out: 3:35:25PM

Comments:
15-080

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/28/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	39.64		$738.14
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$738.14

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412171
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: 9/29/2015
Ref. Tick#:
Printed by: PMoutoux

Vehicle: 160012951296
Check #:
Gross Wt.: 125,900.00
Tare Wt.: 54,380.00
Net Wt.: 71,520.00
Yard/Ton: 40.00 35.76

2554 **CDC MARYSVILLE**
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **7:54:37AM**
Land Out: **7:55:25AM**

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/29/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
APPROVAL NO. 015-080 - HAULED BY TOM WARD

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**35.76**		**$666.36**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$666.36**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412176
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: 9/29/2015
Ref. Tick#:
Printed by: PMoutoux

Vehicle: 160160124311
Check #:
Gross Wt.: 125,780.00
Tare Wt.: 52,400.00
Net Wt.: 73,380.00
Yard/Ton: 40.00 36.69

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 8:05:41AM
Land Out: 8:06:25AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/29/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
APPROVAL NO. 015-080 - HAULED BY TOM WARD

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	36.69		$683.56
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$683.56

137

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412184
Manifest:
P.O.#:

Marysville , MI, USA

ORIGINAL

Date: 9/29/2015
Ref. Tick#:
Printed by: PMoutoux

Vehicle: 160012951296
Check #:
Gross Wt.: 118,180.00
Tare Wt.: 54,380.00
Net Wt.: 63,800.00
Yard/Ton: 40.00 31.90

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:03:52AM
Land Out: 9:04:02AM

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

Comments:
APPROVAL NO. 015-080 - HAULED BY TOM WARD

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/29/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	31.90		$594.95
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$594.95

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1412193**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **9/29/2015**
Ref. Tick#:
Printed by: **PMoutoux**

Vehicle: **160160124311**
Check #:
Gross Wt.: **128,160.00**
Tare Wt.: **52,400.00**
Net Wt.: **75,760.00**
Yard/Ton: **40.00** **37.88**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **9:21:55AM**
Land Out: **9:23:01AM**
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **9/29/2015** **Signature**
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Comments:
APPROVAL NO. 015-080 - HAULED BY TOM WARD

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	**37.88**		**$705.58**
Includes: MICHIGAN SOLID WASTE SURCHARGE of **$ 4.80**		Fee	
		TOTAL DUE:	**$705.58**

138

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412354
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/30/2015
Ref. Tick#:
Printed by: skeais

Vehicle: 160160124311
Check #:
Gross Wt.: 121,040.00
Tare Wt.: 52,400.00
Net Wt.: 68,640.00
Yard/Ton: 40.00 34.32

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 9:58:12AM
Land Out: 9:58:21AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/30/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	34.32		$639.72
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$639.72

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1412378
Manifest:
P.O.#: 2991

Marysville , MI, USA

REPRINT

Date: 9/30/2015
Ref. Tick#:
Printed by: skeais

Vehicle: 160160124311
Check #:
Gross Wt.: 128,400.00
Tare Wt.: 52,400.00
Net Wt.: 76,000.00
Yard/Ton: 40.00 38.00

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 11:12:25AM
Land Out: 11:12:31AM

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 9/30/2015 Signature
Phone Printed Name
(Acting on behalf of): CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJEC	38.00		$707.80
Includes: MICHIGAN SOLID WASTE SURCHARGE of $ 4.80		Fee	
		TOTAL DUE:	$707.80

Time 12:02PM
Date 9/23/2015
9/21/2015 thru 9/21/2015

Landfill Daily Report
Smiths Creek Landfill

Ticket	GL Account	Name	Vehicle	Load Volume	Description	Compacted	User	Qty	Rate	Total	UOM	Status /Insp	Pymnt Type	Date
1411125	850	CDC MARYSVILLE	1600129512	61.5700	14 - 1 TON MINIMUM		bbarnes2	61.57	$18.58	$1,143.85	Tons	Closed	Account	9/21/2015
1411130	850	CDC MARYSVILLE	1601184218	62.5300	14 - 1 TON MINIMUM		bbarnes2	62.53	$18.58	$1,161.61	Tons	Closed	Account	9/21/2015
1411147	850	CDC MARYSVILLE	1600129512	37.7700	14 - 1 TON MINIMUM		madcock	37.77	$18.63	$703.55	Tons	Closed	Account	9/21/2015
1411150	850	CDC MARYSVILLE	1601184218	43.4700	14 - 1 TON MINIMUM		madcock	43.47	$18.61	$808.99	Tons	Closed	Account	9/21/2015
1411171	850	CDC MARYSVILLE	1600129512	44.5700	14 - 1 TON MINIMUM		parnold	44.57	$18.61	$829.35	Tons	Closed	Account	9/21/2015
1411182	850	CDC MARYSVILLE	1601184218	52.2300	14 - 1 TON MINIMUM		parnold	52.23	$18.59	$971.05	Tons	Closed	Account	9/21/2015
1411203	850	CDC MARYSVILLE	1600129512	49.3300	14 - 1 TON MINIMUM		parnold	49.33	$18.60	$917.40	Tons	Closed	Account	9/21/2015
1411211	850	CDC MARYSVILLE	1601184218	53.9800	14 - 1 TON MINIMUM		parnold	53.98	$18.59	$1,003.43	Tons	Closed	Account	9/21/2015
1411225	850	CDC MARYSVILLE	1600129512	53.8500	14 - 1 TON MINIMUM		madcock	53.85	$18.59	$1,001.02	Tons	Closed	Account	9/21/2015
1411229	850	CDC MARYSVILLE	1601184218	53.5700	14 - 1 TON MINIMUM		madcock	53.57	$18.59	$995.84	Tons	Closed	Account	9/21/2015
1411252	850	CDC MARYSVILLE	1600129512	48.1600	14 - 1 TON MINIMUM		parnold	48.16	$18.60	$895.76	Tons	Closed	Account	9/21/2015
		Customer Totals:		**561.03**				**561.03**		**$10,431.85**				
No. of Tickets: 11		**Totals:**		**561.03**				**561.03**						
									Total without Discounts	**$10,431.85**				
									Total with Discounts	**$10,431.85**				

Report Filters:

Date Range Start >= 9/21/2015
Date Range End <= 9/21/2015
Customer Name = CDC MARYSVILLE

AP

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
Phone: (810) 985-2443 Fax:(810) 367-3062

Invoice: 11572
Page 1

CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

2554
Attention:
Contract: **All Contracts**
P.O. 2991
Rep.

Terms: **NET 30** Invoice Date: **10/31/2015** Due Date: **12/1/2015**

	P.O.	Ticket	Date	Quantity	UOM	Rate	Total
- 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1412822	10/5/15	26.34	Tons	$18.61	$490.29
- 1 TON MINIMUM >1000 YD PROJECT SOIL	2991	1413441	10/9/15	26.81	Tons	$18.61	$498.99

MARYSV|6395| Cont. Soil Dspsl, 10|15| 2991-1

Sub-Total $989.28

Account Summary

Current	$989.28
Over 30	$38,227.81 ✓
Over 60	$0.00
Over 90	$0.00
Over 120	$0.00

Total Account Balance: $39,217.09

APPROVED BY _____
DATE APPROVED _____

Invoice Total **$989.28**

Laura Sargent

From: Adam Peetz
Sent: Thursday, November 05, 2015 12:43 PM
To: Becky Lydon; Laura Sargent
Subject: FW: Emailing document from Smiths Creek Landfill Invoice 11572
Attachments: Invoice11572.pdf

Soil disposal invoice for CDC Marysville.

From: Adcock, Melinda [mailto:madcock@stclaircounty.org]
Sent: Thursday, November 05, 2015 11:29 AM
To: Adam Peetz
Subject: Emailing document from Smiths Creek Landfill Invoice 11572

Invoice#11572

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: **1412822**
Manifest:
P.O.#: **2991**

Marysville , MI, USA

ORIGINAL

Date: **10/5/2015**
Ref. Tick#:
Printed by: **madcock**

Vehicle: **16015929**
Check #:
Gross Wt.: **96,060.00**
Tare Wt.: **43,380.00**
Net Wt.: **52,680.00**
Yard/Ton: **25.00** **26.34**

2554
CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 **14 - SPECIAL WASTE CONTRACT**
Driver:
Laborer:
Compacted:
Disposal Site:

LF Coord.:
Genr/Haul: **CDC MARYSVILLE**
Land In: **8:20:35AM**
Land Out: **8:20:52AM**

Comments:
15-080

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date **10/5/2015** **Signature** _____
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJECT SOI	**26.34**		**$490.29**
Includes: MICHIGAN SOLID WASTE SURCHARGE of	**$3.00**	Fee	
		TOTAL DUE:	**$490.29**

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
(810) 985-2443
LANDFILL TICKET IN-BOUND

Ticket: 1413441
Manifest:
P.O.#: 2991

Marysville , MI, USA

ORIGINAL

Date: 10/9/2015
Ref. Tick#:
Printed by: barnold

Vehicle: 16015929
Check #:
Gross Wt.: 97,000.00
Tare Wt.: 43,380.00
Net Wt.: 53,620.00
Yard/Ton: 25.00 26.81

2554 CDC MARYSVILLE
1650 DES PERES RD
SUITE 303
ST LOUIS, MO 63131-1853

Contract: 10344 14 - SPECIAL WASTE CONTRACT
LF Coord.:
Genr/Haul: CDC MARYSVILLE
Land In: 10:43:26AM
Land Out: 10:43:53AM
Driver:
Laborer:
Compacted:
Disposal Site:

The undersigned acknowledges and represents that he/she has read, understood, and knowingly agreed to the terms and conditions set forth on the reverse side of this ticket agreement form.

Date 10/9/2015 Signature
Phone Printed Name
(Acting on behalf of) CDC MARYSVILLE
Address:

Comments:
15-080

Description	Quantity	Amount	Charge
14 - 1 TON MINIMUM >1000 YD PROJECT SOI	26.81		$498.99
Includes: MICHIGAN SOLID WASTE SURCHARGE of	$3.00	Fee	
		TOTAL DUE:	$498.99

APPENDIX G

RESTRICTIVE COVENANT

Non-Residential Use and Groundwater Use Restriction (Filed: May 30, 2014)
Direct Contact Exposure Notification and NAPL Body (File Pending)

Date 5-30 20 14
This is to certify that there are no tax liens or titles on This property and that the taxes are paid for FIVE YEARS previous to the date of this instrument. This certification does not include taxes, if any now in the process of collection by the City, Village or Township Treasurer.
ST. CLAIR COUNTY TREASURER
by: Melissa Odgen

Jay De Boyer Register Of Deeds
St Clair County, Michigan
Rec $22.00
Remon $4.00
Tax Crt $1.00
Recorded
May 30, 2014 11:30:54 AM
Liber 4508 Page 54-58
Receipt # 7757 COVD #201401212O
Seal
Liber 4508 Page 54

COVENANT DEED

DTE ELECTRIC COMPANY, a Michigan corporation, whose address is One Energy Plaza, Detroit, Michigan 48226 ("Grantor"), coveys to **CDC MARYSVILLE, LLC**, a Missouri limited liability company, whose address is 1650 Des Peres Road, Suite 303, St. Louis, Missouri 63131 ("Grantee"), the premises situated in City of Marysville, St. Clair County, Michigan, described as:

SEE ATTACHED EXHIBIT A (the "Property")

for the consideration shown on the Real Estate Transfer Tax Valuation Affidavit filed concurrently herewith, and subject to Grantee's agreement to perform certain demolition and remediation work as more fully defined in a Demolition and Remediation Agreement (the "Demolition Agreement") as Demolition Work and Remediation Work (the "Work"), a memorandum of which is recorded concurrently herewith, by and between Grantor and Commercial Development Company, Inc., a Missouri corporation, dated the date hereof, and subject to easements and restrictions of record and as set forth below.

As its sole warranty or covenant to the Grantee under this Covenant Deed, Grantor hereby covenants and agrees that it has not heretofore done, committed or willingly suffered to be done or committed, any act, by, through and under the Grantor, matter or thing whatsoever, whereby the Property hereby conveyed or any part thereof, is, shall or may be charged or encumbered in title, estate or otherwise.

The Grantor grants to the Grantee the right to make all available divisions, subject to local approval, under Section 108 of the Land Division Act, Act No. 288 of the Public Acts of 1967.

This Property may be located within the vicinity of farmland or a farm operation. Generally accepted agricultural and management practices which may generate noise, dust, odors, and other associated conditions may be used and are protected by the Michigan Right to Farm Act.

Grantor hereby declares and covenants that the Property, excluding however, Lots 8, 9, 10 and 11 of "Assessors Plat of Edmund Atkinson's Lots" as recorded in Liber 48 of Plats on Page 39, St. Clair County, MI, (the "Excluded Area") shall be subject to the following restrictions and conditions:

STATE OF MICHIGAN
St Clair County
May 30, 2014
Receipt # 7757

REAL ESTATE TRANSFER TAX
$550.00 - CO
$3,750.00 - ST
Stamp # 29607

a. Prohibited Land Uses: The Grantee shall prohibit all uses of the Property that are not compatible with or are inconsistent with the Work.

b. Groundwater Use Restrictions: The construction and use of wells or other devices on the Property to extract groundwater for consumption, irrigation, or any other purpose, except as provided below, is prohibited:

   i. Wells and other devices constructed as part of a response activity for the purpose of evaluating groundwater quality or to remediate subsurface contamination associated with a release of hazardous substances into the environment are permitted provided the construction of the wells or devices complies with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, or federal laws or regulations.

   ii. Short-term dewatering for construction purposes is permitted provided the dewatering, including management and disposal of the groundwater, is conducted in accordance with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, and federal environmental laws and regulations.

c. Term of Restrictive Covenant. This restrictive covenant shall run with the Property, excluding the Excluded Area, and shall be binding on the Grantee, future owners and their successors and assigns, lessees, easement holders, and any authorized agents, employees, or persons acting under their direction and control. This restrictive covenant shall continue in effect until released by the Grantor or its successor in interest and if no successor in interest exists the State of Michigan, through the Department of Environmental Quality ("DEQ") or DEQ's successor determines that the Work has been completed in accordance with the terms and conditions of the Demolition Agreement. This Restrictive Covenant may only be modified or rescinded with the written approval of the Grantor or its successor in interest and if no successor in interest exists the State of Michigan, through the DEQ.

d. Enforcement of Restrictive Covenant. The Grantor, its successor in interest, and if no successor in interest exists the State of Michigan, through the DEQ, may individually enforce the restrictions set forth in this restrictive covenant by legal action in a court of competent jurisdiction.

[Remainder of page intentionally left blank; Signatures appear on following pages]

The covenants herein shall be binding upon and inure to the benefit of the respective heirs, successors, assigns and legal representatives of the Grantor and Grantee.

GRANTOR:

DTE ELECTRIC COMPANY, a Michigan corporation

By: _____

Its: VICE PRESIDENT CORPORATE SERVICES

STATE OF MICHIGAN)

WAYNE COUNTY)

Acknowledged before me in Wayne_ County, Michigan, on MAY 23, 2014, by HEATHER KOENDERS, the VICE PRESIDENT CORP SERV of DTE Electric Company, a Michigan corporation, on behalf of said corporation.

_____ FLORENCE D. WASHINGTON
Notary public, State of Michigan, County of WAYNE
My commission expires 7-13-19
Acting in the County of Wayne

Send Subsequent Tax Bills To: GRANTEE

Drafted by and when recorded return to
Gary A. Kravitz
Lewis & Munday, PC
660 Woodward Avenue, Suite 2490
Detroit, Michigan 48226

2004007.0209.451456

EXHIBIT A

Legal Description

MARYSVILLE POWER PLANT

Beginning at the intersection of East and West 1/4 line with East line of M-29; thence South 28 degrees 36 minutes 22 seconds West on East line 100 feet to Southwest corner of Lot 7 of Assessors Plat of Edmund Atkinson's Lots and beginning of this description; thence South 28 degrees 36 minutes 22 seconds West 510.53 feet; thence South 28 degrees 40 minutes West 168.22 feet to point of curvature of a curve to right with radius 2070.6 feet; thence Southerly on a curve 217.82 feet, chord bears South 34 degrees 18 minutes West 217.73 feet, to point; thence South 25 degrees 33 minutes West 93.5 feet; thence South 28 degrees 02 minutes 45 seconds West 99.04 feet; thence South 28 degrees 40 minutes 45 seconds West 299.66 feet to point of curvature of a curve to left with radius 1842.57 feet; thence Southerly along curve 305.26 feet, chord bears South 24 degrees 29 minutes 52 seconds West 304.91 feet, to point; thence South 17 degrees 07 minutes 22 seconds West 230.09 feet; thence South 16 degrees 26 minutes 07 seconds West 174.96 feet; thence South 73 degrees 33 minutes 54 seconds East 33 feet; thence North 16 degrees 26 minutes 06 seconds East 5.00 feet; thence South 73 degrees 38 minutes 16 seconds East 500 feet; thence North 16 degrees 26 minutes 06 seconds East 70 feet; thence South 73 degrees 38 minutes 16 seconds East 282.45 feet to harbor line; thence North 12 degrees 09 minutes 44 seconds East 550.86 feet and North 15 degrees 56 minutes 29 seconds East 1415.87 feet along harbor line to South line extended of said aforementioned Lot 7; thence North 70 degrees 56 minutes 39 seconds West on said South line 408.77 feet to beginning, including Lots 8, 9, 10 and 11 of Assessors Plat of Edmund Atkinson's Lots, according to the plat thereof as recorded in Liber 48 of Plats, Page 39, St. Clair County Records.

THE ABOVE PARCEL AS SURVEYED IS DESCRIBED AS FOLLOWS:
Part of the Southwest 1/4 of Fractional Section 28, Town 6 North, Range 17 East, part of the Southeast 1/4 of Section 29, Town 6 North, Range 17 East, and Lots 8, 9, 10 and 11 of "Assessors Plat of Edmund Atkinson's Lots" as recorded in Liber 48 of Plats, Page 39, St. Clair County Records, all being located in the City of Marysville, St. Clair County, Michigan and being more particularly described as follows: Commencing at the 1/4 corner common to Fractional Section 28, Town 6 North, Range 17 East, and Section 29, Town 6 North, Range 17 East and running thence South 02 degrees 23 minutes 56 seconds East, along the section line common to said Fractional Section 28 and Section 29, a measured distance of 696.65 feet (described 696.53 feet) to a point on the Easterly line of Gratiot Boulevard (M-29) (width varies), said point lies North 02 degrees 23 minutes 56 seconds West, a measured distance of 10.58 feet (described 1.58 feet) from a found concrete monument that references said section line; thence along said Easterly line of Gratiot Boulevard, 40.09 feet along the arc of a curve concave Westerly, radius 2070.60 feet (chord bears North 31 degrees 46 minutes 48 seconds East 40.09 feet) to the point of beginning of the parcel of land herein being described; proceeding thence from said point of beginning North 28 degrees 36 minutes 21 seconds East along the Easterly line of said Gratiot Boulevard, a distance of 168.22 feet to a point; thence North 28 degrees 32 minutes 45 seconds East along said Easterly line of Gratiot Boulevard, part of said line being also the Westerly line of Lots 11 through 8 of said "Assessors Plat of Edmund Atkinson's Lots" (Liber 48 of Plats, Page 39, St. Clair County Records), a distance of 510.53 feet to the Southwest corner of Lot 7 of said subdivision; thence South 71 degrees 00 minutes 17 seconds East along the South line of said Lot 7, said line being also the North line of Lot 8 of said subdivision, and its Easterly extension, a distance of 408.74 feet to a point on the harbor line of the St. Clair River; thence South 15 degrees 52 minutes 50 seconds West along the harbor line of said St. Clair River, a distance of 1415.87 feet to an angle point in said harbor line; thence South 12 degrees 06 minutes 05 seconds West, continuing along said harbor line, a distance of 550.86 feet to a point; thence North 73 degrees 41 minutes 55 seconds West a distance of 282.45 feet to a point; thence South 16 degrees 22 minutes 28 seconds West a distance of 70.00 feet to a point; thence North 73 degrees 41 minutes 55

seconds West a distance of 500.00 feet to a point; thence South 16 degrees 22 minutes 28 seconds West a distance of 5.00 feet to a point; thence North 73 degrees 37 minutes 33 seconds West a distance of 33.00 feet to a point on the Easterly line of said Gratiot Boulevard; thence along the Easterly line of said Gratiot Boulevard the following seven courses: North 16 degrees 22 minutes 28 seconds East a distance of 174.96 feet and thence North 17 degrees 03 minutes 43 seconds East a measured distance of 230.13 feet (described 230.09 feet) to a point of curvature in said line and thence 305.26 feet along the arc of a curve concave Easterly, radius 1842.57 feet (chord bears North 24 degrees 26 minutes 13 seconds East 304.91 feet) to a point of tangent and thence North 28 degrees 37 minutes 06 seconds East a distance of 299.66 feet and thence North 27 degrees 59 minutes 06 seconds East a distance of 99.04 feet and thence North 25 degrees 29 minutes 21 seconds East a distance of 93.50 feet to a point of curvature in said line and thence 217.82 feet along the arc of a non-tangent curve, concave Westerly, radius 2070.60 feet (chord bears North 34 degrees 14 minutes 21 seconds East 217.73 feet) to the point of beginning.

Tax Parcel ID Nos. 74-03-090-0010-000 and 74-03-028-1028-000

"Tank Farm" MD3all

Description of proposed Marysville Oil Supply Facility:

Part of the Northeast 1/4 of Section 29, Town 6 North, Range 17 East, City of Marysville, St. Clair County, Michigan and being more particularly described as follows: Commencing at the Northeast corner of Section 29, Town 6 North, Range 17 East, and running thence South 02 degrees 23 minutes 56 seconds East along the East line of said Section 29, a distance of 1250.00 feet to the point of beginning of the parcel of land herein being described; proceeding thence from said point of beginning South 02 degrees 23 minutes 56 seconds East, along the East line of said Section 29, said line being also the West line of the Port Huron and Detroit Railroad Right-of-Way (width varies), a distance of 1434.03 feet to a found concrete monument at the East 1/4 corner of said section; thence South 88 degrees 32 minutes 23 seconds West along the East-West 1/4 line of Section 29, a measured distance of 691.57 feet (described 691.70 feet) to a found concrete monument; thence North 01 degree 35 minutes 46 seconds West, a measured distance of 1199.17 feet (described 1198.95 feet) to a found concrete monument; thence North 02 degrees 07 minutes 18 seconds West a distance of 223.69 feet to a point; thence North 87 degrees 36 minutes 14 seconds East, a distance of 673.60 feet to the point of beginning.

Tax Parcel ID No. 74-03-029-2005-010 MD3all

DECLARATION OF RESTRICTIVE COVENANT

DEQ Reference No: RC-RRD-201-16-028

This Declaration of Restrictive Covenant ("Restrictive Covenant") has been recorded with the St. Clair County Register of Deeds for the purpose of protecting public health, safety, and welfare, and the environment by prohibiting Notice of activities that could result in unacceptable exposure to environmental contamination present at the property located at 298 Gratiot Boulevard, Marysville and legally described in Exhibit 1 attached hereto (“Property”).

Response activities were implemented to address environmental contamination at the Property pursuant to Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.20101 *et seq.* The response activities that were implemented to address environmental contamination are fully described in the No Further Action (NFA) Report dated May 25, 2016, and prepared by Envirologic Technologies, Inc. on behalf of CDC Marysville, LLC. Response activities including a remedial investigation were conducted in cooperation and consultation with the Michigan Department of Environmental Quality (DEQ), pursuant to Part 201 of NREPA.

The Property described contains hazardous substances in excess of the concentrations developed as the unrestricted residential criteria under Section 20120a(1)(a) or (17) of the NREPA. The DEQ recommends that prospective purchasers or users of the Property undertake appropriate due diligence prior to acquiring or using this Property, and undertake appropriate actions to comply with the requirements of Section 20107a of the NREPA.

The response activities required the recording of this Restrictive Covenant with the St. Clair County Register of Deeds to: 1) provide notice of potential unacceptable exposures to hazardous substances located on the Property; 2) assure that the use of Property is consistent with the exposure assumptions used to develop the Nonresidential cleanup criteria under Section 20120a(1)(b) of the NREPA and the exposure control measures relied upon at the Property.

The Notice contained in this Restrictive Covenant is based upon information available at the time the response activities were implemented. Failure of the response activities to achieve and maintain the criteria, exposure controls, and any requirements specified by the response activities; future changes in the environmental condition of the Property or changes in the Nonresidential cleanup criteria under Section 20120a(1)(b) of the NREPA; the discovery of

environmental conditions at the Property that were not accounted for during implementation of the response activities; or use of the Property in a manner inconsistent with the Notice described herein, may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment.

The “Survey of Property and Limits of Land or Resource Use Notices,” attached as Exhibit 2, provides a survey of the Property that depicts the area or areas subject to the Notice and contains legal descriptions that distinguish those portions of the Property that are subject to the Notice in this Restrictive Covenant.

Definitions

For the purposes of this Restrictive Covenant, the following definitions shall apply:

“DEQ” means the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf.

"Owner" means at any given time the then current title holder of the Property or any portion thereof.

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA; Part 201 of the NREPA; or the Part 201 Administrative Rules, 2002 Michigan Register; Effective December 21, 2002, shall have the same meaning in this document as in Parts 3 and 201 of the NREPA and the Part 201 Administrative Rules, as of the date of filing of this Restrictive Covenant.

Summary of Response Activities

Contaminants associated with coal and coal combustion byproduct material (arsenic and cadmium) along with #6 fuel oil (benzo(a)pyrene) have been detected in soil south of Bunce Creek (Area J (1)) and along the southern (Area J (2)) and eastern (Area J (3)) side of an aboveground storage tank (AST) secondary containment berm. Area J (1) through Area J (3) are depicted in Exhibit 2. Prior to the recording of this Restrictive Covenant, a Remedial Investigation (RI) was conducted. During the RI, the horizontal and vertical extent of soil contaminants was delineated. Concentrations of arsenic in excess of the Non-Residential Direct Contact (NRDC) criterion were identified at depths greater than three (3) feet below ground surface in Area J (1), Area J (2), and in Area J (3). Benzo(a)pyrene in excess of the NRDC criterion and cadmium in excess of the Non-Residential Particulate Soil Inhalation criterion were identified at depths greater than nine (9) feet in Area J (3). This Restrictive Covenant has been recorded on the Property to provide notice to prospective purchasers of the presence of regulated substances at concentrations in excess of the non-residential direct contact and particulate soil inhalation criterion at depths greater than three (3) feet below ground surface.

Residual Nonaqueous-Phase Liquid (NAPL), associated with #6 fuel oil, was properly characterized and will remain in place. The NAPL exists below the ground surface at a depth of 10.5 feet to 17 feet. Exhibit 2 describes and provides the location of the horizontal and vertical extent of the NAPL. The Notice provided for in this Restrictive Covenant serve to prevent unacceptable exposure to hazardous substances as a result of the conditions created by the presence of the NAPL soil contaminant concentrations that exceed the unrestricted Non-Residential criteria under Section 21304a(2) of the NREPA.

NOW THEREFORE,

1. Declaration of Land Use or Resource Use Restrictions

CDC Marysville, LLC, as the Owner of the Property, hereby declares and covenants that the Property shall be subject to the following restrictions and conditions:

a. Prohibited Land Uses: The Owner shall prohibit all uses of portions of the Property, as described in Exhibit 2, that are not compatible with or are inconsistent with the assumptions and basis for the Nonresidential cleanup criteria established pursuant to Section 20120a(1)(b) of the NREPA. Uses that are compatible with Nonresidential cleanup criteria are generally described in Exhibit 3 (Allowable Uses). Cleanup criteria for land-use based response activities are located in the Government Documents Section of the State of Michigan Library.

i. Be advised that concentrations of arsenic, benzo(a)pyrene, and cadmium in soil at portions of this site as described in Exhibit 2 exist above the Nonresidential direct contact criteria and particulate soil inhalation criteria, respectively, at depths greater than three (3) feet below ground surface elevation as described in Exhibit 2.

ii. Be advised that residual NAPL is present at depths greater than 10.5 feet below ground surface elevation at portions of this site as described in Exhibit 2.

iii. Development or redevelopment on this site should take into consideration the potential for exposure to contaminants/NAPL in soil at the areas described in Exhibit 2. Be advised that any excavation or other intrusive activity that exposes soil at depths greater than three (3) feet in areas defined in Exhibit 2, may create an exposure to arsenic, benzo(a)pyrene and cadmium. Such activities must consider the provisions and requirements of Part 201 of the NREPA to prevent adverse exposure to these contaminants.

b. Contaminated Soil Management. The Owner shall manage all soils, media and/or debris located within the portions of the Property designated in Exhibit 2 in accordance with the applicable requirements of Section 20120c of the NREPA; Part 111, Hazardous Waste Management, of the NREPA; Subtitle C of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 *et seq.*; the administrative rules promulgated thereunder; and all other relevant state and federal laws.

2. Access. The Owner grants to the DEQ and its designated representatives the right to enter the Property at reasonable times for the purpose of determining and monitoring compliance with the response activities**,** including the right to take samples, inspect the operation of the response activities and inspect any records relating thereto, and to perform any actions necessary to maintain compliance with Part 201.

3. Conveyance of Property Interest. The Owner shall provide notice to the DEQ of the Owner's intent to transfer any interest in the Property at least fourteen (14) business days prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the applicable provisions of Section 20116 of the NREPA. The notice required to be made to the DEQ under this Paragraph shall be made to: Chief, Remediation and

Redevelopment Division, Michigan DEQ, P.O. Box 30426, Lansing, Michigan 48909-7926; and shall include a statement that the notice is being made pursuant to the requirements of this Restrictive Covenant, DEQ Reference Number RC-RD-201-16-028. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, easement holders, assigns, and transferees by the person transferring the interest.

4. Term of Restrictive Covenant. This Restrictive Covenant shall run with the Property and shall be binding on the Owner; future owners; and their successors and assigns, lessees, easement holders, and any authorized agents, employees, or persons acting under their direction and control. This Restrictive Covenant shall continue in effect until the DEQ or its successor determines that hazardous substances no longer present an unacceptable risk to the public health, safety, or welfare, or the environment. This Restrictive Covenant may only be modified or rescinded with the written approval of the DEQ.

5. Enforcement of Restrictive Covenant. The State of Michigan, through the DEQ, and CDC Marysville, LLC may individually enforce the restrictions set forth in this Restrictive Covenant by legal action in a court of competent jurisdiction.

6. Severability. If any provision of this Restrictive Covenant is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provisions hereof, and all such other provisions shall continue unimpaired and in full force and effect.

7. Authority to Execute Restrictive Covenant. The undersigned person executing this Restrictive Covenant is the Owner, or has the express written permission of the Owner, and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Restrictive Covenant

IN WITNESS WHEREOF, CDC Marysville, LLC has caused this Restrictive Covenant, RC-RD-201-16-028, to be executed on this 26th day of May 2016. (DAL)

CDC Marysville, LLC

By: _____
Signature

Name: Michael J. Roberts
Print or Type Name

Its: Manager
Title

STATE OF MISSOURI
COUNTY OF SAINT LOUIS

The foregoing instrument was acknowledged before me this 26 day of May 2016 by Michael J. Roberts, manager of CDC Marysville, LLC, a Missouri corporation, on behalf of the corporation. (DAL)

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

REBECCA LYDON
My Commission Expires
November 1, 2017
St. Louis County
Commission #13540330

_____
Notary Public Signature

Notary Public, State of Missouri
County of St. Louis
My Commission Expires: 11-1-17
Acting in the County of St. Louis

Prepared by and when recorded return to:

David B. Warwick
Envirologic Technologies, Inc., 2960 Interstate Parkway, Kalamazoo, MI 49048

EXHIBIT 1

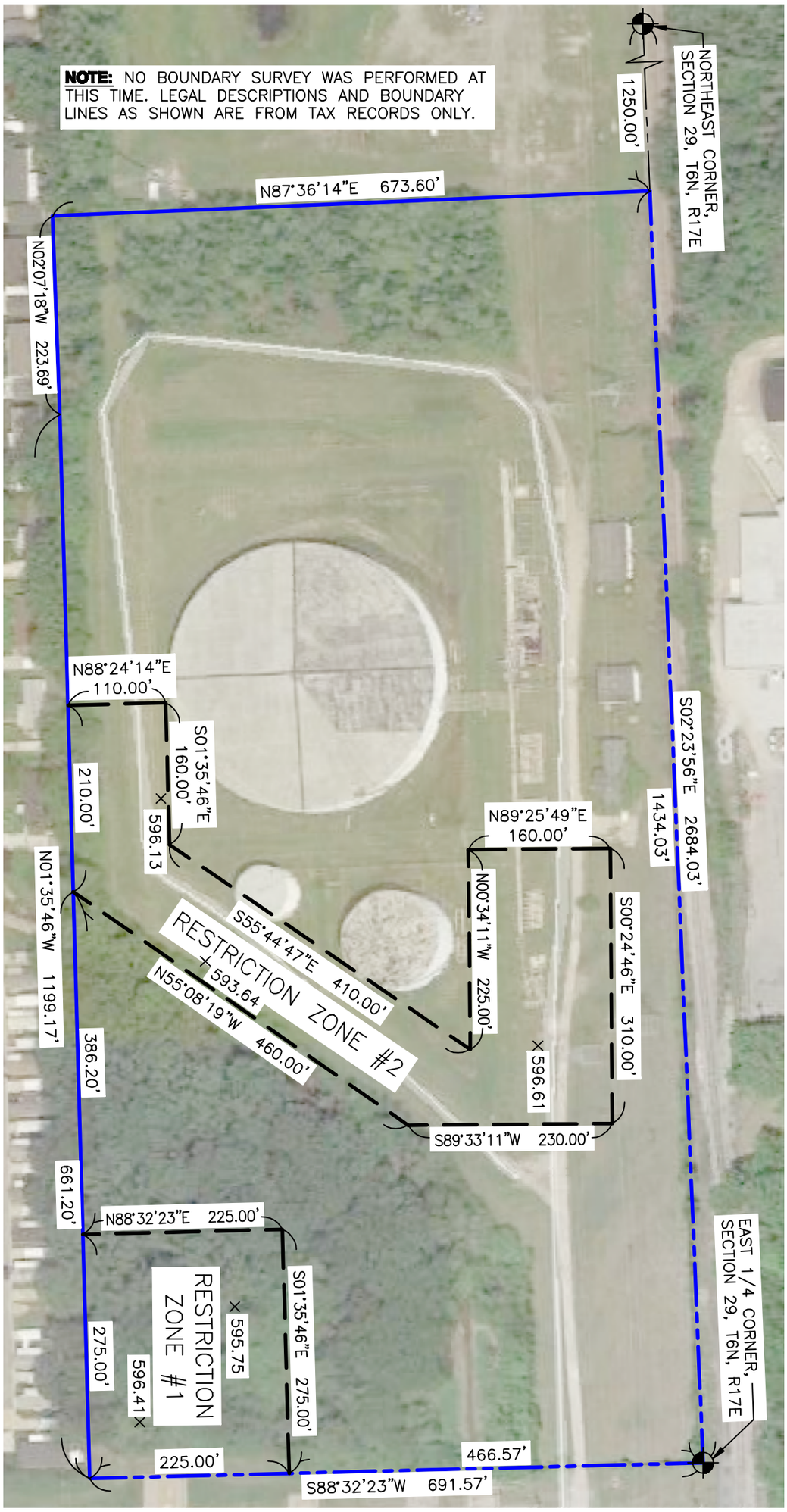
LEGAL DECRIPTION OF PROPERTY

BEG S 2D 23M 56S E 1250' FROM NE SEC COR, TH S 2D 23M 56S E 1434.03', TH S 88D 32M 23S W 691.57', TH N 1D 35M 46S W 1199.17', TH N 2D 7M 18S W 223.69', TH N 87D 36M 14S E 673.60' TO BEG SECTION 29 T6N R17E 22.35A

EXHIBIT 2

SURVEY OF THE PROPERTY
AND LIMITS OF LAND OR RESOURCE USE RESTRICTIONS

HOSIZONTAL AND VERTICAL EXTENT OF RESIDUAL LNAPL



1	SCALE: 1" = 150'	ENVIROLOGIC TECHNOLOGIES, INC 2960 INTERSTATE PARKWAY KALAMAZOO, MI 49048	REVISIONS 5 4 3 2 1
	PROJECT NO.: 2016-0008		
	FILE NAME: SP-01.DWG		
	SHEET: 1 OF 2		

SKETCH OF GROUND WATER USE RESTRICTION ZONES

DTE GREENWOOD OIL TERMINAL
3223 RAVENSWOOD ROAD, MARYSVILLE, MI

SHINK ENGINEERING, PLC
4146 PINE GROVE ROAD
FORT GRATIOT, MI 48059
lmshink@yahoo.com
586.718.1965

DATE:	5/16/16
DESIGNED BY:	LMS
DRAWN BY:	TLE
CHECKED BY:	
APPROVED BY:	

NOTE: NO BOUNDARY SURVEY WAS PERFORMED AT THIS TIME. LEGAL DESCRIPTIONS AND BOUNDARY LINES AS SHOWN ARE FROM TAX RECORDS ONLY.

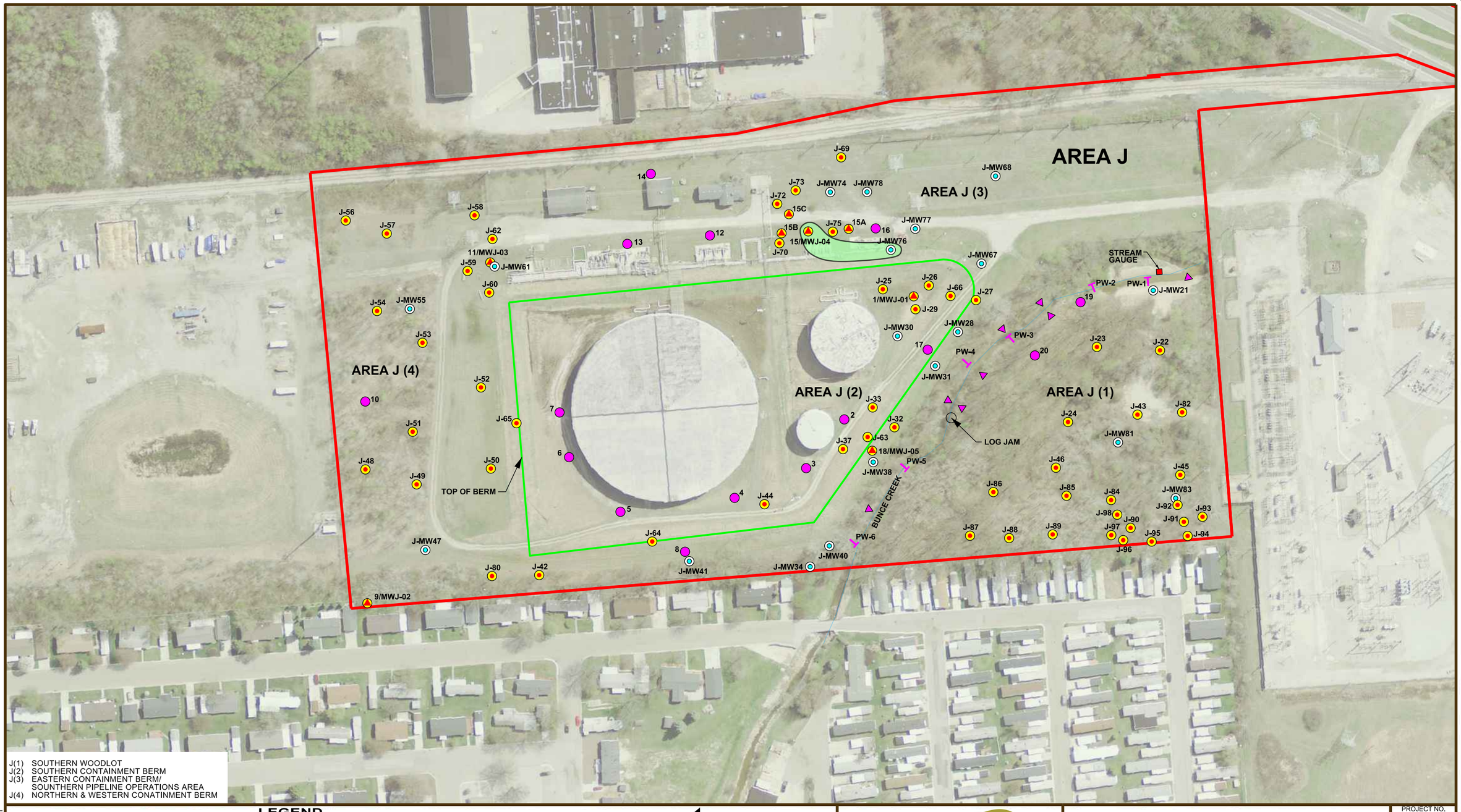
PROPERTY DESCRIPTION: A PARCEL OF LAND BEING A PART OF THE NORTHEAST ¼ OF SECTION 29, T6N, R17E, CITY OF MARYSVILLE, ST. CLAIR COUNTY, MICHIGAN. BEGINNING S. 02° 23' 56" E. 1250 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 29; THENCE S. 02° 23' 56" E. 1434.03 FEET; THENCE S. 88° 32' 23" W. 691.57 FEET; THENCE N. 01° 35' 46" W. 1199.17 FEET; THENCE N. 02° 07' 18" W. 223.69 FEET; THENCE N. 87° 36' 14" E. 673.60 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 22.35 ACRES, MORE OR LESS.

DESCRIPTION OF RESTRICTION ZONE #1: A PARCEL OF LAND BEING A PART OF THE NORTHEAST ¼ OF SECTION 29, T6N, R17E, CITY OF MARYSVILLE, ST. CLAIR COUNTY, MICHIGAN. COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 29; THENCE S. 02° 23' 56" E. 2684.03 FEET ALONG THE EAST LINE OF SAID SECTION 29 TO THE EAST ¼ CORNER; THENCE S. 88° 32' 23" W. 466.57 FEET ALONG THE EAST AND WEST ¼ LINE OF SAID SECTION 29 TO THE POINT OF BEGINNING; THENCE CONTINUING S. 88° 32' 23" W. 225.00 FEET ALONG THE EAST AND WEST ¼ LINE OF SAID SECTION 29; THENCE N. 01° 35' 46" W. 275.00 FEET; THENCE N. 88° 32' 23" E. 225.00 FEET; THENCE S. 01° 35' 46" E. 275.00 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 1.42 ACRES, MORE OR LESS.

DESCRIPTION OF RESTRICTION ZONE #2: A PARCEL OF LAND BEING A PART OF THE NORTHEAST ¼ OF SECTION 29, T6N, R17E, CITY OF MARYSVILLE, ST. CLAIR COUNTY, MICHIGAN. COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 29; THENCE S. 02° 23' 56" E. 2684.03 FEET ALONG THE EAST LINE OF SAID SECTION 29 TO THE EAST ¼ CORNER; THENCE S. 88° 32' 23" W. 691.57 FEET ALONG THE EAST AND WEST ¼ LINE OF SAID SECTION 29; THENCE N. 01° 35' 46" W. 661.20 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE CONTINUING N. 01° 35' 46" W. 210.00 FEET; THENCE N. 88° 24' 14" E. 110.00 FEET; THENCE S. 01° 35' 46" E. 160.00 FEET; THENCE S. 55° 44' 47" E. 410.00 FEET; THENCE N. 00° 34' 11" W. 225.00 FEET; THENCE N. 89° 25' 49" E. 160.00 FEET; THENCE S. 00° 24' 46" E. 310.00 FEET; THENCE S. 89° 33' 11" W. 230.00 FEET; THENCE N. 55° 08' 19" W. 460.00 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 2.75 ACRES, MORE OR LESS.

2	SCALE: 1" = 150'	ENVIROLOGIC TECHNOLOGIES, INC 2960 INTERSTATE PARKWAY KALAMAZOO, MI 49048	REVISIONS	5	
	PROJECT NO.: 2016-0008			4	
	FILE NAME: SP-01.DWG			3	
	SHEET: 2 OF 2			2	
				1	

DESCRIPTIONS OF GROUND WATER USE RESTRICTION ZONES DTE GREENWOOD OIL TERMINAL 3223 RAVENSWOOD ROAD, MARYSVILLE, MI	**SHINK ENGINEERING, PLC** 4146 PINE GROVE ROAD FORT GRATIOT, MI 48059 lmshink@yahoo.com 586.718.1965	DATE:	5/16/16
		DESIGNED BY:	LMS
		DRAWN BY:	TLE
		CHECKED BY:	
		APPROVED BY:	



J(1) SOUTHERN WOODLOT
J(2) SOUTHERN CONTAINMENT BERM
J(3) EASTERN CONTAINMENT BERM/
SOUNTHERN PIPELINE OPERATIONS AREA
J(4) NORTHERN & WESTERN CONATINMENT BERM

LEGEND

- SOIL BORING LOCATION (PHASE II)
- SOIL BORING/TEMPORARY MONITORING WELL LOCATION (PHASE II)
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- PORE WATER SAMPLE
- SECTION OF LOSING STREAM
- APPROXIMATE EXTENT OF RESIDUAL NAPL

NOTE:
THIS IS NOT A PROPERTY BOUNDARY SURVEY, PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE BASED ON AVAILABLE FURNISHED INFORMATION AND ARE APPROXIMATE ONLY AND SHOULD NOT BE USED TO ESTABLISH PROPERTY BOUNDARY LOCATION IN THE FIELD.

N

SCALE 1" = 150'
0 50 100 150 300

envirologic
environmental consulting + services
2960 INTERSTATE PARKWAY
KALAMAZOO, MICHIGAN 49048
PH: (269) 342-1100 FAX: (269) 342-4945

GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

VERTICAL EXTENT OF NAPL BODY (APPROXIMATE)

PROJECT NO. 150323

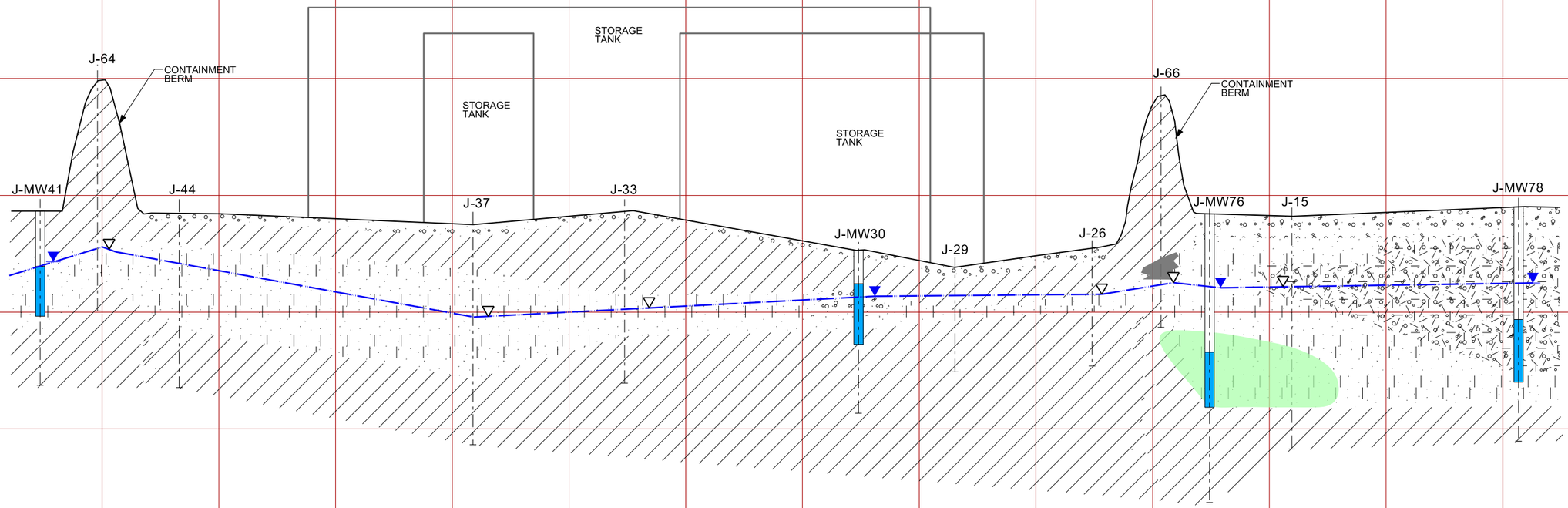
FIGURE No. 2

140189_Site_Plan-Site Plan P-000.pdf

HORIZONTAL DISTANCE IN FEET (1" = 60')

ELEVATION (1" = 10')

100.00
607.6
597.6
587.6
577.6
567.6



GROUNDWATER SATURATION
STATIC WATER LEVEL (AUG. 25, 2014)
WELL CASING
SCREENED INTERVAL
SAND
COAL ASH
INDUSTRIAL FILL
GRAVEL
CLAY
SILT
APPROXIMATE EXTENT OF RESIDUAL NAPL

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GREENWOOD OIL TERMINAL

298 GRATIOT BLVD
MARYSVILLE, MI

VERTICAL EXTENT OF NAPL BODY (APPROXIMATE)

PROJECT NO.
150323

FIGURE No.
3

000000.AAAAAA, File: Model:

EXHIBIT 3

DESCRIPTION OF ALLOWABLE USES

Nonresidential Land Use: This land use is characterized by any use which is not residential in nature and is primarily characterized by industrial and commercial uses. Industrial uses typically involve manufacturing operations engaged in processing and manufacturing of materials or products. Other examples of industrial uses are utility companies, industrial research and development, and petroleum bulk storage. Commercial uses include any business or income-producing use such as commercial warehouses, lumber yards, retail gas stations, auto dealerships and service stations, as well as office buildings, banks, and medical/dental offices (not including hospitals). Commercial uses also include retail businesses whose principal activity is the sale of food or merchandise within an enclosed building and personal service establishments which perform services indoors such as health clubs, barber/beauty salons, photographic studios, etc.

Any residential use is specifically prohibited from the non-residential land use category. This would include the primary use of the property for human habitation and includes structures such as single family dwellings, multiple family structures, mobile homes, condominiums, and apartment buildings. Residential use is also characterized by any use which is intended to house, educate, or provide care for children, the elderly, the infirm, or other sensitive populations, and therefore could include day care centers, educational facilities, hospitals, elder care facilities, and nursing homes. The use of any accessory building or portion of an existing building as a dwelling unit permitted for a proprietor or storekeeper and their families, located in the same building as their place of occupation, or for a watchman or caretaker is also prohibited. Any authority that allows for residential use of the Property as a legal non-conforming is also restricted per the prohibitions contained in this restrictive covenant.