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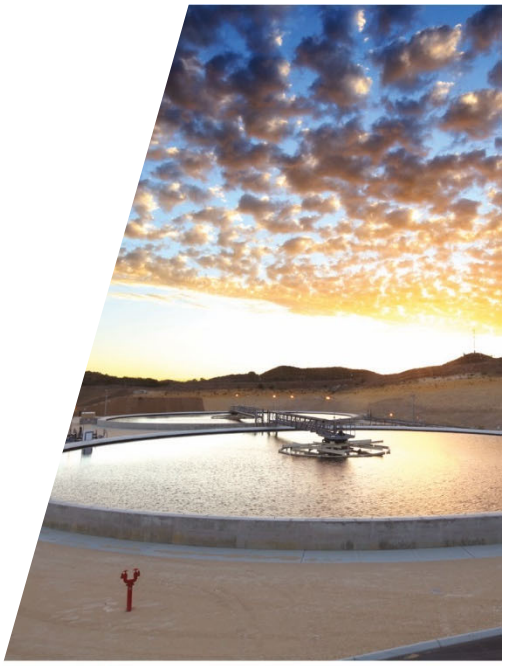
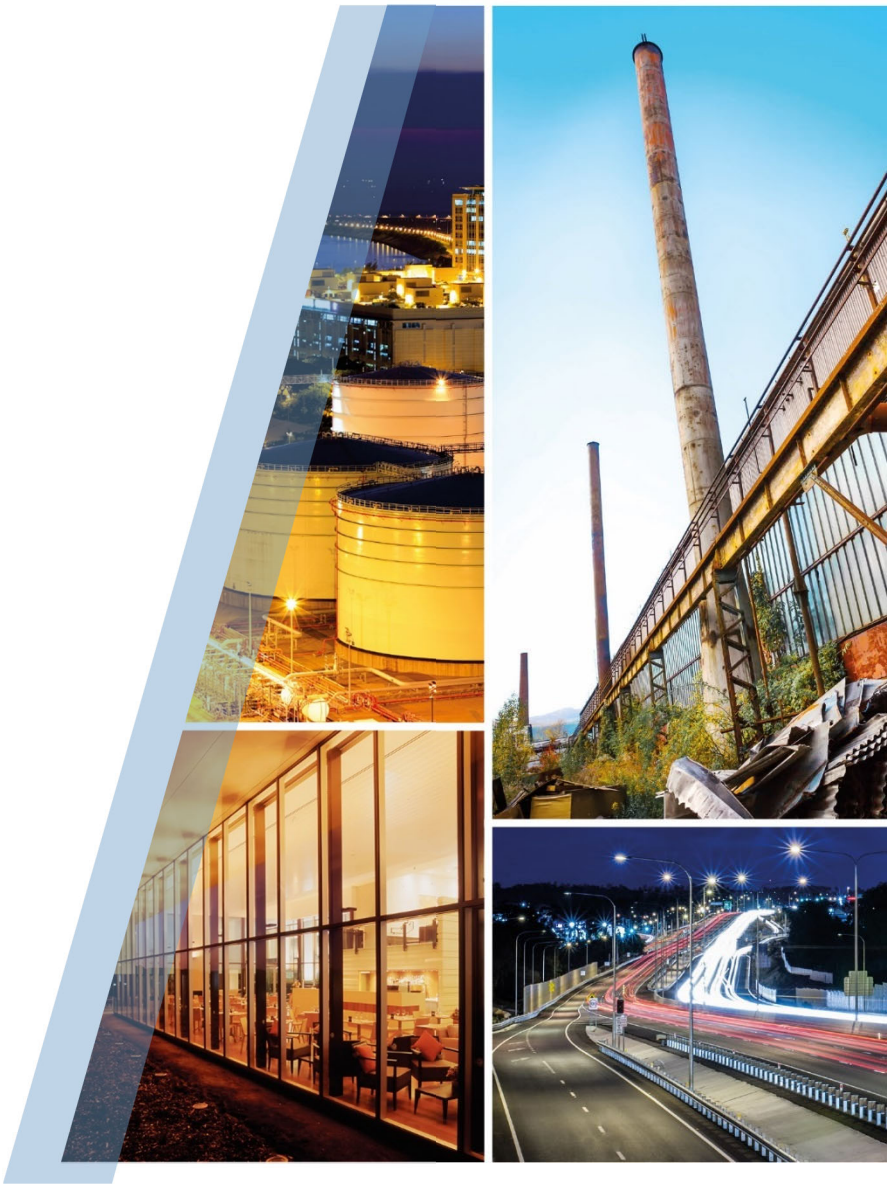


Standard of Care Plan

Dearborn Refining Site
Dearborn, Michigan



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LIST OF ACRONYMS

CRA	Conestoga-Rovers & Associates, Inc.
DCC	Industrial and Commercial II Direct Contact Criteria
DWC	Drinking Water Criteria
DWSD	Detroit Water and Sewerage Department
EGLE	Michigan Department of Environment, Great Lakes, and Energy
GHD	GHD Services, Inc.
GSI	Groundwater Surface Water Interface
GVIIC	Groundwater Volatilization to Indoor Air Inhalation Criteria
HASP	Health and Safety Plan
LNAPL	Light Non-Aqueous Phase Liquid
MDEQ	Michigan Department of Environmental Quality
mg/kg	milligram per kilogram
MPE	Multi-Phase Extraction
MSSLs	Media-Specific Volatilization to Indoor Air Interim Action Screening Levels
OMM	Operation, Maintenance, and Monitoring
PCBs	Polychlorinated Biphenyls
ppm	parts per million
PSIC	Particulate Soil Inhalation Criteria
PVTs	Passive Ventilation Trenches
RA	Response Action
RIASL	Residential Recommended Interim Action Screening Levels
$RIASL_{12}$	RIASL for exposures less than 12 hours
SIR	Site Investigation Report
Site	Dearborn Refining site located at 3901 Wyoming Avenue in the City of Dearborn, Wayne County, Michigan
SOCP	Standard of Care Plan
SVIIC	Soil Volatilization to Indoor Air Inhalation Criteria
TSRIASL	Residential Time-Sensitive Recommended Interim Action Screening Levels
U.S. EPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
VSIC	Infinite Source Volatile Soil Inhalation Criteria

1.0 INTRODUCTION

GHD Services, Inc. (GHD) prepared this Standard of Care Plan (SOCP) for the Dearborn Refining Site located at 3901 Wyoming Avenue in Dearborn, Michigan (Site). This SOCP includes additional data collected following the submittal of the March 1, 2013 version of the SOCP. The City of Dearborn owns the Site as of the date of this SOCP. The SOCP is a template to guide present and future Site owners/operators with requirements under Section 20107a of Part 201 of the Michigan Natural Resources and Environmental Protection Act 451 ("due care" or "7a").

Response Action (RA) activities completed on Site to date included placing non-residential-use and groundwater–use restrictions on the Site, building demolition, excavation and off-Site disposal of soils with polychlorinated biphenyls (PCBs) equal to or greater than 100 milligrams per kilogram (mg/kg) [or parts per million (ppm)], Cover System construction, installation and operation of a Multi-Phase Extraction (MPE) System for light non-aqueous phase liquid (LNAPL) extraction and off-Site disposal, decommissioning and removal of the MPE System, venting of methane via the passive ventilation trenches (PVTs) located at the northern and southern property boundaries and the 36 passive vents located at the southwest corner of the Site, and ongoing operation, maintenance, and monitoring (OMM). The OMM components include inspection of the Cover System, fence, stormwater retention area, swales, berm, PVTs, and passive vents; and Site and sentry well monitoring, as presented in the OMM Plan dated November 2020 (GHD, 2020).

2.0 SITE USE HISTORY

The Site was previously operated by various entities as a waste oil refining and oil processing Site from approximately 1947 until 2006. The Site formerly received used oil, waste oil, and oil-impacted wastewater and blended them with virgin oil for market resale. Additional information is presented in Section 1.3 of the Site Investigation Report (SIR) prepared by Conestoga-Rovers & Associates, Inc. (CRA) (currently GHD) and dated April 2010 (CRA, 2010).

The Site location is presented on Figure 2.1. The "as-built" RA remedy Site plan is presented on Figure 2.2. The current Site Plan is presented on Figure 2.3.

3.0 HAZARDOUS SUBSTANCE INFORMATION

Several soil, groundwater, and soil gas investigations were completed on Site.
Site soil and groundwater were initially investigated in 2008 (prior to construction of the Cover System in 2012) and the results were presented in the SIR. The 2008 soil investigation included:

- the collection of 44 surface soil samples from between 0 and 2.5 feet (ft) below ground surface (bgs)
- biased sampling of stained surface soil areas utilizing a 5 point composite (30 discrete surface soil samples collected in the stained areas that were composited into 6 samples for analysis)
- advancement and sampling of 22 soil borings with depths ranging from 1 foot to 25 ft bgs

Five groundwater monitoring wells (MW1-08, MW2-08, MW3-08/MW3R-08, MW4-08, and MW5-08) were installed around the perimeter of the Site and sampled in 2008. Two test recovery wells (TW-1 and TW-2) were installed in 2009 for the completion of bail-down tests to evaluate LNAPL recovery.

Monitoring wells MW6-10, MW7-10, MW8-10, MW9-10, and MW10-10 were installed in 2011 as part of a short-term pilot test to monitor hydraulic and vacuum radii of influence in the vicinity of test recovery wells TW-1 and TW-2. Thirty-six extraction wells (EX-1 through EX-36) were installed in 2012 as part of the MPE System installed on Site for LNAPL removal activities. It should be noted that these extraction wells were later modified to operate as passive methane vents (gas vents).

Consistent with the OMM Plan, eight gas probes (GP1-12 through GP8-12) were installed in 2012 at the Site boundaries (two at each Site boundary) to evaluate Site pressures and methane at the Site boundaries and 5 sentry wells (MW11-12, MW13-12, MW14-12, MW15-12, and MW16-12) were installed south of the Site on the Ferrous Processing and Trading Company (FPT) property to confirm LNAPL is not migrating off Site.

OMM activities have included the following monitoring activities consistent with the OMM Plan Amendment #2:

- Quarterly Site monitoring well and sentry well hydraulic, LNAPL, and methane monitoring.
- Annual monitoring well sampling and analysis.
- Quarterly gas probes pressure and methane monitoring.

- Quarterly gas vent LNAPL and methane monitoring.
- Annual soil gas sampling and analysis.

The soil analytical data are presented in Tables 3.1 through 3.3. The groundwater analytical data are presented in Table 3.4. Historic groundwater data are presented in Appendix B. The soil gas analytical data are presented in Table 3.5. The methane field results are presented in Table 3.6. The following sections identify parameters in excess of applicable criteria, as noted below.

Soil Analytical Data

The soil analytical data were compared to the following Michigan Act 451, Part 201 Non-residential Criteria:

- Soil Volatilization to Indoor Air Inhalation Criteria (SVIIC)
- Infinite Source Volatile Soil Inhalation Criteria (VSIC)
- Particulate Soil Inhalation Criteria (PSIC)
- Direct Contact Criteria (DCC)
- Soil Saturation Concentration Screening Levels

Arsenic, chromium (total), lead (fine/coarse/total), manganese, PCBs, and benzo(a)pyrene, exceed PSIC and/or DCC. Soil exceedances are presented on Figures 3.1 and 3.2, and in Tables 3.1 through 3.3.

Groundwater Analytical Data

The historic groundwater analytical data are presented in Appendix B. Groundwater samples were collected from 2013 through 2020 for analysis of volatile organic compounds (VOCs) during the annual OMM sampling events. The groundwater analytical data are presented in Table 3.4 and were compared to the following Michigan Act 451, Part 201 Groundwater Criteria:

- Groundwater Volatilization to Indoor Air Inhalation Criteria (GVIIC)
- Water Solubility
- Flammability and Explosivity Screening Levels

The relevant criteria noted above do not include Drinking Water Criteria (DWC) and Groundwater Surface Water Interface (GSI) Criteria due to the lack of pathway receptors consistent with the United States Environmental Protection Agency (U.S. EPA)-approved Work Plan prepared by CRA and dated September 2007 (CRA, 2007). In addition, groundwater is not utilized at the Site and there is a non-residential-use and groundwater-use Site deed restriction. There were no exceedances of criteria throughout the eight years of annual groundwater monitoring.

Soil Gas Analytical Data

The soil gas samples were collected from 2014 through 2020 for analysis of VOCs during the annual OMM sampling events. The analytical data are presented in Table 3.5. The analytical results were compared to the Michigan Department of Environment, Great Lakes, and Energy (EGLE), formerly Michigan Department of Environmental Quality (MDEQ) Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), however; there are no buildings present on Site. Additional evaluation would have to be completed prior to construction of any Site buildings. Benzene, trichloroethene, and vinyl chloride exceed one or more of the following MSSLs: Residential Recommended Interim Action Screening Levels (RIASL), Residential Time-Sensitive Recommended Interim Action Screening Levels (TSRIASL), Non-Residential RIASL, and Non-Residential RIASL for exposures less than 12 hours ($RIASL_{12}$), as presented in Table 3.5.

Methane Monitoring

Methane is monitored on Site as part of the OMM events. The methane field data are presented in Table 3.6. Methane is generally detected at one or more monitoring locations during each OMM event above 1.25 percent methane. Methane has been detected on Site as high as 84.5 percent methane.

An acceptable soil gas concentration (for both residential and nonresidential land uses) is 1.25 percent. For some U.S. EPA projects sites this action level is set at 5 percent methane. However, there are no structures at the Site, so there is no vapor intrusion pathway. Any potential building development must address methane.

The Site Restrictive Covenant (see Appendix A) prohibits construction of new structures or any modification of existing structures (of which there are none), unless such construction is approved in advance by the U.S. EPA and incorporates engineering controls to eliminate the potential for hazardous substance vapor intrusion at concentrations greater than applicable criteria. New structures must be constructed in accordance with current health and safety standards, with implementation of those

standards documented, and comply with all other applicable local, state, and federal regulations.

The NPOS Respondents will work with the City of Dearborn to update the summary of Response Actions, including methane venting, that are presented in the Restrictive Covenant executed by the City of Dearborn. Within 30 days of receipt of U.S. EPA approval of the OMM Plan, a revised draft Restrictive Covenant will be created to address current Site conditions and submitted to the U.S. EPA for review. The revised draft Restrictive Covenant will then subsequently be submitted to the City of Dearborn for review and execution.

3.1 USTS AND ABANDONED OR DISCARDED CONTAINERS

There are currently no known underground storage tanks (USTs) containing hazardous substances on Site. All known abandoned or discarded containers were removed from the Site during previous waste RAs completed from 2006 to 2008.

3.2 DETAILS OF HAZARDOUS SUBSTANCE CONCENTRATION, FATE, AND TRANSPORT

Soil impacts are expected to remain in place beneath the Site Cover System. The overall mass of subsurface contaminants at the Site will generally diminish over time as it biodegrades in-place.

3.3 EXPOSURE PATHWAY ANALYSIS

Exposure pathways pertaining to previously noted exceedances were reviewed and are discussed in the following Sections.

3.3.1 SOURCE CONTROL AND EXISTING CONTAMINATION

No on-Site surface releases are currently occurring or threaten to occur. The RA for soil, groundwater, and LNAPL included removal aspects (e.g., PCB excavation/disposal, groundwater/LNAPL collection/disposal). After the RA was completed, remaining contaminants in-place continue to biodegrade. Methane is being managed and controlled by the PVTs at the northern and southern property boundaries and via the 36 passive vents present at the southwest corner of the Site.

3.3.2 DRINKING WATER EXPOSURE

The groundwater is not utilized at the Site. The Site would receive municipal water from the Detroit Water and Sewerage Department (DWSD) if it were ever developed. In addition, a groundwater-use Site deed restriction is in effect to prohibit groundwater for use.

3.3.3 DERMAL EXPOSURE

Dermal exposure is not a relevant pathway because a Cover System is present across 100 percent of the Site to prevent exposure and the Site is undeveloped. A Health and Safety Plan (HASP) must be developed and utilized for excavations through the Cover System to address potential health hazards and environmental concerns if handling soil or groundwater (including LNAPL, if present) at the Site.

3.3.4 INHALATION OF INDOOR AIR EXPOSURE

Indoor air inhalation of volatile constituents from soil and groundwater is not a relevant pathway of exposure, as there are no buildings on the Site. The SOCP will have to be revised to address any future construction or development (refer to OMM Plan [GHD, 2020]).

3.3.5 INHALATION OF AMBIENT AIR EXPOSURE

Inhalation of ambient air exposure is not a relevant pathway of exposure because the Site is undeveloped. Any potential development will follow the deed restriction requirements (refer to OMM Plan [GHD, 2020]).

3.3.6 ACUTE TOXIC AND PHYSICAL HAZARD RISKS

LNAPL was extracted during the RA, and on-Site and off-Site wells were and will continue to be monitored to evaluate any potential LNAPL migration, as identified in the OMM Plan (GHD, 2020).

3.3.7 SUMMARY OF EXPOSURE PATHWAYS

The exposures pathways and mitigation are summarized as follows:

Exposure Pathway	*RA Components*
Source Control	• Excavation and disposal - complete • Groundwater/LNAPL extraction/disposal - complete • Cover system – maintenance on-going • Passive methane venting – maintenance on-going
Dermal	• Cover system -maintenance on-going • Deed restrictions - complete • HASP – required as needed
Ambient	• Cover system - maintenance on-going • Flexible Membrane Liner - complete • HASP– required as needed

3.4 POTENTIAL FIRE OR EXPLOSION HAZARDS

There are no known chemically incompatible materials that are in proximity to each other on the Site. Methane is generally detected at one or more monitoring locations during each OMM event above 1.25 percent methane. However, methane is being managed and vented at the northern and southern property boundaries through the PVTs and at the southwest corner of the Site through the 36 passive vents. Methane has been detected on Site as high as 84.5 percent methane.

4.0 PLAN FOR RESPONSE ACTIVITIES

The following response activities will prevent exposure of human receptors to residual concentrations of hazardous substances sourced at the Site which exceed applicable criteria.

4.1 NOTIFICATION OF DISCARDED OR ABANDONED CONTAINERS

No known discarded or abandoned containers exist on Site. In the event that discarded or abandoned containers are discovered during any Site development, the U.S. EPA and EGLE (or current state environmental agency) must be notified.

4.2 NOTICE OF MIGRATION

No hazardous substances sourced at the Site are known to be migrating off the Site at concentrations triggering applicable notification requirements. In the event that such hazardous substance migration occurs, the U.S. EPA and EGLE (or current state environmental agency) notification is required at that time. FPT is aware of the conditions at the Site.

The MDEQ/EGLE notified the City of Dearborn that it was not required to submit a notice of migration because it acquired the Site through tax foreclosure. FPT, which purchased a portion of the Site, is aware of Site contaminants and was notified by EGLE to prepare a Due Care Plan.

4.3 USE RESTRICTIONS

Non-residential–use and groundwater-use restrictions have been recorded on the Site in the form of a Restrictive Covenant.

4.4 OPERATION AND MAINTENANCE PLAN

The OMM Plan was prepared by GHD and is dated November 2020. The OMM Plan will continue to be implemented to successfully and safely operate the RA program.

4.5 MONITORING PLAN

The monitoring plan is presented in the OMM Plan (GHD, 2020).

5.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH SECTION 7A OBLIGATIONS

This Section presents an evaluation of the information presented in Section 3.0 and Section 4.0 to demonstrate compliance with the obligations of Section 20107a of Part 201 of Michigan Act 451 by the current owner/operator of the Site.

5.1 EXACERBATION

No activities are currently anticipated to be completed which would move or affect soil and groundwater such that the extent of contamination, or costs to address it, would be increased. This SOCP will be revised if any development or construction is planned.

5.2 STANDARD OF CARE

Methane is being managed and controlled by the PVTs at the northern and southern property boundaries and via the 36 passive vents present at the southwest corner of the Site. In addition, the Site will be operated consistent with this SOCP (e.g., non-residential uses for a storage lot, a groundwater-use restriction, a Cover System in-place, methane venting, and maintenance per the OMM). No further on-Site exposure mitigation is required.

5.2.1 COMMUNICATION OF EXPOSURE AND NOTICE REQUIREMENTS

Areas of known soil contamination were covered with the Cover System. As long as the Site restrictions, Cover System, and passive vents are maintained, there are no known unacceptable exposures from the impacts to the identified receptors. However, if the ground cover is significantly disturbed (e.g., excavation for new construction, etc.), or the passive vents are removed or closed, standard of care designs should be exercised to minimize the risk of unacceptable exposures (during the construction and in a building). A HASP must be developed and will be required to address any potential exposures prior to initiating sub-surface activities.

5.2.2 REASONABLE PRECAUTIONS

As discussed above, there are no potential human exposure pathways for which relevant criteria are exceeded based on the intended above grade land use with methane venting. The present and future owners/operators have to operate the Site consistent with the executed/recorded deed restriction (e.g., Declaration of Restrictive Covenant and Grant of Environmental Protection Easement) presented in Appendix A.

The NPOS Respondents will work with the City of Dearborn to amend the summary of Response Actions in the Restrictive Covenant to include methane venting.

Required maintenance and monitoring activities are presented in the OMM Plan.

5.2.3 COOPERATION WITH RESPONSE ACTIVITIES

Reasonable cooperation, assistance, and access to persons authorized to conduct OMM activities at the Site must be provided by the Site owner/operator.

5.2.4 COMPLIANCE WITH LAND OR RESOURCE USE RESTRICTIONS

The Site owner/operator must comply with the Site non-residential land-use and groundwater-use restrictions established or relied on in connection with the RA activities (see Appendix A).

5.2.5 CONTINUED INTEGRITY OF LAND OR RESOURCE USE RESTRICTIONS

The effectiveness or integrity of the non-residential land-use and groundwater-use restriction employed at the Site as part of the RA will not be impeded by the Site owner or operator.

6.0 REFERENCES

CRA, 2007, Removal Action Work Plan, Dearborn Refining Site, Dearborn, Michigan. September 2007.

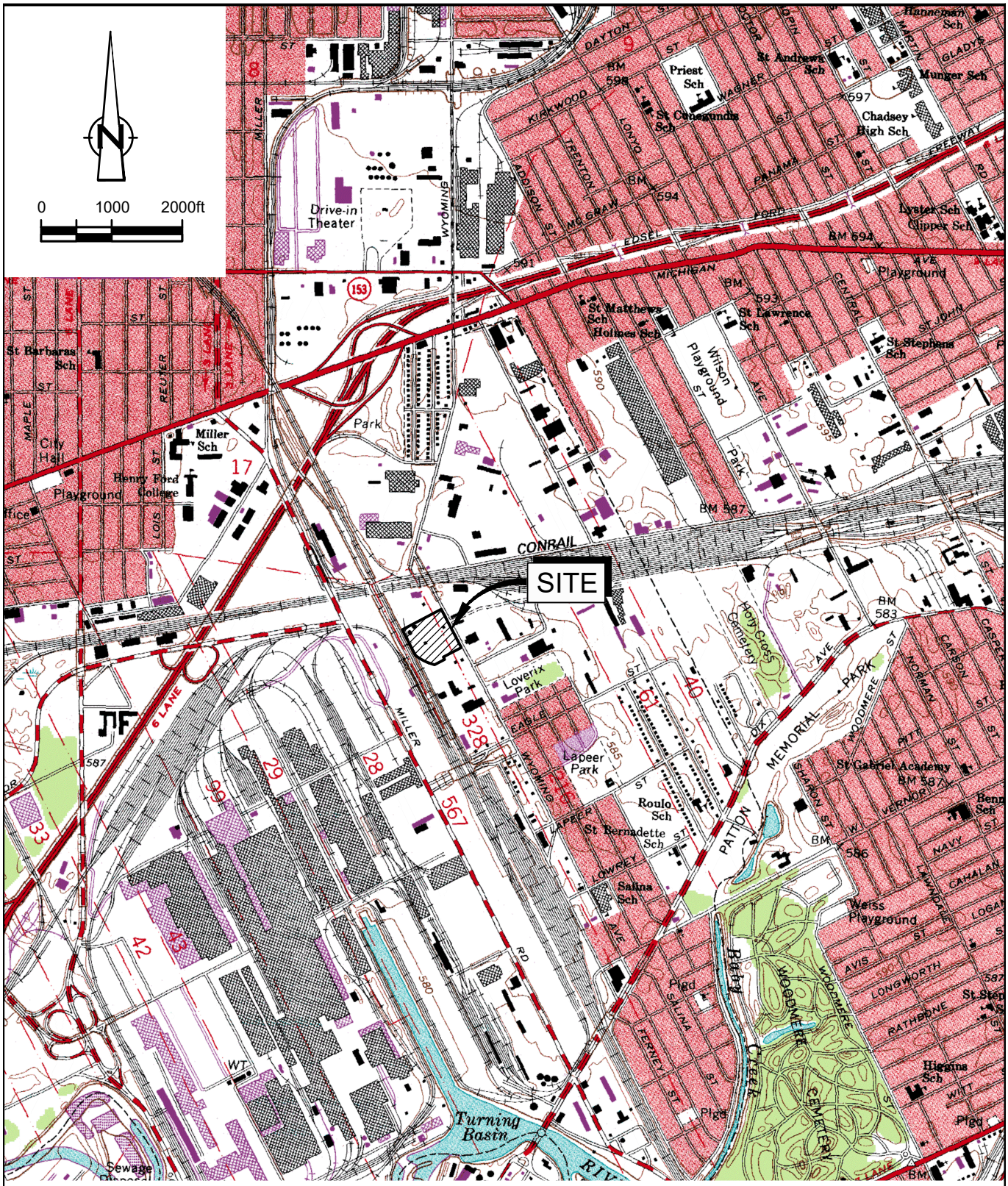
CRA, 2010, Site Investigation Report, Dearborn Refining Site, Dearborn, Michigan. April 13 2010.

CRA, 2011, Removal Action Work Plan Addendum 4 Results Memorandum, Dearborn Refining Site, Dearborn, Michigan. March 1, 2011.

GHD, 2019, Quarterly Progress Report #26, July/August/September 2019, Dearborn Refining Site, Dearborn, Michigan. October 15, 2019.

GHD, 2020, Operation, Maintenance, and Monitoring Plan, Dearborn Refining Site, Dearborn, Michigan. November 2020.

GHD, 2020, Quarterly Progress Report #29, April/May/June 2020, Dearborn Refining Site, Dearborn, Michigan. July 15, 2020.



SOURCE: USGS QUADRANGLE MAP;
DEARBORN, MICHIGAN
PHOTO REVISED 1983

figure 2.1

SITE LOCATION
STANDARD OF CARE PLAN
DEARBORN REFINING SITE
Dearborn, Michigan

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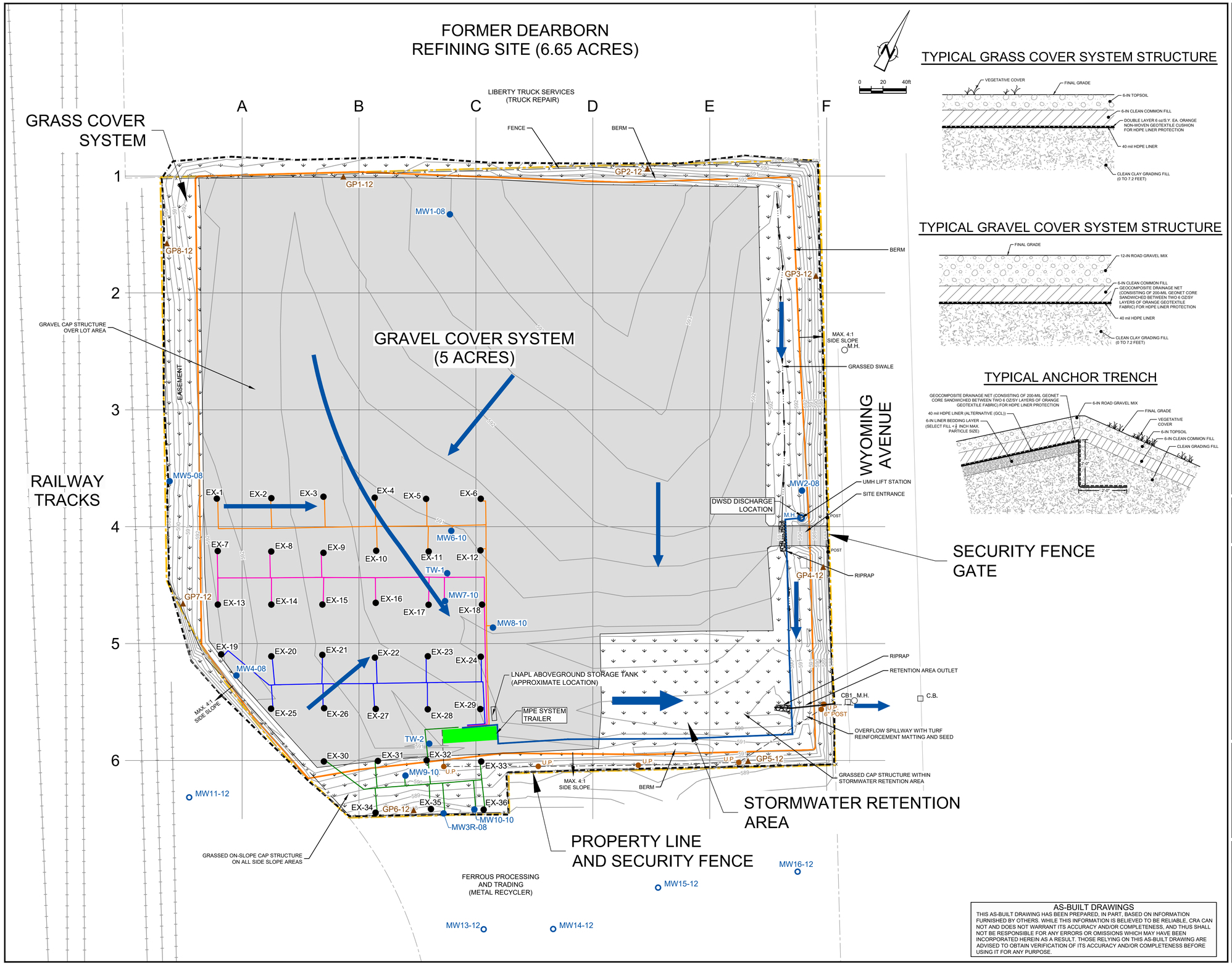
FORMER DEARBORN REFINING SITE (6.65 ACRES)



TYPICAL GRASS COVER SYSTEM STRUCTURE

TYPICAL GRAVEL COVER SYSTEM STRUCTURE

TYPICAL ANCHOR TRENCH

LEGEND

- PROPERTY BOUNDARY
- LEGAL BOUNDARY
- RAILWAY LINE
- C.B. CATCH BASIN
- UMH LIFT STATION
- GRASSED AREA
- GRAVEL AREA
- CAP LIMIT
- SWALE
- x FENCELINE
- 590 EXISTING GROUND SURFACE CONTOURS (ft AMSL)
- 40 MIL HDPE LINER LIMIT (LINER ANCHOR TRENCH LOCATION)
- TREATED WATER DISCHARGE LINE (ON GROUND)
- OVERHEAD POWER LINE
- STORM CULVERT
- MW3R-08 GROUNDWATER MONITORING WELL LOCATION
- TW-1 TEST RECOVERY WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- MW11-12 LNAPL SENTRY WELL LOCATION
- GP1-12 GAS PROBE
- C.B. CATCH BASIN
- M.H. MANHOLE
- U.P. UTILITY POLE
- MPE - MULTI-PHASE EXTRACTION
- LINE 1
- LINE 2
- LINE 3
- LINE 4
- SURFACE WATER DRAINAGE DIRECTION

NOTE:
FLEXIBLE TUBING CONNECTING EXTRACTION NETWORK PIPING TO EXTRACTION WELLS IS NOT PRESENTED ON FIGURE.

GENERAL NOTE

THE POSITION OF THE POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED OR CONFIRMED. BEFORE STARTING WORK, THE CONTRACTOR SHALL CONFIRM THE POSITION AND EXACT LOCATION OF ALL SUCH UTILITIES AND SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO THEM MADE DURING THE COURSE OF THE CONTRACT WORK.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

DEARBORN REFINING SITE
DEARBORN, MICHIGAN

STANDARD OF CARE PLAN

SITE PLAN
AS-BUILT

GHD

Source Reference:
SITE LAYOUT MAP WESTON (11/21/2006), CERTIFIED SURVEY, CONESTOGA-ROVERS & ASSOCIATES, Inc., 04/16/2008. AND SURVEY MAY 02, 2011, EQ SURVEY JULY 30, 2012 AND OCTOBER 18, 2012

Project Manager:	Reviewed By:	Date:	
G.T.		NOVEMBER 2012	
Scale:	Project Nº:	Report Nº:	Drawing Nº:
AS SHOWN	48041-00	019	figure 2.2

AS-BUILT DRAWINGS

THIS AS-BUILT DRAWING HAS BEEN PREPARED, IN PART, BASED ON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, CRA CAN NOT AND DOES NOT WARRANT ITS ACCURACY AND/OR COMPLETENESS, AND THUS SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED HEREIN AS A RESULT. THOSE RELYING ON THIS AS-BUILT DRAWING ARE ADVISED TO OBTAIN VERIFICATION OF ITS ACCURACY AND/OR COMPLETENESS BEFORE USING IT FOR ANY PURPOSE.

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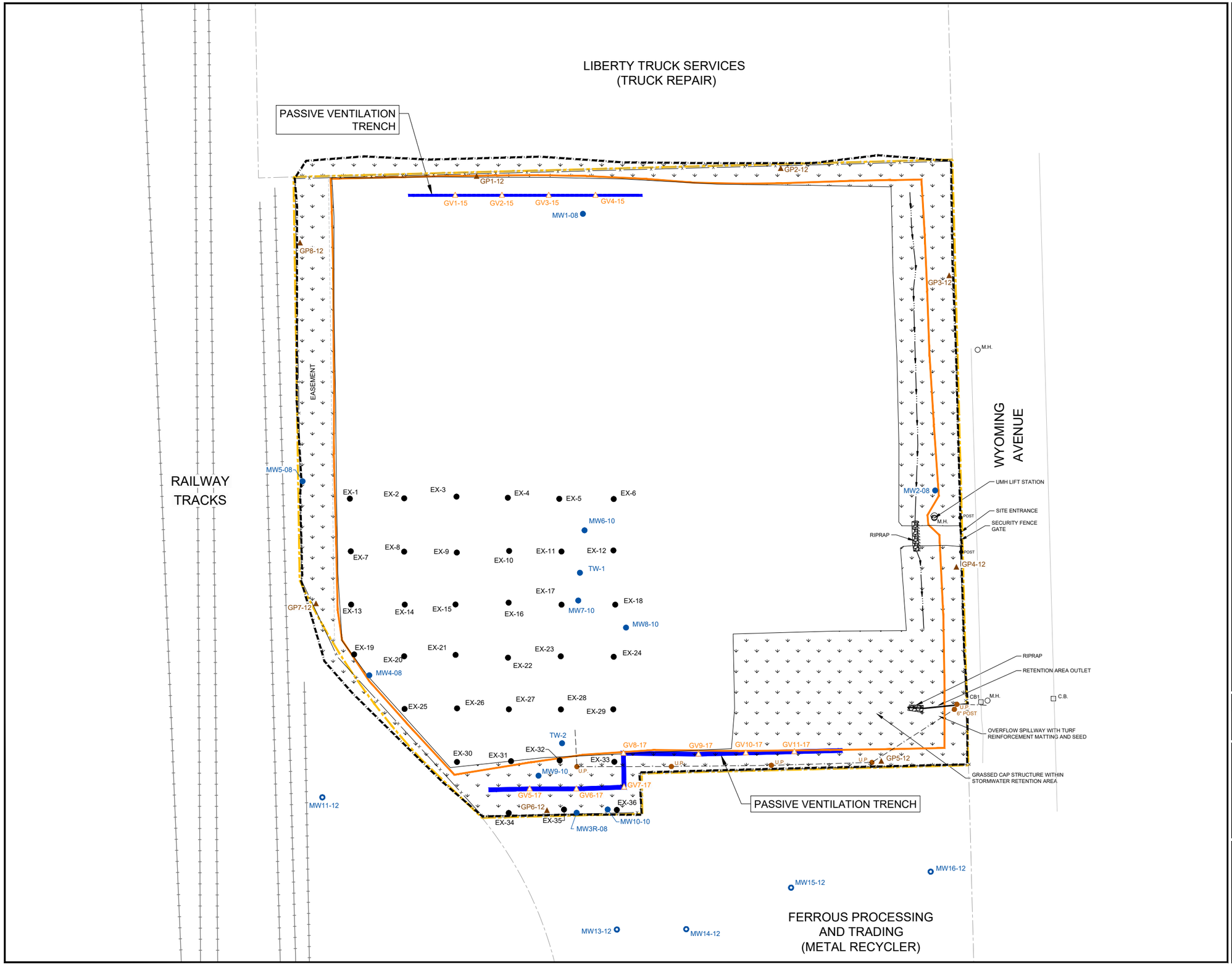

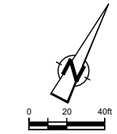

LEGEND

- PROPERTY BOUNDARY
- LEGAL BOUNDARY
- RAILWAY LINE
- C.B. CATCH BASIN
- UMH LIFT STATION
- GRASSED AREA
- CAP LIMIT
- SWALE
- FENCELINE
- 40 MIL HDPE LINER LIMIT (LINER ANCHOR TRENCH LOCATION)
- OVERHEAD POWER LINE
- STORM CULVERT
- MW2-08 MONITORING WELL LOCATION
- TW-1 MONITORING WELL - FORMER TEST RECOVERY WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- MW11-12 LNAPL SENTRY WELL LOCATION
- GP1-12 GAS PROBE
- GV1-15 GAS VENT
- C.B. CATCH BASIN
- M.H. MANHOLE
- U.P. UTILITY POLE

SOURCES
- SITE LAYOUT MAP WESTON (11/21/2006)
- CERTIFIED SURVEY, CONESTOGA-ROVERS & ASSOCIATES, Inc., 04/16/2008 AND SURVEY MAY 02, 2011
- EQ SURVEY JULY 30, 2012 AND OCTOBER 18, 2012.
- CONESTOGA ROVER & ASSOCIATES (CRA) SURVEY DECEMBER 17, 2014. DATUM: SPCS MI S NAD83, INTFT. MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) - CONTINUOUSLY OPERATING REFERENCE STATION (CORS) NETWORK.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

DEARBORN REFINING SITE
DEARBORN, MICHIGAN

STANDARD OF CARE PLAN

CURRENT SITE PLAN

GHD

Source Reference:			
Project Manager: G.T.	Reviewed By: L.C.	Date: August 2020	
Scale: AS SHOWN	Project №: 48041-00	Report №: 019	Drawing №: figure 2.3

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Composite A1-A2-A3	6/18/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	17 {F}

Composite B1-B2-B3	6/20/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1090 {F}

Stained Area Composite B	5/14/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	19 {F}

Composite C7-C8-C9	2/29/2008 (0-1.6) ft BGS mg/kg
Metals	
Lead - coarse fraction	5430 {F}
Lead - fine fraction	8170 {F}
PCBs	
Total PCBs	16.2 {F}

Composite C1-C2-C3	6/20/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	17 {F}

Composite C4-C5-C6	6/18/2008 (0-0.5) ft BGS mg/kg
Metals	
Manganese	1840 {E}
PCBs	
Total PCBs	47 {F}/55 {F}

SB-G6	7/8/2008 (1-2) ft BGS mg/kg
PCBs	
Total PCBs	21 {F}

Composite D1-D2-D3	6/20/2008 (0-0.5) ft BGS mg/kg
Metals	
Chromium	265 {E}
Manganese	5220 J {E}
PCBs	
Total PCBs	150 {F}

Composite B7-B8-B9	6/20/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	32 {F}/19 {F}

Composite G1-G2-G3	2/28/2008 (0-1.5) ft BGS mg/kg
Metals	
Manganese	1630 {E}

Stained Area Composite D	5/15/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	4900 {F}
Lead - fine fraction	3180 {F}

Stained Area Composite F	5/15/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1350 {F}

Composite D6-D5-D4	3/3/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	65 {F}

Stained Area Composite A	5/14/2008 (0-0.5) ft BGS mg/kg
Metals	
Manganese	2090 J {E}
PCBs	
Total PCBs	33 {F}

Composite D7-D8-D9	6/18/2008 (0-0.5) ft BGS mg/kg
PCBs	
Total PCBs	19 {F}

Composite E1-E2-E3	6/12/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - fine fraction	999 {F}/1010 {F}

Composite H1-H2-H3	2/28/2008 (0-1.7) ft BGS mg/kg
Metals	
Manganese	2170 {E}
PCBs	
Total PCBs	31 {F}

Composite G6-G5-G4	2/28/2008 (0-1.3) ft BGS mg/kg
PCBs	
Total PCBs	17 {F}

Composite F4-F5-F6	6/12/2008 (0-0.5) ft BGS mg/kg
Metals	
Manganese	7510 {E}
PCBs	
Total PCBs	20 {F}

Composite H4-H5-H6	2/28/2008 (0-1.1) ft BGS mg/kg
Metals	
Manganese	2120 {E}
PCBs	
Total PCBs	18 {F}

SB-1	6/12/2008 (1-2) ft BGS mg/kg
PCBs	
Total PCBs	28 {F}
SVOCs	
Benzo(a)pyrene	9.5 J {F}

Composite E4-E5-E6	6/12/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1060 {F}
Lead - fine fraction	1060 {F}
Manganese	1540 {E}

Composite H7-H8-H9	2/28/2008 (0-0.5) ft BGS mg/kg
Metals	
Manganese	3990 {E}

SB-I1	7/18/2008 (1-2) ft BGS mg/kg
Metals	
Manganese	1910 {E}

Composite K1- K2- K3	7/10/2008 (0-1.5) ft BGS mg/kg
PCBs	
Total PCBs	51 {F}

Composite L1-L2-L3	2/28/2008 (0-0.5) ft BGS mg/kg
Metals	
Manganese	6210 {E}

Composite I1- I3- I5	7/9/2008 (0-2) ft BGS mg/kg
Metals	
Manganese	1600 J {E}

SB-K1	7/18/2008 (1.5-2.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	11000 {F}
Lead - fine fraction	10700 {F}

Stained Area Composite C	5/15/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1500 {F}
Lead - fine fraction	1130 {F}
Manganese	1620 J {E}

Composite L6-L5-L4	2/28/2008 (0-1.1) ft BGS mg/kg
Metals	
Lead - coarse fraction	3240 {F}
Lead - fine fraction	4620 {F}
Manganese	2680 {E}

Composite L7-L8-L9	2/28/2008 (0-1.1) ft BGS mg/kg
Metals	
Manganese	13300 {E}

Composite J1-J2-J3	3/4/2008 (0-1.7) ft BGS mg/kg
Metals	
Lead - coarse fraction	3740 {F}
Lead - fine fraction	946 {F}

Composite N7-N8-N9	6/18/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - fine fraction	1160 {F}
PCBs	
Total PCBs	27 {F}

SB-O4	7/18/2008 (1-2) ft BGS mg/kg
Metals	
Lead - coarse fraction	965 {F}
Lead - fine fraction	1090 {F}

Composite P1-P2-P3	2/28/2008 (0.25-1.6) ft BGS mg/kg
Metals	
Manganese	2090 {E}

Composite M1-M2-M3	6/12/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - fine fraction	1260 {F}

SB-M3	7/9/2008 (1-2) ft BGS mg/kg
Metals	
Lead - coarse fraction	1540 {F}
Lead - fine fraction	906 {F}

SB-4	6/12/2008 (1-2) ft BGS mg/kg
Metals	
Lead - coarse fraction	4670 {F}
Lead - fine fraction	5310 {F}
PCBs	
Total PCBs	21.7 {F}

Composite J7-J8-J9	3/4/2008 (0-0.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	4630 {F}
Lead - fine fraction	4860 {F}
Manganese	1570 {E}

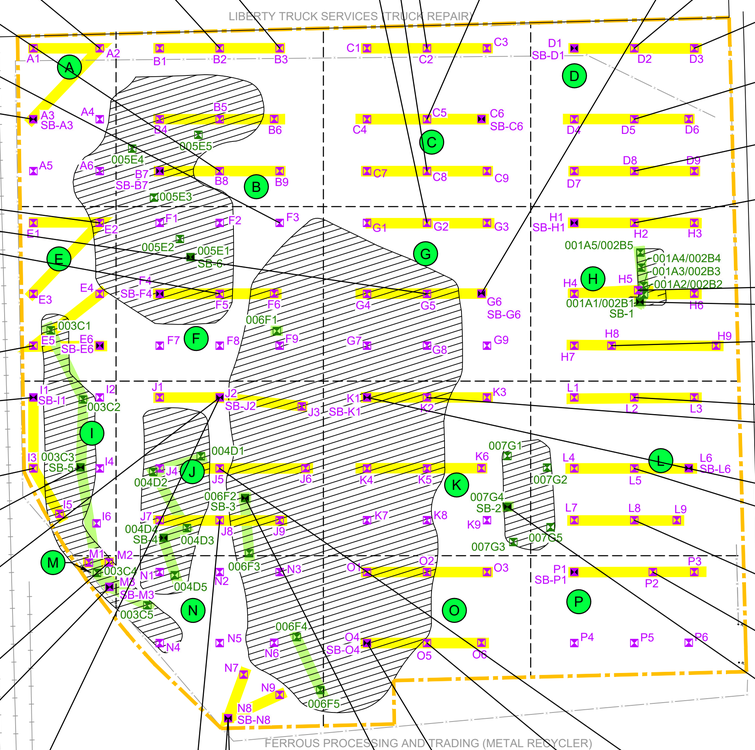
SB-N8	7/9/2008 (1-2) ft BGS mg/kg
Metals	
Lead - coarse fraction	1120 {F}
Manganese	1920 {E}/1640 {E}

SB-3	6/12/2008 (1-2) ft BGS mg/kg
Metals	
Arsenic	49.5 J {F}
Lead - coarse fraction	1430 {F}
Lead - fine fraction	2750 {F}
Manganese	3120 {E}

Composite O4-O5-O6	2/29/2008 (0-0.67) ft BGS mg/kg
Metals	
Lead - fine fraction	9920 J {F}
Manganese	2070 {E}/2520 {E}

Composite J4-J5-J6	3/4/2008 (0-0.75) ft BGS mg/kg
Metals	
Manganese	1690 {E}

SB-2	6/12/2008 (1-2) ft BGS mg/kg
Metals	
Lead - coarse fraction	984 {F}
Lead - fine fraction	1170 {F}
Manganese	1670 {E}



LEGEND

- PROPERTY BOUNDARY
- SOIL SAMPLING GRID
- RAILWAY LINE
- FENCELINE
- N8 — INVESTIGATIVE AREA SURFACE SOIL SAMPLE LOCATION
- 004D4 — STAINED SURFACE SOIL SAMPLE LOCATION
- M3 SB-M3 — INVESTIGATIVE AREA SURFACE SOIL SAMPLE AND BOREHOLE LOCATION
- 003C3 SB-5 — STAINED SURFACE SOIL SAMPLE AND BOREHOLE LOCATION
- A — INVESTIGATIVE AREA
- RESULT EXCEEDS SPECIFIED CRITERIA SEPTEMBER 2012
- mg/kg — MILLIGRAMS PER KILOGRAM
- J — ESTIMATED CONCENTRATION
- E — MATRIX INTERFERENCE
- ft BGS — FEET BELOW GROUND SURFACE
- NA — NOT AVAILABLE
- ID — INSUFFICIENT DATA TO DEVELOP CRITERION
- NLL — HAZARDOUS SUBSTANCE IS NOT LIKELY TO LEACH UNDER MOST SOIL CONDITIONS
- NLV — HAZARDOUS SUBSTANCE IS NOT LIKELY TO VOLATILIZE UNDER MOST CONDITIONS
- STAINED AREA COMPOSITE A — STAINED AREA SOIL COMPOSITE SAMPLE
- COMPOSITE C4, C5, C6 — INVESTIGATIVE AREA SOIL COMPOSITE SAMPLE
- SB-C6 — INVESTIGATIVE AREA SOIL BOREHOLE SAMPLE
- SB-1 — STAINED SOIL BOREHOLE SAMPLE

SOURCE: SITE LAYOUT MAP WESTON (11/21/2006), CERTIFIED SURVEY, CONESTOGA-ROVERS & ASSOCIATES, Inc., 04/16/2008.

NOTES: - ALL RESULTS ARE IN mg/kg.
- TOTAL PCBs REPRESENT THE TOTAL OF DETECTED PCBs.

Composite C4-C5-C6	6/18/2008 (SAMPLE DATE)
	0-0.5 ft BGS (DEPTH)
	mg/kg (SAMPLE UNITS)
Metals	
Manganese	1840 {E} (CONCENTRATION)
PCBs	
Total PCBs	47 {F} / 55 {F} (PARENT/DUPLICATE SAMPLE; CRITERIA)

SAMPLE ID

PARAMETER

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria (1)

Exceedance Parameter List	Statewide Default Background	Groundwater Contact Protection	Non-Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	Non-Residential Particulate Soil Inhalation	Non-Residential Direct Contact	Soil Saturation Concentration Screening
	A	B	C	D	E	F	G
SVOCs (mg/kg)							
Benzo(a)pyrene	NA	NLL	NLV	NLV	1900	8	NA
Metals (mg/kg)							NA
Arsenic	5.8	2000	NLV	NLV	910	37	NA
Chromium	18	140000	NLV	NLV	240	9200	NA
Lead - coarse fraction	21	ID	NLV	NLV	44000	900	NA
Lead - fine fraction	NA	ID	NLV	NLV	44000	900	NA
Manganese	440	180000	NLV	NLV	1500	90000	NA
PCBs (mg/kg)							
Total PCBs	NA	NLL	16000	810	6500	16	NA

NOTE:
(1)CLEANUP CRITERIA IDENTIFIED BY MDEQ RRD OP MEMO NO. 1, UPDATED 9/28/2012, PURSUANT TO 1994 PA 451 AS AMENDED.
MDEQ - MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY.

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

DEARBORN REFINING SITE
DEARBORN, MICHIGAN

STANDARD OF CARE PLAN

SURFACE SOIL (0 to 2.5 FEET BGS) SAMPLE EXCEEDANCES

GHD

Source Reference:

Project Manager: G.T.	Reviewed By: L.C.	Date: FEBRUARY 2013	
Scale: AS SHOWN	Project Nº: 48041-00	Report Nº: 019	Drawing Nº: figure 3.1

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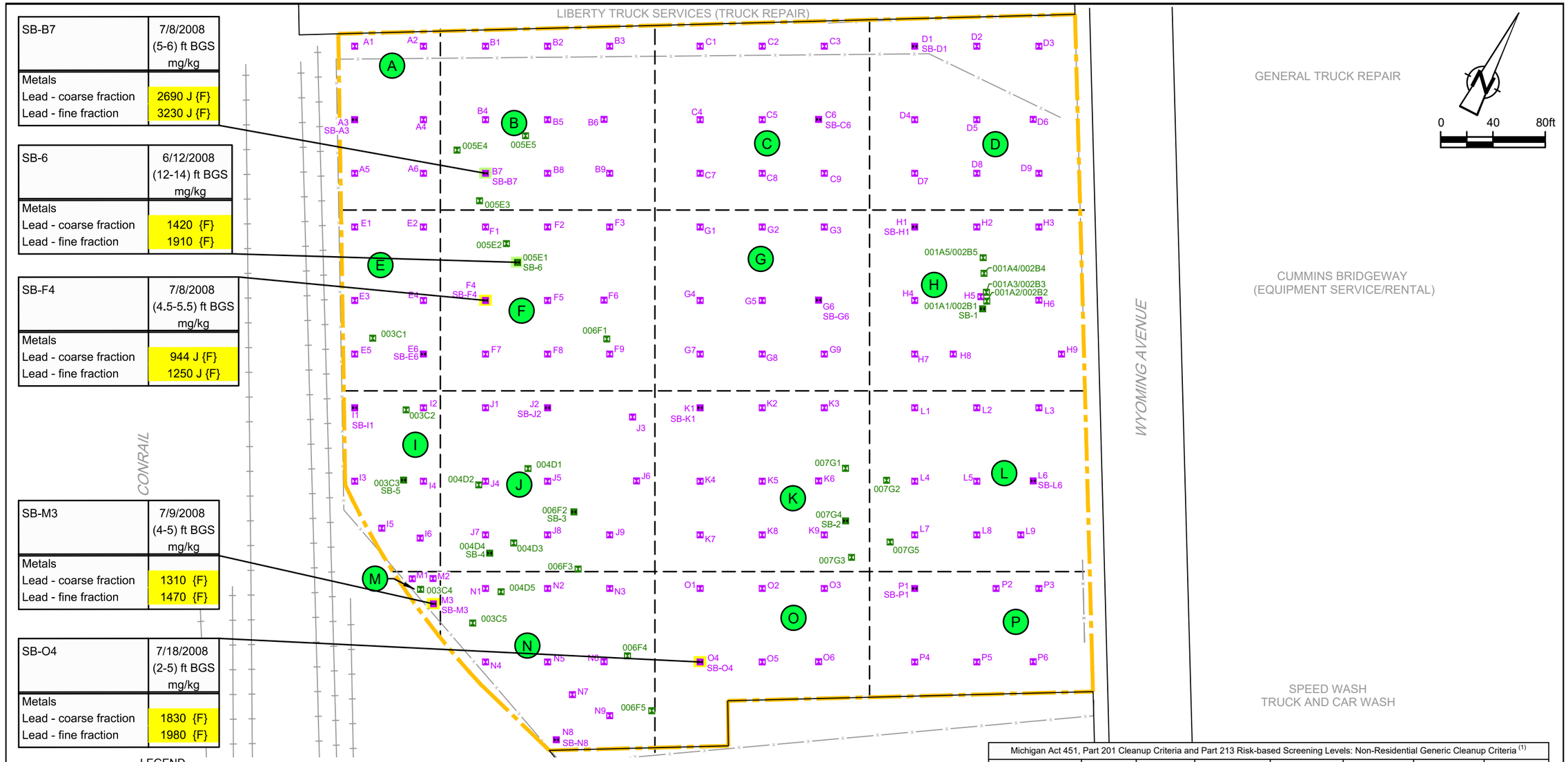
SB-B7	7/8/2008 (5-6) ft BGS mg/kg
Metals	
Lead - coarse fraction	2690 J {F}
Lead - fine fraction	3230 J {F}

SB-6	6/12/2008 (12-14) ft BGS mg/kg
Metals	
Lead - coarse fraction	1420 {F}
Lead - fine fraction	1910 {F}

SB-F4	7/8/2008 (4.5-5.5) ft BGS mg/kg
Metals	
Lead - coarse fraction	944 J {F}
Lead - fine fraction	1250 J {F}

SB-M3	7/9/2008 (4-5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1310 {F}
Lead - fine fraction	1470 {F}

SB-O4	7/18/2008 (2-5) ft BGS mg/kg
Metals	
Lead - coarse fraction	1830 {F}
Lead - fine fraction	1980 {F}



LEGEND

- PROPERTY BOUNDARY
- SOIL SAMPLING GRID
- RAILWAY LINE
- FENCELINE
- A — INVESTIGATIVE AREA
- N8 — INVESTIGATIVE AREA SURFACE SOIL SAMPLE LOCATION
- 004D4 — STAINED SURFACE SOIL SAMPLE LOCATION
- M3 SB-M3 — INVESTIGATIVE AREA SURFACE SOIL SAMPLE AND BOREHOLE LOCATION
- 003C3 SB-5 — STAINED SURFACE SOIL SAMPLE AND BOREHOLE LOCATION
- SB-C6 — INVESTIGATIVE AREA SOIL BOREHOLE SAMPLE
- SB-1 — STAINED SOIL BOREHOLE SAMPLE
- RESULT EXCEEDS SPECIFIED CRITERIA SEPTEMBER 2012
- mg/kg — MILLIGRAMS PER KILOGRAM
- J — ESTIMATED CONCENTRATION
- ft BGS — FEET BELOW GROUND SURFACE
- NA — NOT AVAILABLE
- ID — INSUFFICIENT DATA TO DEVELOP CRITERION
- NLV — HAZARDOUS SUBSTANCE IS NOT LIKELY TO VOLATILIZE UNDER MOST CONDITIONS
- SB-6 — STAINED AREA SOIL SAMPLE
- SB-O4 — INVESTIGATIVE AREA SOIL SAMPLE

SOURCE:
SITE LAYOUT MAP WESTON (11/21/2006), CERTIFIED SURVEY, CONESTOGA-ROVERS & ASSOCIATES, Inc., 04/16/2008.

SB-6	6/12/2008 12-14 ft BGS mg/kg
Metals	
Lead - Coarse Fraction	1420 {F}
Lead - Fine Fraction	1910 {F}

SAMPLE ID
SAMPLE DATE
DEPTH
SAMPLE UNITS
SAMPLE CONCENTRATION
CRITERIA
PARAMETER

NOTE:
ALL RESULTS ARE IN mg/kg.

Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria (1)							
Exceedance Parameter List	Statewide Default Background	Groundwater Contact Protection	Non-Residential Soil Volatilization to Indoor Air Inhalation	Non-Residential Infinite Source Volatile Soil Inhalation	Non-Residential Particulate Soil Inhalation	Non-Residential Direct Contact	Soil Saturation Concentration Screening
	A	B	C	D	E	F	G
Metals (mg/kg)							NA
Lead - coarse fraction	21	ID	NLV	NLV	44000	900	NA
Lead - fine fraction	NA	ID	NLV	NLV	44000	900	NA

NOTE:
(1)CLEANUP CRITERIA IDENTIFIED BY MDEQ RRD OP MEMO NO. 1, UPDATED 9/28/2012, PURSUANT TO 1994 PA 451 AS AMENDED.
MDEQ - MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY.

figure 3.2

SUBSURFACE (> 2.5 FEET BGS) SOIL SAMPLE EXCEEDANCES
STANDARD OF CARE PLAN
DEARBORN REFINING SITE
Dearborn, Michigan

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TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)						A3	lab composite A1,A2,A3	A6	lab composite A4,A5,A6	B1
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	S-48041-061808-MC-003 A	S-48041-061808-MC-00	S-48041-061208-AF-001 A	S-48041-061208-AF-001	S-48041-062008-MC-004 B
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	6/18/2008	6/18/2008	6/12/2008	6/12/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p	q					
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	460	ND(0.067)UJ	--	ND(0.042)UJ	--	ND(0.055)
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	870	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	920	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	890	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	570	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	1100	ND(0.34)UJ	--	0.3	--	ND(0.27)
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	110	0.12 J	--	ND(0.085)	--	0.26
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	1.2	ND(0.34)UJ	--	ND(0.21)UJ	--	ND(0.27)
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	890	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	210	ND(0.13)UJ	--	ND(0.085)	--	ND(0.11)
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	1200	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	550	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	94	0.054 J	--	ND(0.085)	--	0.16
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	170	ND(0.13)UJ	--	0.029 J	--	ND(0.11)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	NA	ND(0.13)UJ	--	ND(0.085)	--	0.019 J
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	27000	ND(1)UJ	--	0.058 J	--	ND(0.82)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	2500	ND(3.4)UJ	--	ND(2.1)	--	ND(2.7)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	2700	ND(3.4)UJ	--	ND(2.1)	--	ND(2.7)
Acetone	mg/kg	NA	540000	160000	170000000	73000	110000	ND(1)UJ	--	ND(0.64)	--	ND(0.82)U
Benzene	mg/kg	NA	8.4	45	470000	840	400	0.028 J	--	ND(0.042)	--	0.011 J
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	1500	ND(0.13)UJ	--	ND(0.085)	--	ND(0.11)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	870	ND(0.13)UJ	--	ND(0.085)	--	ND(0.11)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	2200	ND(0.27)UJ	--	ND(0.17)	--	ND(0.22)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	280	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	390	ND(0.067)UJ	--	ND(0.042)UJ	--	ND(0.055)
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	260	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	950	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	1500	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	1100	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	640	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	ND(0.067)UJ	--	ND(0.042)UJ	--	ND(0.055)
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	0.1 J	--	ND(1)	--	ND(1.3)
Dibromochloromethane	mg/kg	NA	21	80	160000	500	610	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	1000	ND(0.13)UJ	--	ND(0.085)	--	ND(0.11)
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	140	0.044 J	--	0.0078 J	--	0.017 J
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	390	ND(0.34)UJ	--	ND(0.21)	--	0.021 J
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	NA	0.29 J	--	ND(1)	--	0.38 J
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	0.093 J	--	ND(1)	--	0.036 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	5900	ND(0.34)UJ	--	ND(0.21)UJ	--	ND(0.27)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	2300	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
Styrene	mg/kg	NA	1300	3300	6900000	1900	520	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	88	0.019 J	--	ND(0.042)	--	ND(0.055)
Toluene	mg/kg	NA	610	3300	12000000	160000	250	0.34 J	--	0.024 J	--	0.078 J
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	1400	ND(0.067)UJ	--	ND(0.042)	--	ND(0.055)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	ND(0.067)UJ	--	ND(0.042)UJ	--	ND(0.055)
Trichloroethene	mg/kg	NA	1.9	14	59000	660	500	0.025 J	--	0.044	--	0.017 J
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	560	ND(0.13)UJ	--	ND(0.085)	--	ND(0.11)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	550	ND(0.34)UJ	--	ND(0.21)	--	ND(0.27)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	490	ND(0.054)UJ	--	ND(0.034)	--	ND(0.044)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	150	0.3 J	--	0.039 J	--	0.11 J

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)						A3	lab composite A1,A2,A3	A6	lab composite A4,A5,A6	B1
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	3-48041-061808-MC-003 A	3-48041-061808-MC-00	3-48041-061208-AF-001 A	S-48041-061208-AF-001	3-48041-062008-MC-004 B
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	6/18/2008	6/18/2008	6/12/2008	6/12/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p	q					
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	NA	--	ND(3.2)	--	ND(22)	--
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	NA	--	ND(3.2)	--	ND(22)	--
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	1800	--	ND(3.2)	--	ND(22)	--
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	NA	--	ND(3.2)	--	ND(22)	--
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(1.8)	--	ND(13)	--
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	NA	--	ND(3.2)	--	ND(22)	--
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	NA	--	ND(3.2)	--	ND(22)	--
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	19000	--	ND(3.2)	--	ND(22)	--
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	NA	--	0.16 J	--	ND(22)	--
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	--	ND(3.2)	--	ND(22)	--
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2.4)	--	ND(17)	--
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	NA	--	ND(3.2)	--	ND(22)	--
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	NA	--	ND(19)	--	ND(140)	--
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2.4)	--	ND(17)	--
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	NA	--	ND(1.8)	--	ND(13)	--
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	NA	--	ND(3.2)	--	ND(22)	--
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(1.8)	--	ND(13)	--
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	--	ND(3.2)	--	1.9 J	--
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2.4)	--	ND(17)	--
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(4)	--	ND(28)	--
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	NA	--	0.11 J	--	ND(22)	--
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	NA	--	0.36 J	--	ND(22)	--
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	1100	--	ND(3.2)	--	ND(22)	--
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	NA	--	0.73 J	--	ND(22)	--
Atrazine	mg/kg	NA	NLV	NLV	ID	330	NA	--	ND(0.49)	--	ND(3.4)	--
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	NA	--	2.7 J	--	1.1 J	--
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	NA	--	2.5 J	--	1.3 J	--
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	NA	--	ND(3.2)	--	1.7 J	--
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	NA	--	1.8 J	--	0.97 J	--
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	NA	--	ND(3.2)	--	0.76 J	--
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.2)	--	ND(22)	--
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	2200	--	ND(0.97)	--	ND(6.8)	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	10000	--	ND(3.2)	--	ND(22)	--
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	310	--	1.1 J	--	110	--
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	NA	--	ND(3.2)	--	ND(22)	--
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	NA	--	0.31 J	--	ND(22)	--
Chrysene	mg/kg	NA	ID	ID	ID	8000	NA	--	2.5 J	--	1.2 J	--
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	NA	--	ND(3.2)	--	ND(22)	--
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	NA	--	ND(3.2)	--	ND(22)	--
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	740	--	ND(3.2)	--	ND(22)	--
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	790	--	ND(3.2)	--	ND(22)	--
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	760	--	ND(3.2)	--	ND(22)	--
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	140000	--	ND(3.2)	--	ND(22)	--
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	NA	--	4.1	--	1.4 J	--
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	NA	--	ND(3.2)	--	ND(22)	--
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	NA	--	ND(3.2)	--	ND(22)	--
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	350	--	ND(0.49)	--	ND(3.4)	--
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	720	--	ND(3.2)	--	ND(22)	--
Hexachloroethane	mg/kg	NA	79	660	100000	730	NA	--	ND(3.2)	--	ND(22)	--
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	NA	--	1.6 J	--	0.85 J	--
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	2400	--	ND(3.2)	--	ND(22)	--
Naphthalene	mg/kg	NA	470	350	88000	52000	NA	--	0.1 J	--	0.7 J	--
Nitrobenzene	mg/kg	NA	170	64	21000	340	490	--	ND(3.2)	--	ND(22)	--
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	1500	--	ND(3.2)	--	ND(22)	--
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	NA	--	ND(3.2)	--	ND(22)	--
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	NA	--	ND(1.8)	--	ND(13)	--
Phenanthrene	mg/kg	NA	5100	190	2900	5200	NA	--	2.3 J	--	0.99 J	--
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	12000	--	ND(3.2)	--	ND(22)	--
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	NA	--	3.8	--	1.3 J	--
Pyridine	mg/kg	NA	2	9.8	100000	730	37	--	ND(3.2)	--	ND(22)	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)						A3	lab composite A1,A2,A3	A6	lab composite A4,A5,A6	B1
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	3-48041-061808-MC-003 A	S-48041-061808-MC-00	3-48041-061208-AF-001 A	S-48041-061208-AF-001	3-48041-062008-MC-004 B
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	6/18/2008	6/18/2008	6/12/2008	6/12/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p	q					
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	NA	--	5600	--	6050	--
Antimony	mg/kg	NA	NLV	NLV	5900	670	NA	--	1.0 J	--	1.2 J	--
Arsenic	mg/kg	5.8	NLV	NLV	910	37	NA	--	13.3	--	5.6 J	--
Barium	mg/kg	75	NLV	NLV	150000	130000	NA	--	225	--	269 J	--
Beryllium	mg/kg	NA	NLV	NLV	590	1600	NA	--	0.32	--	0.33	--
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	NA	--	11.8	--	2.2	--
Calcium	mg/kg	NA	NA	NA	NA	NA	NA	--	35200	--	23900	--
Chromium	mg/kg	18	NLV	NLV	240	9200	NA	--	57.1 J	--	45.5 J	--
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	NA	--	6.6	--	2.6 J	--
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	NA	--	5.9	--	3.8	--
Copper	mg/kg	32	NLV	NLV	59000	73000	NA	--	93.4 J	--	68.2	--
Iron	mg/kg	12000	NLV	NLV	ID	580000	NA	--	30100	--	24300	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	NA	--	328	--	556	--
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	NA	--	445	--	708	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	NA	--	357	--	636	--
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	NA	--	8150 J	--	5220 J	--
Manganese	mg/kg	440	NLV	NLV	1500	90000	NA	--	819	--	557	--
Mercury	mg/kg	0.13	89	62	8800	580	NA	--	0.20 J	--	0.18	--
Nickel	mg/kg	20	NLV	NLV	16000	150000	NA	--	80.2	--	26.5	--
Potassium	mg/kg	NA	NA	NA	NA	NA	NA	--	913	--	644	--
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	NA	--	3.1	--	1.4	--
Silver	mg/kg	1	NLV	NLV	2900	9000	NA	--	0.26	--	0.34	--
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	NA	--	210	--	247	--
Thallium	mg/kg	NA	NLV	NLV	5900	130	NA	--	0.22	--	0.18	--
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	NA	--	29.9 J	--	17.8 J	--
Zinc	mg/kg	47	NLV	NLV	ID	630000	NA	--	378	--	347 J	--
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.9)	--
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.9)	--
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.9)	--
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.9)	--
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.9)	--
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(2)	--	13	--
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	NA	--	17	--	ND(1.9)	--
Total PCBs	mg/kg	NA	16000	810	6500	16	NA	--	**17[p]**	--	13	--

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite B1,B2,B3	B5	lab composite B4,B5,B6	B7	B7	lab composite B7,B8,B9
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-004	-48041-062008-MC-003	BS-48041-062008-MC-003	S-48041-062008-MC-001 B	S-48041-062008-MC-002 B7	S-48041-062008-MC-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p					Duplicate	
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	--	ND(0.17)	--	ND(0.05)	0.013 J	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	--	ND(0.87)	--	0.032 J	0.043 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	--	16	--	0.13	0.092 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	--	0.51	--	ND(0.1)	ND(0.099)	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	--	4	--	0.059 J	0.034 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	--	0.037 J	--	ND(0.1)	ND(0.099)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	--	0.057 J	--	0.012 J	0.012 J	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	--	ND(2.6)	--	0.082 J	0.099 J	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	--	ND(8.7)	--	ND(2.5)	ND(2.5)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	--	ND(8.7)	--	ND(2.5)	0.052 J	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	--	ND(2.6)U	--	ND(0.75)U	ND(0.74)U	--
Benzene	mg/kg	NA	8.4	45	470000	840	--	ND(0.17)	--	ND(0.05)	0.011 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	--	ND(0.35)UJ	--	ND(0.1)UJ	ND(0.099)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	--	ND(0.35)	--	ND(0.1)	ND(0.099)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	--	ND(0.7)	--	ND(0.2)	ND(0.2)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	--	ND(0.17)	--	0.023 J	0.043 J	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	ND(4.2)	--	0.022 J	0.024 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	--	ND(0.35)	--	ND(0.1)	ND(0.099)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	--	0.39	--	0.025 J	0.039 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	--	0.53 J	--	0.012 J	0.0096 J	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	--	ND(4.2)	--	0.22 J	0.2 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	0.41 J	--	0.033 J	0.056 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	--	ND(0.17)	--	0.018 J	0.017 J	--
Toluene	mg/kg	NA	610	3300	12000000	160000	--	0.051 J	--	0.053 J	0.12	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.17)	--	ND(0.05)	ND(0.049)	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	--	ND(0.17)	--	0.058	0.095	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	--	ND(0.35)	--	ND(0.1)	ND(0.099)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	--	ND(0.87)	--	ND(0.25)	ND(0.25)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	--	ND(0.14)	--	ND(0.04)	ND(0.039)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	--	5.5	--	0.12 J	0.2	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					lab composite B1,B2,B3	B5	lab composite B4,B5,B6	B7	B7	lab composite B7,B8,B9
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-004	-48041-062008-MC-003	BS-48041-062008-MC-003	S-48041-062008-MC-001 B	S-48041-062008-MC-002 B7	S-48041-062008-MC-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p					Duplicate	
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	--	ND(8.5)	--	--	ND(4.5)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.2 J	--	7.2 J	--	--	ND(7.9)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(1.6)	--	ND(11)	--	--	ND(6)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(13)	--	ND(90)	--	--	ND(48)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(1.6)	--	ND(11)	--	--	ND(6)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(1.2)	--	ND(8.5)	--	--	ND(4.5)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	--	ND(8.5)	--	--	ND(4.5)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(1.6)	--	ND(11)	--	--	ND(6)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(2.6)	--	ND(19)	--	--	ND(9.8)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	0.67 J	--	0.47 J	--	--	ND(7.9)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	0.56 J	--	ND(15)	--	--	ND(7.9)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	1.8 J	--	0.74 J	--	--	ND(7.9)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.32)	--	ND(2.3)	--	--	ND(1.2)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	5.2	--	0.58 J	--	--	0.59 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	5.5	--	0.4 J	--	--	0.72 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	7	--	0.55 J	--	--	1.2 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	4	--	0.44 J	--	--	0.81 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	2.3	--	ND(15)	--	--	0.29 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	2.3 J	--	--	ND(7.9)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(2.1)	--	ND(15)	--	--	ND(7.9)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(0.64)	--	ND(4.5)	--	--	ND(2.4)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	0.19 J	--	ND(15)	--	--	ND(7.9)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(2.1)	--	4.4 J	--	--	ND(7.9)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	0.73 J	--	ND(15)	--	--	ND(7.9)
Chrysene	mg/kg	NA	ID	ID	ID	8000	5.2	--	0.66 J	--	--	0.65 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	0.86 J	--	ND(15)	--	--	ND(7.9)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	0.31 J	--	ND(15)	--	--	ND(7.9)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	11	--	1 J	--	--	0.83 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	0.64 J	--	ND(15)	--	--	ND(7.9)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.32)	--	ND(2.3)	--	--	ND(1.2)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	3.3	--	ND(15)	--	--	0.54 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Naphthalene	mg/kg	NA	470	350	88000	52000	0.44 J	--	ND(15)	--	--	ND(7.9)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(2.1)	--	ND(15)	--	--	ND(7.9)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(2.1)	--	ND(15)	--	--	ND(7.9)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(2.1)	--	ND(15)	--	--	ND(7.9)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(1.2)	--	ND(8.5)	--	--	ND(4.5)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	7.1	--	3.2 J	--	--	ND(7.9)
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	0.77 J	--	ND(15)	--	--	ND(7.9)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	9.9	--	1.8 J	--	--	0.9 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(2.1)	--	ND(15)	--	--	ND(7.9)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite B1,B2,B3	B5	lab composite B4,B5,B6	B7	B7	lab composite B7,B8,B9
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-004	-48041-062008-MC-003	BS-48041-062008-MC-003	S-48041-062008-MC-001 B	S-48041-062008-MC-002 B7	S-48041-062008-MC-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p					Duplicate	
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	5600	--	2100	--	--	5990
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.66 J	--	0.21 J	--	--	0.59 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	7.9	--	2.0	--	--	5.7
Barium	mg/kg	75	NLV	NLV	150000	130000	201 J	--	598 J	--	--	153 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.33	--	ND(0.18)	--	--	0.16 J
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	2.0	--	0.73	--	--	1.8
Calcium	mg/kg	NA	NA	NA	NA	NA	50500 J	--	15000 J	--	--	50600 J
Chromium	mg/kg	18	NLV	NLV	240	9200	31.2	--	13.1	--	--	39.1
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	1.8	--	1.9	--	--	1.2
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	5.0	--	1.3	--	--	4.0
Copper	mg/kg	32	NLV	NLV	59000	73000	80.2 J	--	16.6 J	--	--	42.8 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	16700	--	5400	--	--	13100
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	**1090[p]**	--	82.6	--	--	465
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	676	--	129	--	--	465
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	1020	--	90.9	--	--	465
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	8400 J	--	5050 J	--	--	13500 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	632 J	--	118 J	--	--	919 J
Mercury	mg/kg	0.13	89	62	8800	580	0.24	--	0.11	--	--	0.19
Nickel	mg/kg	20	NLV	NLV	16000	150000	18.6	--	6.2	--	--	23.3
Potassium	mg/kg	NA	NA	NA	NA	NA	1090	--	216 J	--	--	672
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	0.71	--	0.16 J	--	--	0.60
Silver	mg/kg	1	NLV	NLV	2900	9000	0.21	--	0.048 J	--	--	0.16
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	141	--	ND(90.2)	--	--	154
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.37	--	0.032 J	--	--	0.13
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	17.9	--	6.8	--	--	16.5
Zinc	mg/kg	47	NLV	NLV	ID	630000	320	--	120	--	--	262
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	ND(0.37)	--	--	ND(2)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	ND(0.37)	--	--	ND(2)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	ND(0.37)	--	--	ND(2)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	ND(0.37)	--	--	ND(2)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	ND(0.37)	--	--	ND(2)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(0.4)	--	2.5	--	--	ND(2)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	3.2	--	ND(0.37)	--	--	19
Total PCBs	mg/kg	NA	16000	810	6500	16	3.2	--	2.5	--	--	**19[p]**

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					lab composite B7,B8,B9	C3	lab composite C1,C2,C3	C6	C6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-002	S-48041-062008-MC-009 C3	S-48041-062008-MC-009 C1 C2 C	S-48041-061808-MC-004 C6	S-48041-061808-MC-005 C6
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/18/2008	6/18/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p	Duplicate				Duplicate
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	--	ND(0.051)	--	0.011 J	ND(0.19)UJ
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	--	ND(0.26)	--	0.19 J	0.15 J
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	--	0.055 J	--	0.74 J	0.76 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	--	ND(0.1)	--	ND(0.1)UJ	ND(0.39)UJ
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	--	ND(0.1)	--	0.12 J	0.13 J
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	--	ND(0.1)	--	0.034 J	ND(0.39)UJ
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	--	ND(0.1)	--	0.018 J	ND(0.39)UJ
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	--	ND(0.77)	--	ND(0.75)UJ	ND(2.9)UJ
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	--	ND(2.6)	--	ND(2.5)UJ	ND(9.6)UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	--	0.034 J	--	0.091 J	0.12 J
Acetone	mg/kg	NA	540000	160000	170000000	73000	--	ND(0.77)	--	ND(0.75)UJ	ND(2.9)UJ
Benzene	mg/kg	NA	8.4	45	470000	840	--	0.0099 J	--	0.048 J	0.059 J
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	--	ND(0.1)UJ	--	ND(0.1)UJ	ND(0.39)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	--	ND(0.1)	--	ND(0.1)UJ	ND(0.39)UJ
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	--	ND(0.21)	--	ND(0.2)UJ	ND(0.77)UJ
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	--	ND(0.26)	--	0.039 J	ND(0.96)UJ
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	--	ND(0.051)	--	0.034 J	ND(0.19)UJ
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	0.085 J	--	0.088 J	0.26 J
Dibromochloromethane	mg/kg	NA	21	80	160000	500	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	--	ND(0.1)	--	ND(0.1)UJ	ND(0.39)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	--	0.017 J	--	0.078 J	0.079 J
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	--	ND(0.26)	--	0.1 J	0.1 J
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	--	0.39 J	--	0.12 J	ND(4.6)UJ
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	0.078 J	--	0.064 J	0.043 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
Methylene chloride	mg/kg	NA	240	700	8300000	5800	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
Styrene	mg/kg	NA	1300	3300	6900000	1900	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	--	ND(0.051)	--	0.011 J	ND(0.19)UJ
Toluene	mg/kg	NA	610	3300	12000000	160000	--	0.11	--	0.094 J	0.1 J
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.051)	--	ND(0.05)UJ	ND(0.19)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	--	ND(0.051)	--	0.026 J	ND(0.19)UJ
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	--	ND(0.1)	--	ND(0.1)UJ	ND(0.39)UJ
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	--	ND(0.26)	--	ND(0.25)UJ	ND(0.96)UJ
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	--	ND(0.041)	--	ND(0.04)UJ	ND(0.15)UJ
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	--	0.13 J	--	0.31 J	0.33 J

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite B7,B8,B9	C3	lab composite C1,C2,C3	C6	C6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-002	S-48041-062008-MC-009 C3	S-48041-062008-MC-009 C1 C2 C	S-48041-061808-MC-004 C6	S-48041-061808-MC-005 C6
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/18/2008	6/18/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p	Duplicate				Duplicate
	Units										
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(7.8)	--	ND(1.2)	--	--
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(7.8)	--	ND(1.2)	--	--
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(7.8)	--	ND(1.2)	--	--
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(7.8)	--	ND(1.2)	--	--
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(4.5)	--	ND(0.68)	--	--
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(7.8)	--	ND(1.2)	--	--
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(7.8)	--	ND(1.2)	--	--
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(7.8)	--	ND(1.2)	--	--
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	ND(7.8)	--	0.034 J	--	--
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(7.8)	--	ND(1.2)	--	--
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.9)	--	ND(0.91)	--	--
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(7.8)	--	ND(1.2)	--	--
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(47)	--	ND(7.3)	--	--
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.9)	--	ND(0.91)	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(4.5)	--	ND(0.68)	--	--
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(7.8)	--	ND(1.2)	--	--
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.5)	--	ND(0.68)	--	--
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(7.8)	--	ND(1.2)	--	--
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.9)	--	ND(0.91)	--	--
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(9.8)	--	ND(1.5)	--	--
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(7.8)	--	0.079 J	--	--
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(7.8)	--	0.034 J	--	--
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(7.8)	--	ND(1.2)	--	--
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(7.8)	--	0.16 J	--	--
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(1.2)	--	ND(0.18)	--	--
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	0.59 J	--	1.9	--	--
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	0.74 J	--	3.4	--	--
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	1.2 J	--	4.2	--	--
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	0.7 J	--	2.5	--	--
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	0.39 J	--	1.5	--	--
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	--	ND(1.2)	--	--
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(2.4)	--	ND(0.36)	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	0.54 J	--	ND(1.2)	--	--
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(7.8)	--	ND(1.2)	--	--
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(7.8)	--	ND(1.2)	--	--
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(7.8)	--	0.088 J	--	--
Chrysene	mg/kg	NA	ID	ID	ID	8000	0.67 J	--	2.4	--	--
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(7.8)	--	0.63 J	--	--
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(7.8)	--	ND(1.2)	--	--
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(7.8)	--	ND(1.2)	--	--
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(7.8)	--	ND(1.2)	--	--
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(7.8)	--	ND(1.2)	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(7.8)	--	ND(1.2)	--	--
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	0.8 J	--	2.2	--	--
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(7.8)	--	0.046 J	--	--
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(7.8)	--	ND(1.2)	--	--
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(1.2)	--	ND(0.18)	--	--
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(7.8)	--	ND(1.2)	--	--
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(7.8)	--	ND(1.2)	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	0.67 J	--	2.1	--	--
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(7.8)	--	ND(1.2)	--	--
Naphthalene	mg/kg	NA	470	350	88000	52000	ND(7.8)	--	0.033 J	--	--
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(7.8)	--	ND(1.2)	--	--
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(7.8)	--	ND(1.2)	--	--
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(7.8)	--	ND(1.2)	--	--
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(4.5)	--	ND(0.68)	--	--
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.29 J	--	0.59 J	--	--
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(7.8)	--	ND(1.2)	--	--
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	0.81 J	--	2.1	--	--
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(7.8)	--	ND(1.2)	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite B7,B8,B9	C3	lab composite C1,C2,C3	C6	C6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-062008-MC-002	S-48041-062008-MC-009 C3	S-48041-062008-MC-009 C1 C2 C	S-48041-061808-MC-004 C6	S-48041-061808-MC-005 C6
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/20/2008	6/20/2008	6/20/2008	6/18/2008	6/18/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type	Units	a	f	h	n	p	Duplicate				Duplicate
Metals											
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	3820	--	10900	--	--
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.24 J	--	0.51 J	--	--
Arsenic	mg/kg	5.8	NLV	NLV	910	37	6.2	--	4.0	--	--
Barium	mg/kg	75	NLV	NLV	150000	130000	86.7 J	--	90.1	--	--
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.13 J	--	ND(0.18)	--	--
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	0.81	--	0.81	--	--
Calcium	mg/kg	NA	NA	NA	NA	NA	24100 J	--	32300	--	--
Chromium	mg/kg	18	NLV	NLV	240	9200	18.6	--	39.2 J	--	--
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	1.2	--	1.4	--	--
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	2.9	--	4.9	--	--
Copper	mg/kg	32	NLV	NLV	59000	73000	20.1 J	--	30.0	--	--
Iron	mg/kg	12000	NLV	NLV	ID	580000	9510	--	13800	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	486	--	169	--	--
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	465	--	165	--	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	481	--	168	--	--
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	8130 J	--	12200	--	--
Manganese	mg/kg	440	NLV	NLV	1500	90000	510 J	--	508	--	--
Mercury	mg/kg	0.13	89	62	8800	580	0.17	--	0.081	--	--
Nickel	mg/kg	20	NLV	NLV	16000	150000	13.6	--	40.3	--	--
Potassium	mg/kg	NA	NA	NA	NA	NA	409 J	--	782	--	--
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	0.36	--	0.46	--	--
Silver	mg/kg	1	NLV	NLV	2900	9000	0.070 J	--	0.11	--	--
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	120	--	106	--	--
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.073 J	--	0.082 J	--	--
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	10.6	--	16.8	--	--
Zinc	mg/kg	47	NLV	NLV	ID	630000	125	--	140	--	--
PCBs											
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(3.9)	--	ND(1.9)	--	--
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	32	--	17	--	--
Total PCBs	mg/kg	NA	16000	810	6500	16	**32[p]**	--	**17[p]**	--	--

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite C4,C5,C6	lab composite C4,C5,C6	C8	lab composite C7,C8,C9	D1	lab composite D1,D2,D3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061808-MC-004	S-48041-061808-MC-005	S-048041-022908-DD-017C8	S-048041-022908-DD-017	S-48041-062008-MC-010	D´ S-48041-062008-MC-010
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	2/29/2008	2/29/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.67-1.2) ft BGS	(0-1.6) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	--	--	ND(0.043)UJ	--	ND(0.046)	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	--	--	ND(0.043)	--	ND(0.046)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	--	--	ND(0.043)	--	ND(0.046)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	--	--	ND(0.043)	--	ND(0.046)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	--	--	ND(0.043)	--	ND(0.046)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	--	--	0.088 J	--	0.7	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	--	--	0.33	--	0.035 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	--	--	ND(0.22)	--	ND(0.23)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	--	--	ND(0.22)	--	ND(0.23)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	--	--	0.061 J	--	0.029 J	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	--	--	ND(0.043)	--	ND(0.046)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	--	--	ND(0.043)	--	ND(0.046)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	--	--	0.15	--	ND(0.092)	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	--	--	ND(0.086)	--	0.062 J	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	--	--	ND(0.086)	--	0.25	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	--	--	ND(0.65)	--	ND(0.69)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	--	--	ND(2.2)	--	ND(2.3)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	--	--	0.19 J	--	0.021 J	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	--	--	ND(0.65)UJ	--	ND(0.69)U	--
Benzene	mg/kg	NA	8.4	45	470000	840	--	--	0.023 J	--	0.01 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	--	--	ND(0.086)UJ	--	ND(0.092)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	--	--	ND(0.086)	--	ND(0.092)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	--	--	ND(0.17)	--	ND(0.18)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	--	--	ND(0.22)	--	ND(0.23)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	--	--	ND(0.043)	--	ND(0.046)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	--	--	ND(0.043)	--	0.04 J	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	--	--	ND(0.22)	--	ND(0.23)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	--	--	ND(0.043)	--	ND(0.046)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	--	--	ND(0.22)	--	ND(0.23)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	--	--	ND(0.043)	--	ND(0.046)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.043)UJ	--	ND(0.046)	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	--	0.062 J	--	0.066 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	--	--	ND(0.043)	--	ND(0.046)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	--	--	ND(0.086)	--	ND(0.092)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	--	--	0.11	--	0.013 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	--	--	0.061 J	--	ND(0.23)	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	--	--	0.13 J	--	0.16 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	--	0.14 J	--	0.03 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	--	--	ND(0.22)	--	ND(0.23)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	--	--	ND(0.22)	--	ND(0.23)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	--	--	ND(0.043)	--	ND(0.046)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	--	--	0.034 J	--	ND(0.046)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	--	--	0.27	--	0.046 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	--	--	ND(0.043)	--	ND(0.046)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.043)UJ	--	ND(0.046)	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	--	--	0.56	--	0.03 J	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	--	--	ND(0.086)	--	ND(0.092)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	--	--	ND(0.22)	--	ND(0.23)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	--	--	ND(0.035)	--	ND(0.037)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	--	--	0.41	--	0.065 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					lab composite C4,C5,C6	lab composite C4,C5,C6	C8	lab composite C7,C8,C9	D1	lab composite D1,D2,D3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061808-MC-004	S-48041-061808-MC-005	S-048041-022908-DD-017C8	S-048041-022908-DD-017	S-48041-062008-MC-010 D´	S-48041-062008-MC-010
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	2/29/2008	2/29/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.67-1.2) ft BGS	(0-1.6) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(4.1)	ND(4.2)	--	ND(8.9)	--	ND(0.67)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.81 J	0.95 J	--	ND(16)	--	ND(1.2)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.5)	ND(5.6)	--	ND(12)	--	ND(0.9)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(44)	ND(44)	--	ND(95)	--	ND(7.2)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.5)	ND(5.6)	--	ND(12)	--	ND(0.9)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(4.1)	ND(4.2)	--	ND(8.9)	--	ND(0.67)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.1)	ND(4.2)	--	ND(8.9)	--	ND(0.67)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(5.5)	ND(5.6)	--	ND(12)	--	ND(0.9)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(9.1)	ND(9.2)	--	ND(20)	--	ND(1.5)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	0.26 J	ND(7.3)	--	ND(16)	--	0.077 J
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(7.3)	ND(7.3)	--	ND(16)	--	0.074 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(1.1)	ND(1.1)	--	ND(2.4)	--	ND(0.18)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	1.5 J	1.9 J	--	ND(16)	--	0.9 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	ND(7.3)	ND(7.3)	--	ND(16)	--	1.5
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	ND(7.3)	ND(7.3)	--	ND(16)	--	1.8
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	1.2 J	1.1 J	--	ND(16)	--	0.95 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	ND(7.3)	ND(7.3)	--	ND(16)	--	0.81 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(2.2)	ND(2.2)	--	ND(4.8)	--	ND(0.36)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	0.95 J	ND(7.3)	--	1.5 J	--	ND(1.2)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	3.5 J	2.2 J	--	ND(16)	--	ND(1.2)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Chrysene	mg/kg	NA	ID	ID	ID	8000	1.4 J	1.7 J	--	0.73 J	--	0.87 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(7.3)	ND(7.3)	--	ND(16)	--	0.19 J
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(7.3)	ND(7.3)	--	1.1 J	--	ND(1.2)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	3 J	3.9 J	--	1.8 J	--	0.94 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	0.94 J	1.1 J	--	ND(16)	--	ND(1.2)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(1.1)	ND(1.1)	--	ND(2.4)	--	ND(0.18)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	0.94 J	0.92 J	--	ND(16)	--	0.81 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Naphthalene	mg/kg	NA	470	350	88000	52000	0.32 J	0.31 J	--	ND(16)	--	ND(1.2)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(4.1)	ND(4.2)	--	ND(8.9)	--	ND(0.67)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	2.6 J	3 J	--	1.2 J	--	0.21 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(7.3)	ND(7.3)	--	ND(16)	--	ND(1.2)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	2.5 J	3.2 J	--	1.6 J	--	0.87 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(7.3)	ND(7.3)	--	--	--	ND(1.2)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite C4,C5,C6	lab composite C4,C5,C6	C8	lab composite C7,C8,C9	D1	lab composite D1,D2,D3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061808-MC-004	S-48041-061808-MC-005	S-048041-022908-DD-017C8	S-048041-022908-DD-017	S-48041-062008-MC-010 D´	S-48041-062008-MC-010
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	2/29/2008	2/29/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.67-1.2) ft BGS	(0-1.6) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	7230	5130	--	7020	--	7320
Antimony	mg/kg	NA	NLV	NLV	5900	670	3.2 J	1.5 J	--	10.2	--	0.32 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	23.3 J	6.6 J	--	7.6	--	4.8
Barium	mg/kg	75	NLV	NLV	150000	130000	241	276	--	693	--	142 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.56	0.27	--	0.56	--	0.13 J
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	2.8	2.3	--	6.1	--	0.75
Calcium	mg/kg	NA	NA	NA	NA	NA	53200	52600	--	38800	--	52300 J
Chromium	mg/kg	18	NLV	NLV	240	9200	95.9 J	55.2 J	--	35.0	--	**265[n]**
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	1.7	1.7	--	ND(0.95)	--	0.87 J
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	8.1	4.1	--	3.7	--	4.0
Copper	mg/kg	32	NLV	NLV	59000	73000	156 J	59.9 J	--	91.9	--	24.1 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	48300	21500	--	24400	--	33200
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	654	576	--	**5430[p]**	--	353
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	725	883	--	**8170[p]**	--	425
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	668	648	--	5880	--	374
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	16300 J	16800 J	--	8820	--	18500 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	**1840[n]**	729	--	1200	--	**5220 J[n]**
Mercury	mg/kg	0.13	89	62	8800	580	0.33 J	0.27 J	--	0.14	--	0.047
Nickel	mg/kg	20	NLV	NLV	16000	150000	40.2	19.7	--	23.1	--	17.1
Potassium	mg/kg	NA	NA	NA	NA	NA	817	722	--	842	--	880
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	0.63	0.82	--	0.75	--	0.44
Silver	mg/kg	1	NLV	NLV	2900	9000	0.32	0.24	--	0.29	--	0.12
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	760	756	--	596	--	118
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.13	0.13	--	ND(0.095)U	--	0.13
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	18.7 J	13.0 J	--	15.5	--	70.9
Zinc	mg/kg	47	NLV	NLV	ID	630000	444	375	--	297	--	111
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	ND(2)	--	ND(19)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	ND(2)	--	ND(19)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	ND(2)	--	ND(19)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	4.2	--	ND(19)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	ND(2)	--	ND(19)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	--	ND(2)	--	ND(19)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	17	55	--	12	--	150
Total PCBs	mg/kg	NA	16000	810	6500	16	**47[p]**	**55[p]**	--	**16.2[p]**	--	**150[p]**

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					D4	lab composite D6,D5,D4	D9	lab composite D7,D8,D9	E2	E2
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030308-DD-019D4	S-048041-030308-DD-019D	S-48041-061808-MC-006 D	S-48041-061808-MC-006	-48041-061208-AF-002 E	-48041-061208-AF-003 E
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/3/2008	3/3/2008	6/18/2008	6/18/2008	6/12/2008	6/12/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p						Duplicate
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.052)UJ	--	ND(0.043)UJ	--	ND(0.052)UJ	ND(0.049)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.054 J	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)UJ	ND(0.24)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.049 J	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.79)	--	ND(0.64)UJ	--	ND(0.78)	ND(0.73)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.6)	--	ND(2.1)UJ	--	ND(2.6)	ND(2.4)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	0.19 J	--	ND(2.1)UJ	--	ND(2.6)	ND(2.4)
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.79)UJ	--	ND(0.64)UJ	--	ND(0.78)U	ND(0.73)U
Benzene	mg/kg	NA	8.4	45	470000	840	0.014 J	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.1)UJ	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.21)	--	ND(0.17)UJ	--	ND(0.21)	ND(0.19)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)UJ	ND(0.049)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)UJ	ND(0.049)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.061 J	--	ND(1)UJ	--	ND(1.2)	ND(1.2)
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.035 J	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(1.3)	--	0.16 J	--	0.11 J	ND(1.2)
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.096 J	--	ND(1)UJ	--	ND(1.2)	ND(1.2)
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)UJ	ND(0.24)UJ
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.027 J	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Toluene	mg/kg	NA	610	3300	12000000	160000	0.24	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.052)	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.052)UJ	--	ND(0.043)UJ	--	ND(0.052)UJ	ND(0.049)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.039 J	--	ND(0.043)UJ	--	ND(0.052)	ND(0.049)
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.1)	--	ND(0.086)UJ	--	ND(0.1)	ND(0.097)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.26)	--	ND(0.21)UJ	--	ND(0.26)	ND(0.24)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.042)	--	ND(0.034)UJ	--	ND(0.042)	ND(0.039)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.14 J	--	0.026 J	--	ND(0.16)	ND(0.15)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					D4	lab composite D6,D5,D4	D9	lab composite D7,D8,D9	E2	E2
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030308-DD-019D4	S-048041-030308-DD-019D	S-48041-061808-MC-006 D	S-48041-061808-MC-006	-48041-061208-AF-002 E	-48041-061208-AF-003 E
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/3/2008	3/3/2008	6/18/2008	6/18/2008	6/12/2008	6/12/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p						Duplicate
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(6.7)	--	ND(1.4)	--	--
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(6.7)	--	ND(1.4)	--	--
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(6.7)	--	ND(1.4)	--	--
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(6.7)	--	ND(1.4)	--	--
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(3.8)	--	ND(0.81)	--	--
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(6.7)	--	ND(1.4)	--	--
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(6.7)	--	ND(1.4)	--	--
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(6.7)	--	ND(1.4)	--	--
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	0.21 J	--	ND(1.4)	--	--
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.7)	--	ND(1.4)	--	--
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5)	--	ND(1.1)	--	--
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(6.7)	--	ND(1.4)	--	--
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(40)	--	ND(8.6)	--	--
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5)	--	ND(1.1)	--	--
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(3.8)	--	ND(0.81)	--	--
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(6.7)	--	ND(1.4)	--	--
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(3.8)	--	ND(0.81)	--	--
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.7)	--	ND(1.4)	--	--
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5)	--	ND(1.1)	--	--
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(6.7)	--	ND(1.4)	--	--
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	0.18 J	--	ND(1.4)	--	--
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(6.7)	--	ND(1.4)	--	--
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	0.65 J	--	ND(1.4)	--	--
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(1)	--	ND(0.22)	--	--
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	3 J	--	ND(1.4)	--	--
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	3.1 J	--	0.27 J	--	--
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	3.6 J	--	0.37 J	--	--
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	2.1 J	--	0.28 J	--	--
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	2 J	--	0.14 J	--	--
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(6.7)	--	ND(1.4)	--	--
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(2)	--	ND(0.43)	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	ND(6.7)	--	0.24 J	--	--
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(6.7)	--	ND(1.4)	--	--
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(6.7)	--	ND(1.4)	--	--
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(6.7)	--	ND(1.4)	--	--
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	2.8 J	--	0.28 J	--	--
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	0.61 J	--	ND(1.4)	--	--
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(6.7)	--	ND(1.4)	--	--
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(6.7)	--	ND(1.4)	--	--
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(6.7)	--	ND(1.4)	--	--
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(6.7)	--	ND(1.4)	--	--
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(6.7)	--	ND(1.4)	--	--
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	5.6 J	--	0.22 J	--	--
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.22 J	--	ND(1.4)	--	--
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(6.7)	--	ND(1.4)	--	--
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(1)	--	ND(0.22)	--	--
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(6.7)	--	ND(1.4)	--	--
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(6.7)	--	ND(1.4)	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	1.9 J	--	0.19 J	--	--
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(6.7)	--	ND(1.4)	--	--
Naphthalene	mg/kg	NA	470	350	88000	52000	--	0.18 J	--	ND(1.4)	--	--
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(6.7)	--	ND(1.4)	--	--
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(6.7)	--	ND(1.4)	--	--
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(6.7)	--	ND(1.4)	--	--
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(3.8)	--	ND(0.81)	--	--
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	2.2 J	--	0.072 J	--	--
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(6.7)	--	ND(1.4)	--	--
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	4.4 J	--	0.27 J	--	--
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	ND(1.4)	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					D4	lab composite D6,D5,D4	D9	lab composite D7,D8,D9	E2	E2
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030308-DD-019D4	S-048041-030308-DD-019D	S-48041-061808-MC-006 D	S-48041-061808-MC-006	-48041-061208-AF-002 E	-48041-061208-AF-003 E
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/3/2008	3/3/2008	6/18/2008	6/18/2008	6/12/2008	6/12/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p						Duplicate
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	7260	--	13500	--	--
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	1.0 J	--	0.24 J	--	--
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	7.8	--	2.6	--	--
Barium	mg/kg	75	NLV	NLV	150000	130000	--	188 J	--	194	--	--
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.96 J	--	3.1	--	--
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	1.0 J	--	0.52	--	--
Calcium	mg/kg	NA	NA	NA	NA	NA	--	33000	--	53600	--	--
Chromium	mg/kg	18	NLV	NLV	240	9200	--	47.8 J	--	22.3 J	--	--
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	1.5	--	1.3	--	--
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	3.8 J	--	2.3	--	--
Copper	mg/kg	32	NLV	NLV	59000	73000	--	41.3 J	--	22.8 J	--	--
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	28100	--	8210	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	226	--	112	--	--
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	549	--	308	--	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	324	--	164	--	--
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	8340	--	43300 J	--	--
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	1130	--	1280	--	--
Mercury	mg/kg	0.13	89	62	8800	580	--	0.092	--	0.049 J	--	--
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	16.4 J	--	12.4	--	--
Potassium	mg/kg	NA	NA	NA	NA	NA	--	750 J	--	1500	--	--
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.3 J	--	1.5	--	--
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.15	--	0.081 J	--	--
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	228 J	--	673	--	--
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.15	--	0.058 J	--	--
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	23.3 J	--	18.4 J	--	--
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	124	--	134	--	--
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(8.3)	--	ND(1.8)	--	--
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	65	--	19	--	--
Total PCBs	mg/kg	NA	16000	810	6500	16	--	**65[p]**	--	**19[p]**	--	--

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite E1,E2,E3	lab composite E1,E2,E3	E6	lab composite E4,E5,E6	F1	lab composite F1,F2,F3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061208-AF-002	S-48041-061208-AF-003	-48041-061208-AF-004 E	S-48041-061208-AF-004	S-48041-062008-MC-005 F	S-48041-062008-MC-005
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	--	--	ND(0.22)UJ	--	ND(0.24)	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	--	--	0.033 J	--	ND(0.095)	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	--	--	ND(0.22)UJ	--	ND(0.24)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	--	--	ND(0.22)UJ	--	ND(0.24)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	--	--	ND(0.089)UJ	--	ND(0.095)	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	--	--	ND(0.044)UJ	--	ND(0.047)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	--	--	ND(0.089)UJ	--	ND(0.095)	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	--	--	ND(0.089)UJ	--	ND(0.095)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	--	--	ND(0.089)UJ	--	ND(0.095)	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	--	--	0.072 J	--	ND(0.71)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	--	--	ND(2.2)UJ	--	ND(2.4)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	--	--	ND(2.2)UJ	--	ND(2.4)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	--	--	ND(0.66)UJ	--	ND(0.71)U	--
Benzene	mg/kg	NA	8.4	45	470000	840	--	--	ND(0.044)UJ	--	ND(0.047)	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	--	--	ND(0.089)UJ	--	ND(0.095)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	--	--	ND(0.089)UJ	--	ND(0.095)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	--	--	ND(0.18)UJ	--	ND(0.19)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	--	--	ND(0.22)UJ	--	ND(0.24)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	--	--	ND(0.044)UJ	--	ND(0.047)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	--	--	ND(0.044)UJ	--	ND(0.047)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	--	--	ND(0.22)UJ	--	ND(0.24)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	--	--	ND(0.044)UJ	--	ND(0.047)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	--	--	ND(0.22)UJ	--	ND(0.24)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	--	--	ND(0.044)UJ	--	ND(0.047)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.044)UJ	--	ND(0.047)	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	--	ND(1.1)UJ	--	ND(1.1)	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	--	--	ND(0.044)UJ	--	ND(0.047)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	--	--	ND(0.089)UJ	--	ND(0.095)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	--	--	0.013 J	--	ND(0.047)	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	--	--	ND(0.22)UJ	--	ND(0.24)	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	--	--	0.13 J	--	ND(1.1)	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	--	0.049 J	--	ND(1.1)	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	--	--	ND(0.22)UJ	--	ND(0.24)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	--	--	ND(0.22)UJ	--	ND(0.24)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	--	--	ND(0.044)UJ	--	ND(0.047)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	--	--	ND(0.044)UJ	--	ND(0.047)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	--	--	0.027 J	--	ND(0.095)	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	--	--	ND(0.044)UJ	--	ND(0.047)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.044)UJ	--	ND(0.047)	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	--	--	ND(0.044)UJ	--	0.022 J	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	--	--	ND(0.089)UJ	--	ND(0.095)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	--	--	ND(0.22)UJ	--	ND(0.24)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	--	--	ND(0.035)UJ	--	ND(0.038)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	--	--	0.054 J	--	ND(0.14)	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					lab composite E1,E2,E3	lab composite E1,E2,E3	E6	lab composite E4,E5,E6	F1	lab composite F1,F2,F3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061208-AF-002	S-48041-061208-AF-003	-48041-061208-AF-004 E	S-48041-061208-AF-004	S-48041-062008-MC-005 F	S-48041-062008-MC-005
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(3.5)	ND(3.5)	--	ND(3.4)	--	ND(1.7)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.24 J	0.16 J	--	ND(6)	--	ND(3)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(4.6)	--	ND(4.6)	--	ND(2.3)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(37)	ND(37)	--	ND(37)	--	ND(18)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(4.6)	--	ND(4.6)	--	ND(2.3)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(3.5)	ND(3.5)	--	ND(3.4)	--	ND(1.7)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(3.5)	ND(3.5)	--	ND(3.4)	--	ND(1.7)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(4.6)	--	ND(4.6)	--	ND(2.3)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(7.7)	ND(7.7)	--	ND(7.5)	--	ND(3.8)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	0.22 J	0.19 J	--	0.17 J	--	ND(3)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.93)	ND(0.93)	--	ND(0.91)	--	ND(0.45)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	0.82 J	0.71 J	--	0.57 J	--	0.29 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	0.98 J	0.71 J	--	0.74 J	--	0.37 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	1.4 J	1.1 J	--	1.2 J	--	0.48 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	1.1 J	0.89 J	--	1.3 J	--	0.34 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	0.44 J	0.39 J	--	0.44 J	--	0.23 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(1.9)	ND(1.9)	--	ND(1.8)	--	ND(0.91)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(6.1)	ND(6.1)	--	ND(6)	--	0.36 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	1.6 J	1.4 J	--	0.97 J	--	ND(3)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Chrysene	mg/kg	NA	ID	ID	ID	8000	0.79 J	0.61 J	--	0.61 J	--	0.3 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	0.21 J	ND(6.1)	--	0.19 J	--	ND(3)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	1.2 J	1 J	--	0.9 J	--	0.55 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.93)	ND(0.93)	--	ND(0.91)	--	ND(0.45)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	0.76 J	0.66 J	--	0.79 J	--	0.27 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Naphthalene	mg/kg	NA	470	350	88000	52000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(3.5)	ND(3.5)	--	ND(3.4)	--	ND(1.7)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.57 J	0.53 J	--	0.43 J	--	0.19 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	1.1 J	0.88 J	--	0.83 J	--	0.39 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(6.1)	ND(6.1)	--	ND(6)	--	ND(3)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					lab composite E1,E2,E3	lab composite E1,E2,E3	E6	lab composite E4,E5,E6	F1	lab composite F1,F2,F3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061208-AF-002	S-48041-061208-AF-003	-48041-061208-AF-004 E	S-48041-061208-AF-004	3-48041-062008-MC-005 F	S-48041-062008-MC-005
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p		Duplicate				
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	12000	8490	--	10900	--	4740
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.63 J	1.1 J	--	1.1 J	--	0.17 J
Arsenic	mg/kg	5.8	NLV	NLV	37	910	6.8 J	4.6 J	--	7.3 J	--	1.6
Barium	mg/kg	75	NLV	NLV	150000	130000	196 J	182 J	--	326 J	--	58.0 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	2.6	1.3	--	0.84	--	0.72
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	3.4	2.7	--	4.7	--	0.48
Calcium	mg/kg	NA	NA	NA	NA	NA	56600	55300	--	55500	--	52300 J
Chromium	mg/kg	18	NLV	NLV	240	9200	54.0 J	60.6 J	--	112 J	--	11.4
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	2.4 J	3.1 J	--	1.6 J	--	0.98
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	3.0	4.0	--	5.7	--	2.0
Copper	mg/kg	32	NLV	NLV	59000	73000	68.1	80.9	--	154	--	11.2 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	18900	22100	--	28300	--	6010
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	707	648	--	**1060**[p]	--	129
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	**999**[p]	**1010**[p]	--	**1060**[p]	--	351
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	873	798	--	1060	--	171
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	19100 J	12000 J	--	35400 J	--	19700 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	1490	977	--	**1540**[n]	--	565 J
Mercury	mg/kg	0.13	89	62	8800	580	0.18	0.26	--	0.18	--	0.031 J
Nickel	mg/kg	20	NLV	NLV	16000	150000	23.4	29.0	--	33.3	--	7.4
Potassium	mg/kg	NA	NA	NA	NA	NA	1130	944	--	1440	--	411 J
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	2.0	1.3	--	1.5	--	0.51
Silver	mg/kg	1	NLV	NLV	2900	9000	0.13	0.17	--	0.37	--	0.040 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	565	410	--	346	--	253
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.17	0.19	--	0.34	--	0.11
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	17.6 J	19.5 J	--	50.6 J	--	7.6
Zinc	mg/kg	47	NLV	NLV	ID	630000	358 J	402 J	--	592 J	--	60.1
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	ND(0.19)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	ND(0.19)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	ND(0.19)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	ND(0.19)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	ND(0.19)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	14 J	8.5 J	--	7	--	ND(0.19)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(1.9)	--	ND(1.9)	--	0.25
Total PCBs	mg/kg	NA	16000	810	6500	16	14 J	8.5 J	--	7	--	0.25

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					F4	lab composite F4,F5,F6	F9	lab composite F7,F8,F9	G3	lab composite G1,G2,G3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	-48041-061208-AF-005 F	S-48041-061208-AF-005	S-48041-062008-MC-006 F9	S-48041-062008-MC-006	S-048041-022808-DD-001	G3S-048041-022808-DD-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.045)UJ	--	ND(0.069)	--	ND(0.052)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	0.028 J	--	ND(0.34)	--	0.1 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.079 J	--	0.43	--	0.14	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)UJ	--	ND(0.34)	--	ND(0.26)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.09)	--	ND(0.14)	--	ND(0.1)	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.09)	--	0.2	--	0.082 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.09)	--	ND(0.14)	--	ND(0.1)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	0.0091 J	--	ND(0.14)	--	ND(0.1)	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	0.096 J	--	0.17 J	--	ND(0.79)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)	--	ND(3.4)	--	ND(2.6)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	0.067 J	--	0.065 J	--	ND(2.6)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.68)U	--	ND(1)U	--	ND(0.79)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.045)	--	0.016 J	--	0.023 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.09)	--	ND(0.14)UJ	--	ND(0.1)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.09)	--	ND(0.14)	--	ND(0.1)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.18)	--	ND(0.27)	--	ND(0.21)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.045)UJ	--	ND(0.069)	--	ND(0.052)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	0.022 J	--	ND(0.069)	--	ND(0.052)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.045)UJ	--	ND(0.069)	--	ND(0.052)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.069 J	--	0.065 J	--	0.1 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.09)	--	ND(0.14)	--	ND(0.1)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.024 J	--	0.052 J	--	0.057	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.033 J	--	0.02 J	--	0.067 J	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.25 J	--	0.53 J	--	0.28 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.15 J	--	0.093 J	--	0.24 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)UJ	--	ND(0.34)	--	ND(0.26)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.029 J	--	0.019 J	--	0.028 J	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.071 J	--	0.11 J	--	0.17	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.045)	--	ND(0.069)	--	ND(0.052)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.045)UJ	--	ND(0.069)	--	ND(0.052)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.065	--	ND(0.069)	--	0.065	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.09)	--	ND(0.14)	--	ND(0.1)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)	--	ND(0.34)	--	ND(0.26)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.036)	--	ND(0.055)	--	ND(0.042)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.17	--	0.32	--	0.25	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					F4	lab composite F4,F5,F6	F9	lab composite F7,F8,F9	G3	lab composite G1,G2,G3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	-48041-061208-AF-005 F	S-48041-061208-AF-005	S-48041-062008-MC-006 F9	S-48041-062008-MC-006	S-048041-022808-DD-001	G3S-048041-022808-DD-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(6.3)	--	ND(17)	--	ND(7.6)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(3.6)	--	ND(9.7)	--	ND(4.3)UJ
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(6.3)	--	ND(17)	--	ND(7.6)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	0.19 J	--	ND(17)	--	0.22 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.8)	--	ND(13)	--	ND(5.8)UJ
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(38)	--	ND(100)	--	ND(46)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.8)	--	ND(13)	--	ND(5.8)UJ
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(3.6)	--	ND(9.7)	--	ND(4.3)UJ
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(3.6)	--	ND(9.7)	--	ND(4.3)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.8)	--	ND(13)	--	ND(5.8)UJ
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(7.9)	--	ND(21)	--	ND(9.5)UJ
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	0.19 J	--	ND(17)	--	0.39 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(0.96)	--	ND(2.6)	--	ND(1.2)UJ
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	0.97 J	--	ND(17)	--	0.96 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	0.96 J	--	ND(17)	--	0.94 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	1.4 J	--	0.77 J	--	1.4 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	1.2 J	--	0.6 J	--	0.81 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	0.59 J	--	ND(17)	--	0.52 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(6.3)	--	ND(17)	--	ND(7.6)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(1.9)	--	ND(5.2)	--	ND(2.3)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	0.78 J	--	7.4 J	--	0.9 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	1.2 J	--	ND(17)	--	ND(7.6)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	0.89 J	--	ND(17)	--	1.2 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	0.2 J	--	ND(17)	--	ND(7.6)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	1.1 J	--	0.64 J	--	1.9 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	ND(6.3)	--	ND(17)	--	0.43 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(0.96)	--	ND(2.6)	--	ND(1.2)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	0.97 J	--	ND(17)	--	0.66 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	0.16 J	--	ND(17)	--	ND(7.6)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(6.3)	--	ND(17)	--	ND(7.6)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(6.3)	--	ND(17)	--	ND(7.6)UJ
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(3.6)	--	ND(9.7)	--	ND(4.3)UJ
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	0.5 J	--	ND(17)	--	1.1 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(6.3)	--	ND(17)	--	ND(7.6)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	1.1 J	--	0.92 J	--	1.5 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	ND(6.3)	--	ND(17)	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					F4	lab composite F4,F5,F6	F9	lab composite F7,F8,F9	G3	lab composite G1,G2,G3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061208-AF-005 F	S-48041-061208-AF-005	S-48041-062008-MC-006 F9	S-48041-062008-MC-006	S-048041-022808-DD-001	G3S-048041-022808-DD-001
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/12/2008	6/12/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	9420	--	9790	--	8150
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.95 J	--	1.7 J	--	0.46 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	5.7 J	--	6.0	--	5.7
Barium	mg/kg	75	NLV	NLV	150000	130000	--	229 J	--	284 J	--	170 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.27	--	1.1	--	1.5
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	3.2	--	4.0	--	1.2
Calcium	mg/kg	NA	NA	NA	NA	NA	--	58400	--	56100 J	--	58300
Chromium	mg/kg	18	NLV	NLV	240	9200	--	218 J	--	104	--	58.0 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	2.4 J	--	0.53 J	--	ND(0.93)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	4.4	--	8.3	--	4.0
Copper	mg/kg	32	NLV	NLV	59000	73000	--	63.0	--	168 J	--	35.9
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	44900	--	19200	--	13200
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	742	--	484	--	185
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	783	--	633	--	313
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	754	--	512	--	219
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	19700 J	--	14100 J	--	15400
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	**7510[n]**	--	965 J	--	**1630[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	0.10	--	0.27	--	0.20
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	22.3	--	102	--	17.4
Potassium	mg/kg	NA	NA	NA	NA	NA	--	955	--	1010	--	716
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.0	--	1.1	--	1.1
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.22	--	0.58	--	0.10
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	379	--	475	--	335
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.27	--	0.21	--	0.19
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	91.7 J	--	23.7	--	21.3 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	432 J	--	1720	--	159
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(4.3)	--	ND(1.9)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	20	--	14	--	12
Total PCBs	mg/kg	NA	16000	810	6500	16	--	**20[p]**	--	14	--	12

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					G6	lab composite G6,G5,G4	G8	lab composite G7,G8,G9	H1	lab composite H1,H2,H3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-002G	S-048041-022808-DD-002	S-48041-062008-MC-007 G	S-48041-062008-MC-007	S-048041-022808-DD-003H	S-048041-022808-DD-00
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.83-1.3) ft BGS	(0-1.3) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.2-1.7) ft BGS	(0-1.7) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	0.97 J	--	ND(0.3)UJ	--	0.11 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.077 J	--	0.044 J	--	0.091	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	0.11 J	--	ND(0.12)UJ	--	ND(0.084)	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.093)UJ	--	ND(0.12)UJ	--	0.072 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	0.25 J	--	ND(0.12)UJ	--	ND(0.084)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	0.47 J	--	ND(0.12)UJ	--	ND(0.084)	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.7)UJ	--	0.12 J	--	0.059 J	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)UJ	--	ND(3)UJ	--	ND(2.1)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.3)UJ	--	ND(3)UJ	--	ND(2.1)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.7)UJ	--	ND(0.91)UJ	--	ND(0.63)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	0.013 J	--	ND(0.061)UJ	--	0.0072 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.093)UJ	--	ND(0.12)UJ	--	ND(0.084)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.093)UJ	--	ND(0.12)UJ	--	ND(0.084)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.19)UJ	--	ND(0.24)UJ	--	ND(0.17)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	0.034 J	--	ND(0.061)UJ	--	ND(0.042)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.1)UJ	--	0.012 J	--	0.056 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.093)UJ	--	ND(0.12)UJ	--	ND(0.084)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.03 J	--	0.01 J	--	0.024 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.064 J	--	ND(0.3)UJ	--	ND(0.21)	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.45 J	--	0.56 J	--	0.18 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.083 J	--	0.033 J	--	0.12 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.047)UJ	--	0.042 J	--	ND(0.042)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.028 J	--	0.04 J	--	0.056 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.061)UJ	--	ND(0.042)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.21 J	--	ND(0.061)UJ	--	0.055	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.093)UJ	--	0.083 J	--	ND(0.084)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)UJ	--	ND(0.3)UJ	--	ND(0.21)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.037)UJ	--	ND(0.048)UJ	--	ND(0.034)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.094 J	--	0.066 J	--	0.12 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					G6	lab composite G6,G5,G4	G8	lab composite G7,G8,G9	H1	lab composite H1,H2,H3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-002G	S-048041-022808-DD-003	-48041-062008-MC-007 G	S-48041-062008-MC-007	S-048041-022808-DD-003H	S-048041-022808-DD-00
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.83-1.3) ft BGS	(0-1.3) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.2-1.7) ft BGS	(0-1.7) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.8)	--	ND(3.4)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	0.12 J	--	ND(3.1)	--	ND(6)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.6)	--	ND(2.4)	--	ND(4.5)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(21)	--	ND(19)	--	ND(36)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.6)	--	ND(2.4)	--	ND(4.5)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(2)	--	ND(1.8)	--	ND(3.4)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2)	--	ND(1.8)	--	ND(3.4)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.6)	--	ND(2.4)	--	ND(4.5)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(4.3)	--	ND(3.9)	--	ND(7.5)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	0.18 J	--	ND(3.1)	--	ND(6)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	0.2 J	--	ND(3.1)	--	ND(6)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	0.49 J	--	ND(3.1)	--	ND(6)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(0.52)	--	ND(0.48)	--	ND(0.9)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	1.4 J	--	0.26 J	--	0.23 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	1.6 J	--	0.29 J	--	0.26 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	2 J	--	0.46 J	--	0.54 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	1.6 J	--	0.24 J	--	0.33 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	0.92 J	--	0.2 J	--	ND(6)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(3.5)	--	ND(3.1)	--	ND(6)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(1)	--	ND(0.95)	--	ND(1.8)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	0.32 J	--	1.7 J	--	ND(6)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	0.58 J	--	1.1 J	--	ND(6)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	1.6 J	--	0.32 J	--	0.45 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	0.34 J	--	ND(3.1)	--	ND(6)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	2.6 J	--	0.58 J	--	0.45 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.2 J	--	ND(3.1)	--	ND(6)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(0.52)	--	ND(0.48)	--	ND(0.9)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	1.2 J	--	0.2 J	--	0.22 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	0.14 J	--	ND(3.1)	--	ND(6)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(3.5)	--	ND(3.1)	--	ND(6)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(3.5)	--	ND(3.1)	--	ND(6)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(2)	--	ND(1.8)	--	ND(3.4)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	1.7 J	--	0.22 J	--	0.24 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(3.5)	--	ND(3.1)	--	ND(6)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	2.4 J	--	0.56 J	--	0.51 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	ND(3.1)	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					G6	lab composite G6,G5,G4	G8	lab composite G7,G8,G9	H1	lab composite H1,H2,H3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-002G	S-048041-022808-DD-0023	-48041-062008-MC-007 G	S-48041-062008-MC-0075	-048041-022808-DD-003H	S-048041-022808-DD-003
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	6/20/2008	6/20/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.83-1.3) ft BGS	(0-1.3) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.2-1.7) ft BGS	(0-1.7) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	9810	--	6330	--	11200
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.46 J	--	1.8 J	--	0.14 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	7.0	--	3.7	--	1.3
Barium	mg/kg	75	NLV	NLV	150000	130000	--	219 J	--	124 J	--	142 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	1.6	--	0.41	--	3.3
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	1.4	--	2.1	--	0.21
Calcium	mg/kg	NA	NA	NA	NA	NA	--	59300	--	33400 J	--	94300
Chromium	mg/kg	18	NLV	NLV	240	9200	--	39.2 J	--	72.0	--	103 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	0.57 J	--	1.9	--	ND(0.90)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	5.5	--	5.5	--	0.85
Copper	mg/kg	32	NLV	NLV	59000	73000	--	64.9	--	96.2 J	--	9.9
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	15300	--	18200	--	7560
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	284	--	273	--	292
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	470	--	290	--	558
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	303	--	276	--	364
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	12600	--	8190 J	--	26900
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	779	--	661 J	--	**2170[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	0.28	--	0.30	--	0.058
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	24.4	--	32.1	--	3.7
Potassium	mg/kg	NA	NA	NA	NA	NA	--	1270	--	703	--	738
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.2	--	0.52	--	1.6
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.25	--	0.22	--	0.058 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	222	--	267	--	518
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.22	--	ND(0.48)	--	0.040 J
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	19.9 J	--	18.3	--	21.7 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	243	--	671	--	33.8
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(2.2)	--	ND(3.9)	--	ND(3.7)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	17	--	8	--	31
Total PCBs	mg/kg	NA	16000	810	6500	16	--	**17[p]**	--	8	--	**31[p]**

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					H5	lab composite H4,H5,H6	H8	lab composite H7,H8,H9	I1	lab composite I1, I3, I5
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-004H	S-048041-022808-DD-004	S-048041-022808-DD-005H	S-048041-022808-DD-005	S-048041-070908-DD-014	S-048041-070908-DD-014
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	2/28/2008	2/28/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-0.58) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.5-2) ft BGS	(0-2) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.28)UJ	--	ND(0.041)UJ	--	ND(0.1)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	1.7	--	ND(0.21)	--	ND(0.5)UJ	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	2.3	--	0.53	--	ND(0.2)UJ	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	15	--	0.044 J	--	ND(0.2)UJ	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.98	--	ND(0.083)	--	ND(0.2)UJ	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.56)	--	ND(0.083)	--	ND(0.2)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	0.53 J	--	ND(0.083)	--	ND(0.2)UJ	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(4.2)	--	ND(0.62)	--	0.12 J	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(14)	--	ND(2.1)	--	ND(5)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	0.57 J	--	ND(2.1)	--	ND(5)UJ	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(4.2)UJ	--	ND(0.62)UJ	--	ND(1.5)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.56)UJ	--	ND(0.083)UJ	--	ND(0.2)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.56)	--	ND(0.083)	--	ND(0.2)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(1.1)	--	ND(0.17)	--	ND(0.4)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.28)UJ	--	ND(0.041)UJ	--	ND(0.1)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(6.7)	--	0.052 J	--	ND(2.4)UJ	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.56)	--	ND(0.083)	--	ND(0.2)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.12 J	--	0.36	--	ND(0.1)UJ	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.42 J	--	0.064 J	--	ND(0.5)UJ	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(6.7)	--	0.096 J	--	9.4 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(6.7)	--	0.11 J	--	ND(2.4)UJ	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.22 J	--	0.041 J	--	ND(0.2)UJ	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.28)	--	ND(0.041)	--	ND(0.1)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.28)UJ	--	ND(0.041)UJ	--	ND(0.1)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.28)	--	0.038 J	--	ND(0.1)UJ	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.56)	--	ND(0.083)	--	ND(0.2)UJ	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(1.4)	--	ND(0.21)	--	ND(0.5)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.22)	--	ND(0.033)	--	ND(0.08)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.96	--	0.21	--	ND(0.3)UJ	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					H5	lab composite H4,H5,H6	H8	lab composite H7,H8,H9	I1	lab composite I1, I3, I5
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-004H	S-048041-022808-DD-004	S-048041-022808-DD-005H	S-048041-022808-DD-005	S-048041-070908-DD-014	S-048041-070908-DD-014
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	2/28/2008	2/28/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-0.58) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.5-2) ft BGS	(0-2) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(35)	--	ND(8)	--	ND(15)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(35)	--	ND(8)	--	ND(15)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(35)	--	ND(8)	--	ND(15)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(35)	--	ND(8)	--	ND(15)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(20)	--	ND(4.5)	--	ND(8.5)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(35)	--	ND(8)	--	ND(15)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(35)	--	ND(8)	--	ND(15)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(35)	--	ND(8)	--	ND(15)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(35)	--	0.56 J	--	ND(15)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(35)	--	ND(8)	--	ND(15)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(27)	--	ND(6.1)	--	ND(11)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(35)	--	ND(8)	--	ND(15)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(210)	--	ND(48)	--	ND(91)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(27)	--	ND(6.1)	--	ND(11)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(20)	--	ND(4.5)	--	ND(8.5)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(35)	--	ND(8)	--	ND(15)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(20)	--	ND(4.5)	--	ND(8.5)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(35)	--	ND(8)	--	ND(15)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(27)	--	ND(6.1)	--	ND(11)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(44)	--	ND(10)	--	ND(19)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(35)	--	0.27 J	--	ND(15)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(35)	--	ND(8)	--	0.86 J
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(35)	--	ND(8)	--	ND(15)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	ND(35)	--	ND(8)	--	0.5 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(5.3)	--	ND(1.2)	--	ND(2.3)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	ND(35)	--	0.21 J	--	3.1 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	1.1 J	--	0.29 J	--	3.3 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	2.1 J	--	0.5 J	--	4.5 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	1.2 J	--	0.3 J	--	2.1 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	ND(35)	--	ND(8)	--	1.8 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(35)	--	ND(8)	--	ND(15)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(11)	--	ND(2.4)	--	ND(4.5)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	17 J	--	0.96 J	--	ND(15)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	3.5 J	--	ND(8)	--	ND(15)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(35)	--	ND(8)	--	ND(15)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(35)	--	ND(8)	--	ND(15)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	1.7 J	--	0.23 J	--	3 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(35)	--	ND(8)	--	0.61 J
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(35)	--	ND(8)	--	ND(15)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(35)	--	ND(8)	--	ND(15)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(35)	--	ND(8)	--	ND(15)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(35)	--	ND(8)	--	ND(15)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(35)	--	ND(8)	--	ND(15)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	2.1 J	--	0.56 J	--	3.2 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	ND(35)	--	0.39 J	--	ND(15)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(35)	--	ND(8)	--	ND(15)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(5.3)	--	ND(1.2)	--	ND(2.3)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(35)	--	ND(8)	--	ND(15)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(35)	--	ND(8)	--	ND(15)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	1.1 J	--	0.23 J	--	2.1 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(35)	--	ND(8)	--	ND(15)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(35)	--	0.21 J	--	ND(15)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(35)	--	ND(8)	--	ND(15)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(35)	--	ND(8)	--	ND(15)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(35)	--	ND(8)	--	ND(15)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(20)	--	ND(4.5)	--	ND(8.5)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	1.6 J	--	1 J	--	0.67 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(35)	--	ND(8)	--	ND(15)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	2.7 J	--	0.56 J	--	2.8 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	--	--	ND(15)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					H5	lab composite H4,H5,H6	H8	lab composite H7,H8,H9	I1	lab composite I1, I3, I5
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-004H	S-048041-022808-DD-004	S-048041-022808-DD-005H	S-048041-022808-DD-005	S-048041-070908-DD-014	S-048041-070908-DD-014
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	2/28/2008	2/28/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-0.58) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1.5-2) ft BGS	(0-2) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	7990	--	9490	--	14300 J
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.96 J	--	0.37 J	--	0.58
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	7.5	--	3.9	--	6.8
Barium	mg/kg	75	NLV	NLV	150000	130000	--	271 J	--	182 J	--	262
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	1.2	--	2.1	--	3.2
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	3.1	--	0.92	--	1.5 J
Calcium	mg/kg	NA	NA	NA	NA	NA	--	51900	--	97600	--	150000
Chromium	mg/kg	18	NLV	NLV	240	9200	--	91.8 J	--	79.1 J	--	36.4 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	0.47 J	--	0.34 J	--	3.1
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	5.5	--	2.6	--	3.5 J
Copper	mg/kg	32	NLV	NLV	59000	73000	--	95.5	--	29.5	--	43.7
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	24700	--	20700	--	16100 J
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	494	--	156	--	165 J
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	657	--	446	--	253 J
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	534	--	266	--	206
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	11400	--	23300	--	28700 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	**2120[n]**	--	**3990[n]**	--	**1600 J[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	0.20	--	0.15	--	0.098
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	26.3	--	10.7	--	15.3 J
Potassium	mg/kg	NA	NA	NA	NA	NA	--	1110	--	754	--	1910
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.3	--	1.3	--	2.0
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.30	--	0.093 J	--	0.16
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	438	--	371	--	692
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.16	--	0.093 J	--	0.29
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	30.4 J	--	42.9 J	--	18.0
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	3050	--	144	--	234
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	ND(0.75)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	ND(0.75)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	ND(0.75)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	ND(0.75)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	ND(0.75)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(2)	--	5
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	18	--	12	--	ND(0.75)
Total PCBs	mg/kg	NA	16000	810	6500	16	--	**18[p]**	--	12	--	5

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					I2	lab composite I2, I4, I6	J2	lab composite J1,J2,J3	J4	lab composite J4,J5,J6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-070908-DD-015	IS-048041-070908-DD-015	S-048041-030408-DD-020	JS-048041-030408-DD-020	S-048041-030408-DD-021	JS-048041-030408-DD-021
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	7/9/2008	7/9/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-1.1) ft BGS	(0.17-0.67) ft BGS	(0-1.7) ft BGS	(0.25-0.75) ft BGS	(0-0.75) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.048)	--	ND(0.05)UJ	--	ND(0.061)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	0.013 J	--	ND(0.05)	--	ND(0.061)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.096)	--	0.072 J	--	0.17	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.096)	--	ND(0.1)	--	0.17	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.096)	--	ND(0.1)	--	ND(0.12)	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.096)	--	ND(0.1)	--	ND(0.12)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.096)	--	ND(0.1)	--	ND(0.12)	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	0.084 J	--	ND(0.75)	--	ND(0.92)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.4)	--	ND(2.5)	--	ND(3.1)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.4)	--	ND(2.5)	--	ND(3.1)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.72)U	--	ND(0.75)UJ	--	ND(0.92)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	0.024 J	--	0.06	--	0.07	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.096)	--	ND(0.1)UJ	--	ND(0.12)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.096)	--	ND(0.1)	--	ND(0.12)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.19)	--	ND(0.2)	--	ND(0.25)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.048)UJ	--	ND(0.05)UJ	--	ND(0.061)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.048)UJ	--	ND(0.05)UJ	--	ND(0.061)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.2)UJ	--	0.15 J	--	0.25 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.096)UJ	--	ND(0.1)UJ	--	ND(0.12)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.012 J	--	0.049 J	--	0.089	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.24)	--	0.3	--	0.62	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.28 J	--	0.66 J	--	0.16 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.067 J	--	0.54 J	--	1 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.24)	--	0.17 J	--	0.17 J	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.032 J	--	0.024 J	--	0.11 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.048)UJ	--	ND(0.05)	--	ND(0.061)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.048)UJ	--	ND(0.05)UJ	--	ND(0.061)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.048)	--	ND(0.05)	--	ND(0.061)	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.096)	--	ND(0.1)	--	ND(0.12)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.24)	--	ND(0.25)	--	ND(0.31)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.039)	--	ND(0.04)	--	ND(0.049)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.057 J	--	0.24	--	0.34	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					I2	lab composite I2, I4, I6	J2	lab composite J1,J2,J3	J4	lab composite J4,J5,J6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-070908-DD-015	IS-048041-070908-DD-015	S-048041-030408-DD-020	JS-048041-030408-DD-020	S-048041-030408-DD-021	JS-048041-030408-DD-021
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	7/9/2008	7/9/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-1.1) ft BGS	(0.17-0.67) ft BGS	(0-1.7) ft BGS	(0.25-0.75) ft BGS	(0-0.75) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(19)	--	ND(17)	--	ND(16)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(19)	--	ND(17)	--	ND(16)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(19)	--	ND(17)	--	ND(16)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(19)	--	ND(17)	--	ND(16)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(11)	--	ND(9.5)	--	ND(9.1)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(19)	--	ND(17)	--	ND(16)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(19)	--	ND(17)	--	ND(16)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(19)	--	ND(17)	--	ND(16)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(19)	--	ND(17)	--	ND(16)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(19)	--	ND(17)	--	ND(16)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(14)	--	ND(13)	--	ND(12)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(19)	--	ND(17)	--	ND(16)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(120)	--	ND(100)	--	ND(97)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(14)	--	ND(13)	--	ND(12)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(11)	--	ND(9.5)	--	ND(9.1)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(19)	--	ND(17)	--	ND(16)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(11)	--	ND(9.5)	--	ND(9.1)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(19)	--	ND(17)	--	ND(16)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(14)	--	ND(13)	--	ND(12)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(24)	--	ND(21)	--	ND(20)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	0.5 J	--	ND(17)	--	ND(16)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(19)	--	ND(17)	--	ND(16)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(19)	--	ND(17)	--	ND(16)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	1.8 J	--	ND(17)	--	ND(16)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(2.9)	--	ND(2.5)	--	ND(2.4)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	2.6 J	--	ND(17)	--	ND(16)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	2.1 J	--	ND(17)	--	ND(16)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	2.9 J	--	ND(17)	--	0.57 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	1.3 J	--	ND(17)	--	ND(16)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	1.3 J	--	ND(17)	--	ND(16)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(19)	--	ND(17)	--	ND(16)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(5.8)	--	ND(5.1)	--	ND(4.8)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	ND(19)U	--	1.1 J	--	4.9 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	1.4 J	--	ND(17)	--	ND(16)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(19)	--	ND(17)	--	ND(16)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(19)	--	ND(17)	--	ND(16)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	3.3 J	--	0.66 J	--	ND(16)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(19)	--	ND(17)	--	ND(16)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(19)	--	ND(17)	--	ND(16)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(19)	--	ND(17)	--	ND(16)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(19)	--	ND(17)	--	ND(16)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(19)	--	ND(17)	--	ND(16)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(19)	--	ND(17)	--	ND(16)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	6.3 J	--	1.1 J	--	1.1 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.74 J	--	ND(17)	--	ND(16)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(19)	--	ND(17)	--	ND(16)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(2.9)	--	ND(2.5)	--	ND(2.4)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(19)	--	ND(17)	--	ND(16)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(19)	--	ND(17)	--	ND(16)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	1.1 J	--	ND(17)	--	ND(16)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(19)	--	ND(17)	--	ND(16)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(19)	--	ND(17)	--	ND(16)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(19)	--	ND(17)	--	ND(16)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(19)	--	ND(17)	--	ND(16)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(19)	--	ND(17)	--	ND(16)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(11)	--	ND(9.5)	--	ND(9.1)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	4.8 J	--	0.76 J	--	ND(16)
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(19)	--	ND(17)	--	ND(16)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	5.3 J	--	0.96 J	--	0.82 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	ND(19)	--	--	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					I2	lab composite I2, I4, I6	J2	lab composite J1,J2,J3	J4	lab composite J4,J5,J6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-070908-DD-015	IS-048041-070908-DD-015	S-048041-030408-DD-020	JS-048041-030408-DD-020	S-048041-030408-DD-021	JS-048041-030408-DD-021
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	7/9/2008	7/9/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-1.1) ft BGS	(0.17-0.67) ft BGS	(0-1.7) ft BGS	(0.25-0.75) ft BGS	(0-0.75) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	7330 J	--	7920	--	5350
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.77	--	1.3 J	--	0.74 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	10.4	--	9.8	--	6.0
Barium	mg/kg	75	NLV	NLV	150000	130000	--	335	--	289	--	204
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.89	--	0.40	--	0.37
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	9.3 J	--	1.9 J	--	1.6 J
Calcium	mg/kg	NA	NA	NA	NA	NA	--	42400	--	72300	--	51600
Chromium	mg/kg	18	NLV	NLV	240	9200	--	19.5 J	--	37.3 J	--	54.3 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	ND(0.92)	--	0.28 J	--	0.50 J
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	5.7 J	--	4.9	--	3.2
Copper	mg/kg	32	NLV	NLV	59000	73000	--	77.3	--	192	--	78.3
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	23000 J	--	19700	--	18800
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	401 J	--	**3740[p]**	--	417
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	381 J	--	**946[p]**	--	472
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	396	--	2920	--	434
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	5070 J	--	11600 J	--	7990 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	408 J	--	842	--	**1690[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	0.15	--	0.27	--	0.32
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	17.2 J	--	26.7 J	--	12.8 J
Potassium	mg/kg	NA	NA	NA	NA	NA	--	780	--	2170	--	495
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.2	--	1.2	--	0.70
Silver	mg/kg	1	NLV	NLV	2900	9000	--	1.5	--	1.0	--	0.20
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	582	--	320	--	252
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.20	--	0.42	--	0.14
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	20.0	--	21.0	--	29.9
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	4180	--	393	--	298
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	4.9	--	16	--	3.4
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)	--	ND(2.1)	--	ND(0.4)
Total PCBs	mg/kg	NA	16000	810	6500	16	--	4.9	--	16	--	3.4

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					J9	lab composite J7,J8,J9	K1	lab composite K1, K2, K3	K4	lab composite K4, K5, K6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030408-DD-022	JS-048041-030408-DD-022	S-048041-071008-DD-018	KS-048041-071008-DD-018	S-048041-070908-DD-016	K4S-048041-070908-DD-016
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/4/2008	3/4/2008	7/10/2008	7/10/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.21-0.71) ft BGS	(0-1.5) ft BGS	(0.67-1.17) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.047)UJ	--	ND(0.047)	--	ND(0.049)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.047)	--	0.057	--	0.042 J	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	1	--	2.7	--	0.49 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	0.028 J	--	0.065 J	--	0.029 J	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.32	--	0.85	--	0.091 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.094)	--	ND(0.094)	--	ND(0.098)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.094)	--	ND(0.094)	--	ND(0.098)UJ	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.7)	--	ND(0.7)	--	ND(0.74)UJ	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)	--	ND(2.3)	--	ND(2.5)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.3)	--	ND(2.3)	--	ND(2.5)UJ	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.7)UJ	--	ND(0.7)U	--	ND(0.74)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	0.073	--	0.03 J	--	0.012 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.094)UJ	--	ND(0.094)	--	ND(0.098)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.094)	--	ND(0.094)	--	ND(0.098)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.19)	--	ND(0.19)	--	ND(0.2)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.047)UJ	--	ND(0.047)	--	ND(0.049)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.047)	--	0.049	--	0.043 J	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.047)UJ	--	ND(0.049)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.17 J	--	0.084 J	--	ND(1.2)UJ	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.094)UJ	--	ND(0.094)UJ	--	ND(0.098)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.18	--	0.47	--	0.11 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.15 J	--	0.2 J	--	0.026 J	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.16 J	--	0.22 J	--	ND(1.2)UJ	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.32 J	--	0.092 J	--	ND(1.2)UJ	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.047)	--	0.078	--	ND(0.049)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.13	--	0.95	--	0.13 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.047)	--	ND(0.047)	--	ND(0.049)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.047)UJ	--	ND(0.049)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.047)	--	0.081	--	0.036 J	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.094)	--	ND(0.094)	--	ND(0.098)UJ	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)	--	ND(0.23)	--	ND(0.25)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.038)	--	0.18	--	ND(0.039)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.82	--	1.7	--	0.48 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					J9	lab composite J7,J8,J9	K1	lab composite K1, K2, K3	K4	lab composite K4, K5, K6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030408-DD-022	JS-048041-030408-DD-022	S-048041-071008-DD-018	KS-048041-071008-DD-018	S-048041-070908-DD-016	KS-048041-070908-DD-016
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/4/2008	3/4/2008	7/10/2008	7/10/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.21-0.71) ft BGS	(0-1.5) ft BGS	(0.67-1.17) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(54)	--	ND(15)	--	ND(19)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(54)	--	ND(15)	--	ND(19)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(54)	--	ND(15)	--	ND(19)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(54)	--	ND(15)	--	ND(19)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(31)	--	ND(8.7)	--	ND(11)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(54)	--	ND(15)	--	ND(19)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(54)	--	ND(15)	--	ND(19)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(54)	--	ND(15)	--	ND(19)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(54)	--	6.4 J	--	8.5 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(54)	--	ND(15)	--	ND(19)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(41)	--	ND(12)	--	ND(14)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(54)	--	ND(15)	--	ND(19)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(330)	--	ND(92)	--	ND(110)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(41)	--	ND(12)	--	ND(14)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(31)	--	ND(8.7)	--	ND(11)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(54)	--	ND(15)	--	ND(19)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(31)	--	ND(8.7)	--	ND(11)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(54)	--	ND(15)	--	ND(19)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(41)	--	ND(12)	--	ND(14)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(68)	--	ND(19)	--	ND(23)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(54)	--	ND(15)	--	0.67 J
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(54)	--	ND(15)	--	ND(19)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(54)	--	ND(15)	--	ND(19)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	ND(54)	--	ND(15)	--	0.6 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(8.2)	--	ND(2.3)	--	ND(2.8)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	ND(54)	--	ND(15)	--	ND(19)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	ND(54)	--	ND(15)	--	ND(19)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	ND(54)	--	ND(15)	--	0.53 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	ND(54)	--	ND(15)	--	ND(19)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	ND(54)	--	ND(15)	--	ND(19)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(54)	--	ND(15)	--	ND(19)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(16)	--	ND(4.6)	--	ND(5.6)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	6.4 J	--	ND(15)	--	ND(19)U
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	4.3 J	--	ND(15)	--	ND(19)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(54)	--	ND(15)	--	ND(19)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(54)	--	ND(15)	--	ND(19)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	ND(54)	--	1.2 J	--	ND(19)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(54)	--	ND(15)	--	ND(19)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(54)	--	ND(15)	--	ND(19)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(54)	--	ND(15)	--	ND(19)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(54)	--	ND(15)	--	ND(19)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(54)	--	ND(15)	--	ND(19)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(54)	--	ND(15)	--	ND(19)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	ND(54)	--	1.9 J	--	0.93 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	ND(54)	--	6.3 J	--	1.7 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(54)	--	ND(15)	--	ND(19)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(8.2)	--	ND(2.3)	--	ND(2.8)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(54)	--	ND(15)	--	ND(19)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(54)	--	ND(15)	--	ND(19)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	ND(54)	--	ND(15)	--	ND(19)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(54)	--	ND(15)	--	ND(19)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(54)	--	1.8 J	--	2.7 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(54)	--	ND(15)	--	ND(19)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(54)	--	ND(15)	--	ND(19)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(54)	--	ND(15)	--	ND(19)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(31)	--	ND(8.7)	--	ND(11)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	ND(54)	--	6.6 J	--	3.6 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(54)	--	ND(15)	--	ND(19)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	1.4 J	--	1.8 J	--	1.5 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	ND(15)	--	ND(19)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					J9	lab composite J7,J8,J9	K1	lab composite K1, K2, K3	K4	lab composite K4, K5, K6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-030408-DD-022J	S-048041-030408-DD-022	S-048041-071008-DD-018	KS-048041-071008-DD-018	S-048041-070908-DD-016	K4S-048041-070908-DD-016
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	3/4/2008	3/4/2008	7/10/2008	7/10/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0.21-0.71) ft BGS	(0-1.5) ft BGS	(0.67-1.17) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	5930	--	8390	--	10700 J
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.54 J	--	0.43 J	--	0.42
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	3.3	--	9.2 J	--	4.3
Barium	mg/kg	75	NLV	NLV	150000	130000	--	176	--	150	--	212
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	1.0	--	0.51	--	1.7
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	6.4 J	--	1.5	--	3.3 J
Calcium	mg/kg	NA	NA	NA	NA	NA	--	42900	--	56800	--	54800
Chromium	mg/kg	18	NLV	NLV	240	9200	--	50.5 J	--	33.1	--	54.6 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	0.32 J	--	1.2	--	ND(0.90)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	2.1	--	4.8	--	6.6 J
Copper	mg/kg	32	NLV	NLV	59000	73000	--	59.5	--	47.5	--	125
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	18500	--	15900	--	14800 J
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	**4630[p]**	--	275 J	--	362 J
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	**4860[p]**	--	438 J	--	478 J
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	4680	--	322	--	396
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	9580 J	--	8570	--	18900 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	**1570[n]**	--	660	--	1440 J
Mercury	mg/kg	0.13	89	62	8800	580	--	0.091	--	0.14	--	0.14
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	11.9 J	--	16.6	--	18.4 J
Potassium	mg/kg	NA	NA	NA	NA	NA	--	571	--	1230	--	2190
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	0.69	--	1.2	--	1.2
Silver	mg/kg	1	NLV	NLV	2900	9000	--	1.3	--	0.15	--	0.23
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	282	--	489	--	1100
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.055 J	--	0.36	--	0.11
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	21.2	--	24.7	--	20.4
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	303	--	175	--	352
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)	--	ND(0.74)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)	--	ND(0.74)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)	--	ND(0.74)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)	--	ND(0.74)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	39	--	1.6
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)	--	ND(0.74)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.9)	--	12	--	4.4
Total PCBs	mg/kg	NA	16000	810	6500	16	--	ND	--	**51[p]**	--	6

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					K9	lab composite K9,K8,K7	L3	lab composite L1,L2,L3	L6	lab composite L6,L5,L4
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	-048041-022908-DD-016K	S-048041-022908-DD-016	-048041-022808-DD-006L	S-048041-022808-DD-006	-048041-022808-DD-007L	S-048041-022808-DD-007
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/28/2008	2/28/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.33-0.83) ft BGS	(0-0.83) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-1.1) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.047)UJ	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	0.06 J	--	ND(0.31)UJ	--	ND(0.24)UJ	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.19	--	0.22 J	--	0.05 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	0.023 J	--	ND(0.12)UJ	--	ND(0.096)UJ	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.15	--	ND(0.12)UJ	--	ND(0.096)UJ	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.093)	--	ND(0.12)UJ	--	ND(0.096)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.093)	--	ND(0.12)UJ	--	ND(0.096)UJ	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.7)	--	ND(0.94)UJ	--	ND(0.72)UJ	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)	--	ND(3.1)UJ	--	ND(2.4)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.3)	--	ND(3.1)UJ	--	ND(2.4)UJ	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.7)UJ	--	ND(0.94)UJ	--	ND(0.72)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	0.031 J	--	0.012 J	--	ND(0.048)UJ	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.093)UJ	--	ND(0.12)UJ	--	ND(0.096)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.093)	--	ND(0.12)UJ	--	ND(0.096)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.19)	--	ND(0.25)UJ	--	ND(0.19)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.1)	--	ND(1.5)UJ	--	ND(1.2)UJ	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.093)	--	ND(0.12)UJ	--	ND(0.096)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.054	--	0.078 J	--	ND(0.048)UJ	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.064 J	--	0.087 J	--	ND(0.24)UJ	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.37 J	--	0.14 J	--	0.28 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.1 J	--	0.1 J	--	0.073 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.072 J	--	0.045 J	--	0.013 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.047)	--	ND(0.062)UJ	--	ND(0.048)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.047)UJ	--	ND(0.062)UJ	--	ND(0.048)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.025 J	--	0.028 J	--	ND(0.048)UJ	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.093)	--	ND(0.12)UJ	--	ND(0.096)UJ	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)	--	ND(0.31)UJ	--	ND(0.24)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.037)	--	ND(0.05)UJ	--	ND(0.038)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.23	--	0.2 J	--	0.068 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					K9	lab composite K9,K8,K7	L3	lab composite L1,L2,L3	L6	lab composite L6,L5,L4
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	-048041-022908-DD-016K	S-048041-022908-DD-016	-048041-022808-DD-006L	S-048041-022808-DD-006	-048041-022808-DD-007L	S-048041-022808-DD-007
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/28/2008	2/28/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.33-0.83) ft BGS	(0-0.83) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-1.1) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(9)	--	ND(0.18)UJ	--	ND(1.7)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(16)	--	0.03 J	--	ND(3)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(12)	--	ND(0.24)UJ	--	ND(2.3)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(96)	--	ND(1.9)UJ	--	ND(18)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(12)	--	ND(0.24)UJ	--	ND(2.3)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(9)	--	ND(0.18)UJ	--	ND(1.7)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(9)	--	ND(0.18)UJ	--	ND(1.7)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(12)	--	ND(0.24)UJ	--	ND(2.3)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(20)	--	ND(0.4)UJ	--	ND(3.8)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(16)	--	0.011 J	--	ND(3)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	ND(16)	--	0.021 J	--	ND(3)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(2.4)	--	ND(0.049)UJ	--	ND(0.46)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	0.69 J	--	0.073 J	--	0.23 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	0.56 J	--	0.1 J	--	0.29 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	0.87 J	--	0.15 J	--	0.4 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	0.44 J	--	0.14 J	--	0.33 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	ND(16)	--	0.057 J	--	0.16 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(4.8)	--	ND(0.097)UJ	--	ND(0.92)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	1.1 J	--	0.047 J	--	0.24 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(16)	--	0.25 J	--	0.55 J
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	0.73 J	--	0.089 J	--	0.29 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(16)	--	0.024 J	--	ND(3)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	1.5 J	--	0.13 J	--	0.41 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.48 J	--	0.0091 J	--	ND(3)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(2.4)	--	ND(0.049)UJ	--	ND(0.46)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	ND(16)	--	0.1 J	--	0.22 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(16)	--	0.023 J	--	ND(3)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(9)	--	ND(0.18)UJ	--	ND(1.7)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	1.3 J	--	0.062 J	--	0.2 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(16)	--	ND(0.32)UJ	--	ND(3)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	1.3 J	--	0.12 J	--	0.4 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	--	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					K9	lab composite K9,K8,K7	L3	lab composite L1,L2,L3	L6	lab composite L6,L5,L4
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	3-048041-022908-DD-016K	S-048041-022908-DD-016	3-048041-022808-DD-006L	S-048041-022808-DD-006	3-048041-022808-DD-007L	S-048041-022808-DD-007
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/28/2008	2/28/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.33-0.83) ft BGS	(0-0.83) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-1.1) ft BGS
Sample Type	Units	a	f	h	n	p						
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	5720	--	5670	--	11900
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.46	--	1.0 J	--	0.25 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	3.9	--	4.3	--	2.6
Barium	mg/kg	75	NLV	NLV	150000	130000	--	115	--	126 J	--	168 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.38	--	0.80	--	3.4
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	2.1	--	0.90	--	0.71
Calcium	mg/kg	NA	NA	NA	NA	NA	--	64200	--	68400	--	134000
Chromium	mg/kg	18	NLV	NLV	240	9200	--	61.2	--	229 J	--	61.1 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	ND(0.96)	--	0.48 J	--	ND(0.92)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	4.2	--	3.5	--	2.0
Copper	mg/kg	32	NLV	NLV	59000	73000	--	43.4	--	48.8	--	23.8
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	17400	--	41800	--	14400
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	567	--	235	--	**3240[p]**
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	488	--	289	--	**4620[p]**
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	535	--	257	--	3830
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	12200	--	16300	--	24900
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	1440	--	**6210[n]**	--	**2680[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	0.24	--	0.25	--	0.11
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	17.0	--	14.7	--	10.7
Potassium	mg/kg	NA	NA	NA	NA	NA	--	727	--	516	--	1000
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	0.51	--	0.74	--	1.3
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.12	--	0.11	--	0.059 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	343	--	117	--	478
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	ND(0.096)U	--	0.095 J	--	0.078 J
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	23.1	--	76.6 J	--	29.9 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	245	--	114	--	118
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.79)	--	ND(0.8)	--	ND(0.76)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.79)	--	ND(0.8)	--	ND(0.76)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.79)	--	ND(0.8)	--	ND(0.76)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	0.34 J	--	ND(0.8)	--	ND(0.76)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.79)	--	ND(0.8)	--	ND(0.76)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.79)	--	ND(0.8)	--	ND(0.76)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	8.3	--	7	--	7.2
Total PCBs	mg/kg	NA	16000	810	6500	16	--	8.64 J	--	7	--	7.2

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					L9	lab composite L7,L8,L9	M3	lab composite M1,M2,M3	N3	lab composite N1,N2,N3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-008L	S-048041-022808-DD-008	S-48041-061208-AF-006 M	S-48041-061208-AF-006	S-48041-062008-MC-008 N	S-48041-062008-MC-008
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.046)UJ	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.04 J	--	ND(0.098)UJ	--	ND(0.14)UJ	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.042 J	--	ND(0.098)UJ	--	ND(0.14)UJ	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.69)	--	ND(0.73)UJ	--	0.17 J	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)	--	ND(2.4)UJ	--	ND(3.4)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.3)	--	ND(2.4)UJ	--	ND(3.4)UJ	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.69)UJ	--	ND(0.73)UJ	--	ND(1)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.046)	--	ND(0.049)UJ	--	0.012 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.092)UJ	--	ND(0.098)UJ	--	ND(0.14)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.18)	--	ND(0.2)UJ	--	ND(0.27)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.046)UJ	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.1)	--	ND(1.2)UJ	--	ND(1.6)UJ	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	ND(0.046)	--	0.013 J	--	0.012 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.45 J	--	0.15 J	--	0.47 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.066 J	--	0.055 J	--	0.05 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Toluene	mg/kg	NA	610	3300	12000000	160000	ND(0.092)	--	0.021 J	--	0.049 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.046)UJ	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.046)	--	ND(0.049)UJ	--	ND(0.068)UJ	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.092)	--	ND(0.098)UJ	--	ND(0.14)UJ	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)	--	ND(0.24)UJ	--	ND(0.34)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.037)	--	ND(0.039)UJ	--	ND(0.054)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.053 J	--	0.043 J	--	0.062 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					L9	lab composite L7,L8,L9	M3	lab composite M1,M2,M3	N3	lab composite N1,N2,N3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022808-DD-008L	S-048041-022808-DD-008	S-48041-061208-AF-006 M	S-48041-061208-AF-006	S-48041-062008-MC-008 N	S-48041-062008-MC-008
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/28/2008	2/28/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(4.1)	--	ND(3.6)	--	ND(4.5)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(7.2)	--	0.28 J	--	ND(7.9)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5.5)	--	ND(4.9)	--	ND(6)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(44)	--	ND(39)	--	ND(48)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5.5)	--	ND(4.9)	--	ND(6)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(4.1)	--	ND(3.6)	--	ND(4.5)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.1)	--	ND(3.6)	--	ND(4.5)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(5.5)	--	ND(4.9)	--	ND(6)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(9)	--	ND(8)	--	ND(9.9)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	0.22 J	--	ND(6.4)	--	ND(7.9)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(1.1)	--	ND(0.97)	--	ND(1.2)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	0.42 J	--	0.41 J	--	0.32 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	0.5 J	--	0.68 J	--	ND(7.9)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	0.84 J	--	1.1 J	--	0.65 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	0.58 J	--	0.95 J	--	0.4 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	0.27 J	--	0.31 J	--	ND(7.9)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(2.2)	--	ND(1.9)	--	ND(2.4)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	0.53 J	--	ND(6.4)	--	2.5 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	0.74 J	--	0.62 J	--	0.49 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	0.99 J	--	0.63 J	--	0.66 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.19 J	--	ND(6.4)	--	ND(7.9)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(1.1)	--	ND(0.97)	--	ND(1.2)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	0.44 J	--	0.59 J	--	0.31 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(7.2)	--	0.25 J	--	ND(7.9)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(4.1)	--	ND(3.6)	--	ND(4.5)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	0.79 J	--	0.43 J	--	0.26 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(7.2)	--	ND(6.4)	--	ND(7.9)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	0.89 J	--	0.58 J	--	0.78 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	ND(6.4)	--	ND(7.9)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					L9	lab composite L7,L8,L9	M3	lab composite M1,M2,M3	N3	lab composite N1,N2,N3
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	S-048041-022808-DD-008L	S-048041-022808-DD-008	S-48041-061208-AF-006 M	S-48041-061208-AF-006	S-48041-062008-MC-008 N	S-48041-062008-MC-008
Sample Date							2/28/2008	2/28/2008	6/12/2008	6/12/2008	6/20/2008	6/20/2008
Sample Depth							(0-0.5) ft BGS	(0-1.1) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
Sample Type	Units	a	f	h	n	p						
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	8310	--	9080	--	15600
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.40 J	--	0.57 J	--	0.79 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	4.1	--	4.4 J	--	7.9
Barium	mg/kg	75	NLV	NLV	150000	130000	--	170 J	--	144 J	--	285 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	1.5	--	0.57	--	3.1
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	1.8	--	3.3	--	1.8
Calcium	mg/kg	NA	NA	NA	NA	NA	--	168000	--	48900	--	54200 J
Chromium	mg/kg	18	NLV	NLV	240	9200	--	162 J	--	52.7 J	--	46.9
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	0.29 J	--	1.5 J	--	1.1
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	2.4	--	4.1	--	4.3
Copper	mg/kg	32	NLV	NLV	59000	73000	--	38.1	--	80.5	--	86.0 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	22000	--	19600	--	26900
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	299	--	795	--	501
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	467	--	**1260[p]**	--	775
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	354	--	968	--	568
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	41200	--	11800 J	--	24800 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	**13300[n]**	--	749	--	1270 J
Mercury	mg/kg	0.13	89	62	8800	580	--	0.19	--	0.049	--	0.28
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	11.8	--	20.4	--	25.9
Potassium	mg/kg	NA	NA	NA	NA	NA	--	737	--	1370	--	1620
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.2	--	0.76	--	2.2
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.12	--	1.0	--	0.29
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	545	--	596	--	713
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.098	--	0.25	--	0.23
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	56.5 J	--	24.0 J	--	21.3
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	166	--	668 J	--	597
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	ND(0.8)	--	ND(0.2)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	ND(0.8)	--	ND(0.2)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	ND(0.8)	--	ND(0.2)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	ND(0.8)	--	ND(0.2)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	ND(0.8)	--	ND(0.2)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	9.2	--	ND(0.8)	--	ND(0.2)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.72)	--	4.2	--	1.7
Total PCBs	mg/kg	NA	16000	810	6500	16	--	9.2	--	4.2	--	1.7

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					N6	lab composite N4,N5,N6	N8	lab composite N7,N8,N9	O1	ab composite O1, O2, O3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	3-48041-061808-MC-001	N S-48041-061808-MC-001	3-48041-061808-MC-002	N S-48041-061808-MC-002	S-048041-070908-DD-017	01S-048041-070908-DD-017
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	6/18/2008	6/18/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.29)UJ	--	ND(0.33)UJ	--	0.14 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.12)UJ	--	0.074 J	--	6	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.12)UJ	--	ND(0.13)UJ	--	0.5	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.12)UJ	--	ND(0.13)UJ	--	2.7	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.12)UJ	--	ND(0.13)UJ	--	0.051 J	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.12)UJ	--	ND(0.13)UJ	--	0.17 J	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.87)UJ	--	ND(0.99)UJ	--	ND(1.4)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.9)UJ	--	ND(3.3)UJ	--	ND(4.8)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.9)UJ	--	ND(3.3)UJ	--	ND(4.8)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.87)UJ	--	ND(0.99)UJ	--	ND(1.4)U	--
Benzene	mg/kg	NA	8.4	45	470000	840	0.02 J	--	0.02 J	--	0.37	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.12)UJ	--	ND(0.13)UJ	--	ND(0.19)	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.12)UJ	--	ND(0.13)UJ	--	ND(0.19)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.23)UJ	--	ND(0.26)UJ	--	ND(0.38)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.058)UJ	--	ND(0.066)UJ	--	0.26	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.058)UJ	--	ND(0.066)UJ	--	0.042 J	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.4)UJ	--	0.11 J	--	1.6 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.12)UJ	--	ND(0.13)UJ	--	ND(0.19)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.069 J	--	0.019 J	--	0.47	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.29)UJ	--	0.012 J	--	4.2	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.24 J	--	0.17 J	--	ND(2.3)	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.019 J	--	0.11 J	--	6.5 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.29)UJ	--	ND(0.33)UJ	--	1.4	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.058)UJ	--	0.13 J	--	ND(0.096)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.2 J	--	0.14 J	--	0.3	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.058)UJ	--	ND(0.066)UJ	--	ND(0.096)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.058)UJ	--	ND(0.066)UJ	--	0.26	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.12)UJ	--	ND(0.13)UJ	--	ND(0.19)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.29)UJ	--	ND(0.33)UJ	--	ND(0.48)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.046)UJ	--	ND(0.053)UJ	--	ND(0.076)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.11 J	--	0.17 J	--	4.5	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					N6	lab composite N4,N5,N6	N8	lab composite N7,N8,N9	O1	ab composite O1, O2, O3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-48041-061808-MC-001	N S-48041-061808-MC-001	S-48041-061808-MC-002	N S-48041-061808-MC-002	S-048041-070908-DD-017	01S-048041-070908-DD-017
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	6/18/2008	6/18/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(3.6)	--	ND(3.4)	--	ND(8.8)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(6.4)	--	ND(5.9)	--	7.6 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.9)	--	ND(4.5)	--	ND(12)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(39)	--	ND(36)	--	ND(94)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.9)	--	ND(4.5)	--	ND(12)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(3.6)	--	ND(3.4)	--	ND(8.8)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(3.6)	--	ND(3.4)	--	ND(8.8)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(4.9)	--	ND(4.5)	--	ND(12)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(8)	--	ND(7.4)	--	ND(19)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	0.3 J	--	ND(5.9)	--	0.94 J
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	0.22 J	--	ND(5.9)	--	ND(16)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	1.1 J	--	0.37 J	--	0.8 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(0.97)	--	ND(0.9)	--	ND(2.4)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	3 J	--	1.3 J	--	0.58 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	2.3 J	--	ND(5.9)	--	0.49 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	ND(6.4)	--	ND(5.9)	--	0.7 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	1.6 J	--	1.1 J	--	ND(16)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(6.4)	--	ND(5.9)	--	ND(16)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(1.9)	--	ND(1.8)	--	ND(4.7)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(6.4)	--	9.4	--	ND(16)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	2.4 J	--	1.2 J	--	0.9 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	6.4	--	2.4 J	--	1.6 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	0.57 J	--	ND(5.9)	--	4.6 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(0.97)	--	ND(0.9)	--	ND(2.4)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	1.5 J	--	0.89 J	--	ND(16)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(6.4)	--	ND(5.9)	--	0.74 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(6.4)	--	ND(5.9)	--	ND(16)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(6.4)	--	ND(5.9)	--	ND(16)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(3.6)	--	ND(3.4)	--	ND(8.8)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	4.2 J	--	1.3 J	--	4.5 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(6.4)	--	ND(5.9)	--	ND(16)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	4.8 J	--	2 J	--	1.7 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	ND(6.4)	--	ND(5.9)	--	ND(16)

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					N6	lab composite N4,N5,N6	N8	lab composite N7,N8,N9	O1	ab composite O1, O2, O3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	3-48041-061808-MC-001 N	S-48041-061808-MC-001	3-48041-061808-MC-002 N	S-48041-061808-MC-002	S-048041-070908-DD-017 01	S-048041-070908-DD-017
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	6/18/2008	6/18/2008	6/18/2008	6/18/2008	7/9/2008	7/9/2008
Sample Depth		Background	Inhalation	Inhalation			(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(1-1.5) ft BGS	(0-1.5) ft BGS
Sample Type		a	f	h	n	p						
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	5800	--	5630	--	5820 J
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.66 J	--	2.0 J	--	0.92
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	5.4	--	12.7	--	6.6
Barium	mg/kg	75	NLV	NLV	150000	130000	--	145	--	317	--	156
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.34	--	0.47	--	0.14 J
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	1.9	--	3.7	--	1.3 J
Calcium	mg/kg	NA	NA	NA	NA	NA	--	53800	--	45800	--	24700
Chromium	mg/kg	18	NLV	NLV	240	9200	--	49.6 J	--	87.5 J	--	31.8 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	2.9	--	5.2	--	2.7
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	4.4	--	5.4	--	4.5 J
Copper	mg/kg	32	NLV	NLV	59000	73000	--	66.1 J	--	267 J	--	58.2
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	22400	--	35200	--	21900 J
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	331	--	799	--	741 J
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	421	--	**1160**[p]	--	637 J
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	353	--	892	--	707
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	11300 J	--	6870 J	--	6050 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	1110	--	622	--	341 J
Mercury	mg/kg	0.13	89	62	8800	580	--	0.28 J	--	1.1 J	--	0.33
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	26.7	--	50.9	--	18.9 J
Potassium	mg/kg	NA	NA	NA	NA	NA	--	669	--	558	--	1050
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	0.62	--	1.1	--	0.66
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.22	--	0.45	--	0.11
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	240	--	429	--	259
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.17	--	0.13	--	0.16
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	24.0 J	--	17.7 J	--	16.6
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	519	--	708	--	119
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	ND(3.7)	--	ND(0.39)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	ND(3.7)	--	ND(0.39)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	ND(3.7)	--	ND(0.39)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	ND(3.7)	--	ND(0.39)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	ND(3.7)	--	1.5
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.2)	--	27	--	ND(0.39)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	2	--	ND(3.7)	--	2.1
Total PCBs	mg/kg	NA	16000	810	6500	16	--	2	--	**27**[p]	--	3.6

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					O4	O4	lab composite O4,O5,O6	lab composite O4,O5,O6	P1	lab composite P1,P2,P3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-0140	S-048041-022908-DD-01501	S-048041-022908-DD-014	S-048041-022908-DD-015	S-048041-022808-DD-009P	S-048041-022808-DD-009
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.17-0.67) ft BGS	(0.17-0.67) ft BGS	(0-0.67) ft BGS	(0-0.67) ft BGS	(1.1-1.6) ft BGS	(0.25-1.6) ft BGS
Sample Type		a	f	h	n	p		Duplicate		Duplicate		
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.075 J	0.063 J	--	--	0.13	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	0.068 J	0.054 J	--	--	0.067 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(1)UJ	ND(0.8)UJ	--	--	ND(0.72)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(3.4)UJ	ND(2.7)UJ	--	--	ND(2.4)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(3.4)UJ	ND(2.7)UJ	--	--	ND(2.4)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(1)UJ	ND(0.8)UJ	--	--	ND(0.72)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.067)UJ	ND(0.053)UJ	--	--	0.011 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.27)UJ	ND(0.21)UJ	--	--	ND(0.19)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.6)UJ	ND(1.3)UJ	--	--	0.061 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.012 J	0.025 J	--	--	0.025 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.19 J	0.42 J	--	--	0.27 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.11 J	0.083 J	--	--	0.11 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.067)UJ	0.11 J	--	--	ND(0.048)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.037 J	0.046 J	--	--	0.11	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.067)UJ	ND(0.053)UJ	--	--	ND(0.048)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.067)UJ	ND(0.053)UJ	--	--	0.065	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.13)UJ	ND(0.11)UJ	--	--	ND(0.095)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.34)UJ	ND(0.27)UJ	--	--	ND(0.24)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.054)UJ	ND(0.043)UJ	--	--	ND(0.038)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.1 J	0.28 J	--	--	0.24	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					O4	O4	lab composite O4,O5,O6	lab composite O4,O5,O6	P1	lab composite P1,P2,P3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-0140	S-048041-022908-DD-01501	S-048041-022908-DD-014	S-048041-022908-DD-015	S-048041-022808-DD-009P	S-048041-022808-DD-009
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.17-0.67) ft BGS	(0.17-0.67) ft BGS	(0-0.67) ft BGS	(0-0.67) ft BGS	(1.1-1.6) ft BGS	(0.25-1.6) ft BGS
Sample Type		a	f	h	n	p		Duplicate		Duplicate		
	Units											
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	--	ND(9.5)	ND(3.6)	--	ND(1.8)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	--	ND(17)	ND(6.4)	--	0.082 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	--	ND(13)	ND(4.8)	--	ND(2.4)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	--	ND(100)	ND(39)	--	ND(19)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	--	ND(13)	ND(4.8)	--	ND(2.4)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	--	ND(9.5)	ND(3.6)	--	ND(1.8)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	--	ND(9.5)	ND(3.6)	--	ND(1.8)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	--	ND(13)	ND(4.8)	--	ND(2.4)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	--	ND(21)	ND(8)	--	ND(4)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	--	ND(17)	ND(6.4)	--	0.11 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	--	ND(2.5)	ND(0.97)	--	ND(0.48)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	--	ND(17)	ND(6.4)	--	0.49 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	--	0.44 J	0.26 J	--	0.52 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	--	ND(17)	0.42 J	--	0.81 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	--	0.62 J	0.55 J	--	0.52 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	--	ND(17)	ND(6.4)	--	0.28 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	--	ND(17)	ND(6.4)	--	ND(3.2)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	--	ND(5.1)	ND(1.9)	--	ND(0.96)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	--	ND(17)	0.65 J	--	ND(3.2)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	--	ND(17)	0.2 J	--	0.61 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	--	ND(17)	ND(6.4)	--	0.12 J
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	--	0.66 J	0.39 J	--	1 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	--	ND(2.5)	ND(0.97)	--	ND(0.48)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	--	ND(17)	0.32 J	--	0.39 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	--	ND(17)	ND(6.4)	--	ND(3.2)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	--	ND(17)	ND(6.4)	--	ND(3.2)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	--	ND(9.5)	ND(3.6)	--	ND(1.8)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	--	0.58 J	0.18 J	--	0.43 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	--	ND(17)	ND(6.4)	--	ND(3.2)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	--	0.65 J	0.34 J	--	0.79 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--	--	--	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					O4	O4	lab composite O4,O5,O6	lab composite O4,O5,O6	P1	lab composite P1,P2,P3
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-0140	S-048041-022908-DD-01501	S-048041-022908-DD-014	S-048041-022908-DD-015	S-048041-022808-DD-009P	S-048041-022808-DD-009
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008	2/29/2008	2/29/2008	2/28/2008	2/28/2008
Sample Depth		Background	Inhalation	Inhalation			(0.17-0.67) ft BGS	(0.17-0.67) ft BGS	(0-0.67) ft BGS	(0-0.67) ft BGS	(1.1-1.6) ft BGS	(0.25-1.6) ft BGS
Sample Type		a	f	h	n	p		Duplicate		Duplicate		
	Units											
Metals												
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	--	17000	13600	--	8350
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	--	1.0 J	0.57 J	--	0.40 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	--	4.2 J	3.3 J	--	4.5
Barium	mg/kg	75	NLV	NLV	150000	130000	--	--	322	269	--	140 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	--	2.8	2.1	--	1.7 J
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	--	4.0	2.8	--	0.84
Calcium	mg/kg	NA	NA	NA	NA	NA	--	--	123000	88100	--	56000
Chromium	mg/kg	18	NLV	NLV	240	9200	--	--	65.6	61.8	--	76.1 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	--	0.89 J	0.65 J	--	ND(0.96)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	--	4.6	4.0	--	3.6
Copper	mg/kg	32	NLV	NLV	59000	73000	--	--	74.0	71.8	--	49.4
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	--	14400	11900	--	16700
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	--	279	292	--	216
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	--	**9920 J[p]**	572 J	--	302
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	--	4460 J	400 J	--	247
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	--	25700	11700	--	15200
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	--	**2070[n]**	**2520[n]**	--	**2090[n]**
Mercury	mg/kg	0.13	89	62	8800	580	--	--	0.31	0.22	--	0.19
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	--	30.8	25.6	--	20.8
Potassium	mg/kg	NA	NA	NA	NA	NA	--	--	1630	1280	--	756
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	--	2.5	1.7	--	1.3
Silver	mg/kg	1	NLV	NLV	2900	9000	--	--	0.21	0.14	--	0.097
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	--	410	305	--	225
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	--	ND(0.11)U	ND(0.097)U	--	0.10
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	--	18.7	22.8	--	30.2 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	--	385	267	--	149
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	--	ND(0.42)	ND(0.4)	--	ND(0.79)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	--	2.9	3	--	6.6
Total PCBs	mg/kg	NA	16000	810	6500	16	--	--	2.9	3	--	6.6

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					P6	lab composite P4,P5,P6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-011P	S-048041-022908-DD-011
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-1) ft BGS	(0.42-1) ft BGS
Sample Type		a	f	h	n	p		
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.063)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.063)	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.063)	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.063)	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.063)	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	0.099 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.12 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.32)	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.32)	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	0.03 J	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.063)	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.063)	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.13)	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.13)	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	0.014 J	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.95)	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(3.2)	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(3.2)	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.95)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.063)	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.13)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.13)	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.25)	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.32)	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.063)	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.063)	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.32)	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.063)	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.32)	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.063)	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.063)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.083 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.063)	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.13)	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.023 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.32)	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.1 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.17 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.32)	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.32)	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.063)	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.097	--
Toluene	mg/kg	NA	610	3300	12000000	160000	0.036 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.063)	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.063)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.54	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.13)	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.32)	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.051)	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.18 J	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					P6	lab composite P4,P5,P6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-011P	S-048041-022908-DD-011
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-1) ft BGS	(0.42-1) ft BGS
Sample Type		a	f	h	n	p		
	Units							
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(3.1)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(3.1)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(3.1)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(3.1)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(1.7)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(3.1)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(3.1)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(3.1)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	0.17 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(3.1)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.3)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(3.1)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(19)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.3)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(1.7)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(3.1)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(1.7)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(3.1)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(2.3)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(3.8)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(3.1)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	ND(3.1)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(3.1)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	ND(3.1)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(0.46)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	0.39 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	0.38 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	0.47 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	0.37 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	0.23 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(3.1)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(0.93)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	ND(3.1)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(3.1)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(3.1)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(3.1)
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	0.45 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(3.1)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(3.1)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(3.1)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(3.1)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(3.1)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(3.1)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	0.87 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	ND(3.1)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(3.1)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(0.46)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(3.1)
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(3.1)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	0.27 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(3.1)
Naphthalene	mg/kg	NA	470	350	88000	52000	--	0.079 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(3.1)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(3.1)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(3.1)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(1.7)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	0.44 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(3.1)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	0.77 J
Pyridine	mg/kg	NA	2	9.8	100000	730	--	--

TABLE 3.1

SURFACE SOIL ANALYTICAL DATA - INVESTIGATIVE AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)					P6	lab composite P4,P5,P6
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	S-048041-022908-DD-011P	S-048041-022908-DD-011
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	2/29/2008	2/29/2008
Sample Depth		Background	Inhalation	Inhalation			(0.5-1) ft BGS	(0.42-1) ft BGS
Sample Type		a	f	h	n	p		
	Units							
Metals								
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	4490
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.31
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	8.9
Barium	mg/kg	75	NLV	NLV	150000	130000	--	139
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.52
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	0.76
Calcium	mg/kg	NA	NA	NA	NA	NA	--	39400
Chromium	mg/kg	18	NLV	NLV	240	9200	--	24.4
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	1.1
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	2.6
Copper	mg/kg	32	NLV	NLV	59000	73000	--	27.3
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	9060
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	281
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	370
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	314
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	9200
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	712
Mercury	mg/kg	0.13	89	62	8800	580	--	0.068
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	10.2
Potassium	mg/kg	NA	NA	NA	NA	NA	--	569
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	0.80
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.082 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	229
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	ND(0.11)U
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	15.4
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	86.4
PCBs								
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.76)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	6.7
Total PCBs	mg/kg	NA	16000	810	6500	16	--	6.7

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended

-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*001A2*	*b composite A1,A2,A3,A4,A*	*002B2*	*ab composite B1,B2,B3,B4,B5*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	Soil Saturation Concentration Screening Levels	*-048041-051408-MC-001 A*	*S-048041-051408-MC-001*	*-048041-051408-MC-002 B*	*S-048041-051408-MC-002*
Sample Date								*5/14/2008*	*5/14/2008*	*5/14/2008*	*5/14/2008*
Sample Depth								*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p	q				
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	460	ND(0.061)UJ	--	ND(0.048)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	870	ND(0.061)	--	ND(0.048)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	920	ND(0.061)	--	ND(0.048)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	890	ND(0.061)	--	ND(0.048)UJ	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	570	ND(0.061)	--	ND(0.048)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	1100	0.022 J	--	0.025 J	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	110	0.048 J	--	0.039 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	1.2	ND(0.3)	--	ND(0.24)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	890	ND(0.3)	--	ND(0.24)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	210	0.037 J	--	ND(0.096)UJ	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	1200	ND(0.061)UJ	--	ND(0.048)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	550	ND(0.061)	--	ND(0.048)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	94	ND(0.12)	--	ND(0.096)UJ	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	170	ND(0.12)	--	ND(0.096)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	NA	ND(0.12)	--	ND(0.096)UJ	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	27000	0.082 J	--	ND(0.72)UJ	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	2500	ND(3)	--	ND(2.4)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	2700	0.027 J	--	0.023 J	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	110000	ND(0.91)	--	ND(0.72)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	400	ND(0.061)	--	ND(0.048)UJ	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	1500	ND(0.12)UJ	--	ND(0.096)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	870	ND(0.12)	--	ND(0.096)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	2200	ND(0.24)	--	ND(0.19)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	280	ND(0.3)	--	ND(0.24)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	390	ND(0.061)UJ	--	ND(0.048)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	260	ND(0.061)	--	ND(0.048)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	950	ND(0.3)	--	ND(0.24)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	1500	ND(0.061)	--	ND(0.048)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	1100	ND(0.3)	--	ND(0.24)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	640	ND(0.061)	--	ND(0.048)UJ	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	ND(0.061)UJ	--	ND(0.048)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	ND(1.5)	--	0.063 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	610	ND(0.061)	--	ND(0.048)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	1000	ND(0.12)UJ	--	ND(0.096)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	140	0.023 J	--	0.019 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	390	ND(0.3)	--	0.0079 J	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA		0.13 J	--	0.086 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA		0.029 J	--	0.018 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	5900	ND(0.3)	--	ND(0.24)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	2300	ND(0.3)	--	ND(0.24)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	520	ND(0.061)	--	ND(0.048)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	88	ND(0.061)	--	ND(0.048)UJ	--
Toluene	mg/kg	NA	610	3300	12000000	160000	250	0.089 J	--	0.052 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	1400	ND(0.061)	--	ND(0.048)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA		ND(0.061)UJ	--	ND(0.048)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	500	ND(0.061)	--	ND(0.048)UJ	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	560	2.1	--	0.44 J	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	550	ND(0.3)	--	ND(0.24)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	490	ND(0.048)	--	ND(0.038)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	150	0.066 J	--	0.046 J	--

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*001A2*	*b composite A1,A2,A3,A4,A*	*002B2*	*ab composite B1,B2,B3,B4,B5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	*-048041-051408-MC-001 A*	*S-048041-051408-MC-001*	*-048041-051408-MC-002 B*	*S-048041-051408-MC-002*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	*5/14/2008*	*5/14/2008*	*5/14/2008*	*5/14/2008*
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p	q				
	Units										
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)	--	ND(30)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	NA	--	ND(31)UJ	--	ND(30)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	NA	--	ND(31)UJ	--	ND(30)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	1800	--	ND(31)UJ	--	ND(30)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	NA	--	ND(31)UJ	--	ND(30)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(18)UJ	--	ND(17)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	NA	--	ND(31)UJ	--	ND(30)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)UJ	--	ND(30)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	NA	--	ND(31)UJ	--	ND(30)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	19000	--	ND(31)	--	ND(30)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	NA	--	ND(31)UJ	--	ND(30)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	--	ND(31)	--	ND(30)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(23)UJ	--	ND(23)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	NA	--	ND(31)UJ	--	ND(30)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	NA	--	ND(190)UJ	--	ND(180)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(23)UJ	--	ND(23)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	NA	--	ND(18)	--	ND(17)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)	--	ND(30)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	NA	--	ND(31)UJ	--	ND(30)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(18)UJ	--	ND(17)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)UJ	--	ND(30)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	--	ND(31)	--	ND(30)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(23)UJ	--	ND(23)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(39)UJ	--	ND(38)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	NA	--	ND(31)UJ	--	ND(30)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	NA	--	ND(31)UJ	--	ND(30)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	1100	--	ND(31)	--	ND(30)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	NA	--	ND(31)	--	ND(30)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	NA	--	ND(4.7)	--	ND(4.5)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)	--	ND(30)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	NA	--	ND(31)UJ	--	ND(30)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	NA	--	ND(31)UJ	--	ND(30)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	NA	--	2 J	--	ND(30)
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	NA	--	ND(31)UJ	--	ND(30)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	NA	--	ND(31)UJ	--	ND(30)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)UJ	--	ND(30)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(31)UJ	--	ND(30)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	2200	--	ND(9.4)	--	ND(9.1)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	10000	--	ND(31)UJ	--	ND(30)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	310	--	ND(31)UJ	--	ND(30)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	NA	--	ND(31)UJ	--	ND(30)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	NA	--	ND(31)	--	ND(30)
Chrysene	mg/kg	NA	ID	ID	ID	8000	NA	--	ND(31)UJ	--	ND(30)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	NA	--	ND(31)UJ	--	ND(30)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	NA	--	ND(31)UJ	--	ND(30)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	740	--	ND(31)UJ	--	ND(30)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	790	--	ND(31)UJ	--	ND(30)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	760	--	ND(31)	--	ND(30)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	140000	--	ND(31)UJ	--	ND(30)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	NA	--	0.96 J	--	2.6 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	NA	--	ND(31)UJ	--	ND(30)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	NA	--	ND(31)	--	ND(30)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	350	--	ND(4.7)UJ	--	ND(4.5)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	720	--	ND(31)UJ	--	ND(30)
Hexachloroethane	mg/kg	NA	79	660	100000	730	NA	--	ND(31)	--	ND(30)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	NA	--	ND(31)UJ	--	ND(30)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	2400	--	ND(31)UJ	--	ND(30)
Naphthalene	mg/kg	NA	470	350	88000	52000	NA	--	ND(31)UJ	--	ND(30)
Nitrobenzene	mg/kg	NA	170	64	21000	340	490	--	ND(31)	--	ND(30)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	1500	--	ND(31)	--	ND(30)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	NA	--	ND(31)	--	ND(30)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	NA	--	ND(18)	--	ND(17)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	NA	--	ND(31)	--	1 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	12000	--	ND(31)	--	ND(30)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	NA	--	1.2 J	--	2.3 J

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*001A2*	*b composite A1,A2,A3,A4,A*	*002B2*	*ab composite B1,B2,B3,B4,B5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	*-048041-051408-MC-001 A*	*S-048041-051408-MC-001*	*-048041-051408-MC-002 B*	*S-048041-051408-MC-002*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	*5/14/2008*	*5/14/2008*	*5/14/2008*	*5/14/2008*
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p	q				
	Units										
							37				
Metals											
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	NA	--	9390	--	12300
Antimony	mg/kg	NA	NLV	NLV	5900	670	NA	--	0.93 J	--	0.78 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	NA	--	6.0	--	6.2
Barium	mg/kg	75	NLV	NLV	150000	130000	NA	--	181	--	244
Beryllium	mg/kg	NA	NLV	NLV	590	1600	NA	--	0.57	--	0.83
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	NA	--	1.9	--	1.8
Calcium	mg/kg	NA	NA	NA	NA	NA	NA	--	73400	--	74600
Chromium	mg/kg	18	NLV	NLV	240	9200	NA	--	57.7 J	--	39.6 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	NA	--	ND(0.94)UJ	--	ND(0.91)UJ
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	NA	--	5.4 J	--	6.1 J
Copper	mg/kg	32	NLV	NLV	59000	73000	NA	--	76.4	--	78.5
Iron	mg/kg	12000	NLV	NLV	ID	580000	NA	--	21600	--	17600
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	NA	--	449	--	394
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	NA	--	491	--	521
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	NA	--	455	--	413
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	NA	--	18000 J	--	15200 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	NA	--	**2090 J[n]**	--	1080 J
Mercury	mg/kg	0.13	89	62	8800	580	NA	--	0.18	--	0.20
Nickel	mg/kg	20	NLV	NLV	16000	150000	NA	--	26.0 J	--	24.7 J
Potassium	mg/kg	NA	NA	NA	NA	NA	NA	--	1210	--	1680
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	NA	--	0.78	--	0.99
Silver	mg/kg	1	NLV	NLV	2900	9000	NA	--	0.16	--	0.17
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	NA	--	289	--	333
Thallium	mg/kg	NA	NLV	NLV	5900	130	NA	--	0.21	--	0.19
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	NA	--	39.1 J	--	19.7 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	NA	--	422	--	326
PCBs											
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	NA	--	ND(3.9)	--	ND(3.8)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	NA	--	33	--	19
Total PCBs	mg/kg	NA	16000	810	6500	16	NA	--	**33[p]**	--	**19[p]**

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*003C3*	*ab composite C1,C2,C3,C4,C5*	*004D4*	*ab composite D1,D2,D3,D4,D5*	*005E1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-048041-051508-MC-003 C3*	*S-048041-051508-MC-003*	*S-048041-051508-MC-004 D4*	*S-048041-051508-MC-004*	*S-048041-051508-MC-005 E1*
Sample Date							*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth							*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.054)UJ	--	0.11 J	--	ND(0.044)UJ
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.27)UJ	--	ND(0.26)UJ	--	0.56 J
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.11)UJ	--	2.2 J	--	0.26 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.11)UJ	--	0.062 J	--	0.22 J
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.11)UJ	--	0.84 J	--	0.22 J
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.11)UJ	--	ND(0.1)UJ	--	0.098 J
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.11)UJ	--	0.013 J	--	0.091 J
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	0.073 J	--	0.12 J	--	ND(0.66)UJ
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.7)UJ	--	ND(2.6)UJ	--	ND(2.2)UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.7)UJ	--	ND(2.6)UJ	--	ND(2.2)UJ
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.81)UJ	--	0.13 J	--	ND(0.66)UJ
Benzene	mg/kg	NA	8.4	45	470000	840	0.034 J	--	0.045 J	--	ND(0.044)UJ
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.11)UJ	--	ND(0.1)UJ	--	ND(0.087)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.11)UJ	--	ND(0.1)UJ	--	ND(0.087)UJ
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.22)UJ	--	ND(0.21)UJ	--	ND(0.17)UJ
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	0.021 J	--	0.033 J	--	ND(0.044)UJ
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.074 J	--	0.21 J	--	0.086 J
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.11)UJ	--	ND(0.1)UJ	--	ND(0.087)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.015 J	--	0.23 J	--	0.021 J
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.27)UJ	--	0.14 J	--	ND(0.22)UJ
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.1 J	--	0.17 J	--	ND(1)UJ
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.022 J	--	0.62 J	--	0.11 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.054)UJ	--	0.027 J	--	ND(0.044)UJ
Toluene	mg/kg	NA	610	3300	12000000	160000	0.072 J	--	0.17 J	--	0.027 J
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.054)UJ	--	ND(0.052)UJ	--	ND(0.044)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.044 J	--	0.068 J	--	ND(0.044)UJ
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.11)UJ	--	ND(0.1)UJ	--	ND(0.087)UJ
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.27)UJ	--	ND(0.26)UJ	--	ND(0.22)UJ
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.043)UJ	--	ND(0.041)UJ	--	ND(0.035)UJ
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.065 J	--	1 J	--	0.83 J

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*003C3*	*ab composite C1,C2,C3,C4,C5*	*004D4*	*ab composite D1,D2,D3,D4,D5*	*005E1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-051508-MC-003 C3*	*S-048041-051508-MC-003*	*S-048041-051508-MC-004 D4*	*S-048041-051508-MC-004*	*S-048041-051508-MC-005 E1*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth		Background	Inhalation	Inhalation			*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	--	ND(53)	--	ND(260)	--
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	--	ND(53)	--	ND(260)	--
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	--	ND(53)	--	ND(260)	--
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	--	ND(53)	--	ND(260)	--
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(30)	--	ND(150)	--
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	--	ND(53)	--	ND(260)	--
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	--	ND(53)	--	ND(260)	--
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	--	ND(53)	--	ND(260)	--
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	--	ND(53)	--	ND(260)	--
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(53)	--	ND(260)	--
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(40)	--	ND(190)	--
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	--	ND(53)	--	ND(260)	--
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	--	ND(320)	--	ND(1600)	--
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(40)	--	ND(190)	--
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	--	ND(30)	--	ND(150)	--
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	--	ND(53)	--	ND(260)	--
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(30)	--	ND(150)	--
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	--	ND(53)	--	ND(260)	--
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	--	ND(40)	--	ND(190)	--
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	--	ND(67)	--	ND(320)	--
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	--	ND(53)	--	ND(260)	--
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	--	1.9 J	--	ND(260)	--
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	--	ND(53)	--	ND(260)	--
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	--	1.4 J	--	ND(260)	--
Atrazine	mg/kg	NA	NLV	NLV	ID	330	--	ND(8.1)	--	ND(39)	--
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	--	ND(53)	--	ND(260)	--
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	--	ND(53)	--	ND(260)	--
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	--	ND(53)	--	ND(260)	--
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	--	ND(53)	--	ND(260)	--
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	--	ND(53)	--	ND(260)	--
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	--	ND(53)	--	ND(260)	--
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	--	ND(16)	--	ND(78)	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	--	ND(53)	--	ND(260)	--
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	--	ND(53)	--	ND(260)	--
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	--	ND(53)	--	ND(260)	--
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	--	ND(53)	--	ND(260)	--
Chrysene	mg/kg	NA	ID	ID	ID	8000	--	ND(53)	--	ND(260)	--
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	--	ND(53)	--	ND(260)	--
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	--	ND(53)	--	ND(260)	--
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	--	ND(53)	--	ND(260)	--
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	--	ND(53)	--	ND(260)	--
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	--	ND(53)	--	ND(260)	--
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	--	ND(53)	--	ND(260)	--
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	--	5.4 J	--	ND(260)	--
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	--	ND(53)	--	ND(260)	--
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	--	ND(53)	--	ND(260)	--
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	--	ND(8.1)	--	ND(39)	--
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	--	ND(53)	--	ND(260)	--
Hexachloroethane	mg/kg	NA	79	660	100000	730	--	ND(53)	--	ND(260)	--
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	--	ND(53)	--	ND(260)	--
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	--	ND(53)	--	ND(260)	--
Naphthalene	mg/kg	NA	470	350	88000	52000	--	ND(53)	--	ND(260)	--
Nitrobenzene	mg/kg	NA	170	64	21000	340	--	ND(53)	--	ND(260)	--
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	--	ND(53)	--	ND(260)	--
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	--	ND(53)	--	ND(260)	--
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	--	ND(30)	--	ND(150)	--
Phenanthrene	mg/kg	NA	5100	190	2900	5200	--	5.4 J	--	ND(260)	--
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	--	ND(53)	--	ND(260)	--
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	--	8.1 J	--	ND(260)	--

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*003C3*	*ab composite C1,C2,C3,C4,C5*	*004D4*	*ab composite D1,D2,D3,D4,D5*	*005E1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-048041-051508-MC-003 C3*	*S-048041-051508-MC-003*	*S-048041-051508-MC-004 D4*	*S-048041-051508-MC-004*	*S-048041-051508-MC-005 E1*
Sample Date							*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth							*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Metals											
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	--	8220	--	11500	--
Antimony	mg/kg	NA	NLV	NLV	5900	670	--	0.85 J	--	1.0 J	--
Arsenic	mg/kg	5.8	NLV	NLV	910	37	--	10.5	--	9.4	--
Barium	mg/kg	75	NLV	NLV	150000	130000	--	280	--	284	--
Beryllium	mg/kg	NA	NLV	NLV	590	1600	--	0.46	--	0.73	--
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	--	5.5	--	5.5	--
Calcium	mg/kg	NA	NA	NA	NA	NA	--	58600	--	39200	--
Chromium	mg/kg	18	NLV	NLV	240	9200	--	130 J	--	81.4 J	--
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	--	4.8 J	--	ND(0.97)UJ	--
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	--	5.0 J	--	6.9 J	--
Copper	mg/kg	32	NLV	NLV	59000	73000	--	118	--	85.3	--
Iron	mg/kg	12000	NLV	NLV	ID	580000	--	36000	--	29400	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--	**1500[p]**	--	**4900[p]**	--
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--	**1130[p]**	--	**3180[p]**	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--	1430	--	4620	--
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	--	12700 J	--	7010 J	--
Manganese	mg/kg	440	NLV	NLV	1500	90000	--	**1620 J[n]**	--	1170 J	--
Mercury	mg/kg	0.13	89	62	8800	580	--	0.22	--	0.21	--
Nickel	mg/kg	20	NLV	NLV	16000	150000	--	26.4 J	--	34.1 J	--
Potassium	mg/kg	NA	NA	NA	NA	NA	--	1110	--	1600	--
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	--	1.2	--	1.1	--
Silver	mg/kg	1	NLV	NLV	2900	9000	--	0.34	--	0.30	--
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	--	215	--	304	--
Thallium	mg/kg	NA	NLV	NLV	5900	130	--	0.34	--	0.34	--
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	--	31.1 J	--	27.2 J	--
Zinc	mg/kg	47	NLV	NLV	ID	630000	--	724	--	901	--
PCBs											
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	ND(0.4)	--
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	ND(0.4)	--
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	ND(0.4)	--
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	ND(0.4)	--
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	1	--
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	--	ND(0.44)	--	ND(0.4)	--
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	--	2.2	--	2.9	--
Total PCBs	mg/kg	NA	16000	810	6500	16	--	2.2	--	3.9	--

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*lab composite E1,E2,E3,E4,E5*	*006F2*	*lab composite F1,F2,F3,F4,F5*	*007G4*	*ab composite G1,G2,G3,G4,G5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-051508-MC-005*	*S-048041-051508-MC-006 F2*	*S-048041-051508-MC-006*	*S-048041-051508-MC-007 G4*	*S-048041-051508-MC-007*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth		Background	Inhalation	Inhalation			*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	--	ND(0.043)UJ	--	0.011 J	--
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	--	ND(0.21)UJ	--	ND(0.21)UJ	--
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	--	0.1 J	--	0.18 J	--
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	--	ND(0.21)UJ	--	ND(0.21)UJ	--
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	--	ND(0.21)UJ	--	ND(0.21)UJ	--
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	--	0.11 J	--	ND(0.085)UJ	--
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	--	ND(0.043)UJ	--	ND(0.043)UJ	--
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	--	0.077 J	--	0.13 J	--
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	--	0.036 J	--	ND(0.085)UJ	--
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	--	0.07 J	--	0.01 J	--
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	--	0.093 J	--	ND(0.64)UJ	--
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	--	ND(2.1)UJ	--	ND(2.1)UJ	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	--	ND(2.1)UJ	--	0.048 J	--
Acetone	mg/kg	NA	540000	160000	170000000	73000	--	ND(0.64)UJ	--	ND(0.64)UJ	--
Benzene	mg/kg	NA	8.4	45	470000	840	--	0.02 J	--	0.0081 J	--
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	--	ND(0.086)UJ	--	ND(0.085)UJ	--
Bromoform	mg/kg	NA	770	3100	3600000	3800	--	ND(0.086)UJ	--	ND(0.085)UJ	--
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	--	ND(0.17)UJ	--	ND(0.17)UJ	--
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	--	ND(0.21)UJ	--	ND(0.21)UJ	--
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	--	ND(0.21)UJ	--	ND(0.21)UJ	--
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	--	ND(0.21)UJ	--	ND(0.21)UJ	--
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	--	ND(0.043)UJ	--	0.03 J	--
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	0.16 J	--	0.084 J	--
Dibromochloromethane	mg/kg	NA	21	80	160000	500	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	--	ND(0.086)UJ	--	ND(0.085)UJ	--
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	--	0.025 J	--	0.02 J	--
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	--	0.029 J	--	0.0089 J	--
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	--	0.12 J	--	0.12 J	--
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	--	0.57 J	--	0.098 J	--
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	--	ND(0.21)UJ	--	ND(0.21)UJ	--
Methylene chloride	mg/kg	NA	240	700	8300000	5800	--	ND(0.21)UJ	--	ND(0.21)UJ	--
Styrene	mg/kg	NA	1300	3300	6900000	1900	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	--	ND(0.043)UJ	--	0.033 J	--
Toluene	mg/kg	NA	610	3300	12000000	160000	--	0.049 J	--	0.053 J	--
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	--	ND(0.043)UJ	--	ND(0.043)UJ	--
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	--	ND(0.043)UJ	--	ND(0.043)UJ	--
Trichloroethene	mg/kg	NA	1.9	14	59000	660	--	ND(0.043)UJ	--	0.069 J	--
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	--	ND(0.086)UJ	--	ND(0.085)UJ	--
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	--	ND(0.21)UJ	--	ND(0.21)UJ	--
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	--	ND(0.034)UJ	--	ND(0.034)UJ	--
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	--	0.15 J	--	0.17 J	--

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*lab composite E1,E2,E3,E4,E5*	*006F2*	*lab composite F1,F2,F3,F4,F5*	*007G4*	*ab composite G1,G2,G3,G4,G5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-051508-MC-005*	*S-048041-051508-MC-006 F2*	*S-048041-051508-MC-006*	*S-048041-051508-MC-007 G4*	*S-048041-051508-MC-007*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth		Background	Inhalation	Inhalation			*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(310)	--	ND(190)	--	ND(180)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(310)	--	ND(190)	--	ND(180)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(310)	--	ND(190)	--	ND(180)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(310)	--	ND(190)	--	ND(180)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(170)	--	ND(110)	--	ND(100)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(310)	--	ND(190)	--	ND(180)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(310)	--	ND(190)	--	ND(180)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(310)	--	ND(190)	--	ND(180)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	ND(310)	--	ND(190)	--	ND(180)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(310)	--	ND(190)	--	ND(180)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(230)	--	ND(150)	--	ND(130)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(310)	--	ND(190)	--	ND(180)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(1800)	--	ND(1200)	--	ND(1100)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(230)	--	ND(150)	--	ND(130)
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(170)	--	ND(110)	--	ND(100)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(310)	--	ND(190)	--	ND(180)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(170)	--	ND(110)	--	ND(100)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(310)	--	ND(190)	--	ND(180)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(230)	--	ND(150)	--	ND(130)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(380)	--	ND(240)	--	ND(220)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(310)	--	ND(190)	--	ND(180)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(310)	--	ND(190)	--	ND(180)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(310)	--	ND(190)	--	ND(180)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(310)	--	ND(190)	--	ND(180)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(46)	--	ND(29)	--	ND(27)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	ND(310)	--	ND(190)	--	ND(180)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	ND(310)	--	ND(190)	--	ND(180)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	ND(310)	--	ND(190)	--	ND(180)
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	ND(310)	--	ND(190)	--	ND(180)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	ND(310)	--	ND(190)	--	ND(180)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(310)	--	ND(190)	--	ND(180)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(92)	--	ND(59)	--	ND(53)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(310)	--	ND(190)	--	ND(180)U
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(310)	--	ND(190)	--	ND(180)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(310)	--	ND(190)	--	ND(180)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(310)	--	ND(190)	--	ND(180)
Chrysene	mg/kg	NA	ID	ID	ID	8000	ND(310)	--	ND(190)	--	ND(180)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(310)	--	ND(190)	--	ND(180)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(310)	--	ND(190)	--	ND(180)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(310)	--	ND(190)	--	ND(180)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(310)	--	ND(190)	--	ND(180)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(310)	--	ND(190)	--	ND(180)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(310)	--	ND(190)	--	ND(180)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	ND(310)	--	ND(190)	--	ND(180)
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(310)	--	ND(190)	--	ND(180)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(310)	--	ND(190)	--	ND(180)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(46)	--	ND(29)	--	ND(27)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(310)	--	ND(190)	--	ND(180)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(310)	--	ND(190)	--	ND(180)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	ND(310)	--	ND(190)	--	ND(180)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(310)	--	ND(190)	--	ND(180)
Naphthalene	mg/kg	NA	470	350	88000	52000	ND(310)	--	ND(190)	--	ND(180)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(310)	--	ND(190)	--	ND(180)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(310)	--	ND(190)	--	ND(180)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(310)	--	ND(190)	--	ND(180)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(170)	--	ND(110)	--	ND(100)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	ND(310)	--	ND(190)	--	ND(180)
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(310)	--	ND(190)	--	ND(180)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	ND(310)	--	ND(190)	--	ND(180)

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*lab composite E1,E2,E3,E4,E5*	*006F2*	*lab composite F1,F2,F3,F4,F5*	*007G4*	*ab composite G1,G2,G3,G4,G5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-051508-MC-005*	*S-048041-051508-MC-006 F2*	*S-048041-051508-MC-006*	*S-048041-051508-MC-007 G4*	*S-048041-051508-MC-007*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*	*5/15/2008*
Sample Depth		Background	Inhalation	Inhalation			*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*	*(0-0.5) ft BGS*
Sample Type		a	f	h	n	p					
	Units										
Metals											
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	3690	--	7150	--	12900
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.45 J	--	1.8 J	--	0.83 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	5.2	--	9.4	--	5.2
Barium	mg/kg	75	NLV	NLV	150000	130000	116	--	260	--	315
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.088 J	--	0.36	--	2.4
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	2.1	--	3.9	--	6.8
Calcium	mg/kg	NA	NA	NA	NA	NA	43500	--	46200	--	107000
Chromium	mg/kg	18	NLV	NLV	240	9200	20.6 J	--	125 J	--	51.1 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	11.1 J	--	1.2 J	--	ND(0.89)UJ
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	2.9 J	--	10.2 J	--	3.6 J
Copper	mg/kg	32	NLV	NLV	59000	73000	28.4	--	139	--	97.4
Iron	mg/kg	12000	NLV	NLV	ID	580000	9110	--	57700	--	17200
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	469	--	**1350[p]**	--	699
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	543	--	788	--	563
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	470	--	1210	--	666
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	14300 J	--	10700 J	--	21300 J
Manganese	mg/kg	440	NLV	NLV	1500	90000	336 J	--	1330 J	--	1430 J
Mercury	mg/kg	0.13	89	62	8800	580	0.11	--	1.5	--	0.020 J
Nickel	mg/kg	20	NLV	NLV	16000	150000	13.7 J	--	54.0 J	--	22.5 J
Potassium	mg/kg	NA	NA	NA	NA	NA	409 J	--	895	--	1340
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	0.38	--	0.98	--	1.5
Silver	mg/kg	1	NLV	NLV	2900	9000	0.13	--	0.34	--	0.28
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	118	--	333	--	564
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.10	--	0.16 J	--	0.089
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	12.2 J	--	26.8 J	--	17.8 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	218	--	702	--	474
PCBs											
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.38)	--	ND(0.81)	--	ND(1.8)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.38)	--	ND(0.81)	--	ND(1.8)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.38)	--	ND(0.81)	--	ND(1.8)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.38)	--	ND(0.81)	--	ND(1.8)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	1.1	--	0.98	--	ND(1.8)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(0.38)	--	ND(0.81)	--	ND(1.8)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	4.7	--	5.2	--	15
Total PCBs	mg/kg	NA	16000	810	6500	16	5.8	--	6.18	--	15

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]				
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact
Sample Depth		Background	Inhalation	Inhalation		
Sample Type		a	f	h	n	p
	Units					
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000
Acetone	mg/kg	NA	540000	160000	170000000	73000
Benzene	mg/kg	NA	8.4	45	470000	840
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490
Bromoform	mg/kg	NA	770	3100	3600000	3800
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440
Chlorobenzene	mg/kg	NA	220	920	2100000	14000
Chloroethane	mg/kg	NA	5300	36000	290000000	12000
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA
Cyclohexane	mg/kg	NA	NA	NA	NA	NA
Dibromochloromethane	mg/kg	NA	21	80	160000	500
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000
Methyl acetate	mg/kg	NA	NA	NA	NA	NA
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100
Methylene chloride	mg/kg	NA	240	700	8300000	5800
Styrene	mg/kg	NA	1300	3300	6900000	1900
Tetrachloroethene	mg/kg	NA	21	210	1200000	930
Toluene	mg/kg	NA	610	3300	12000000	160000
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA
Trichloroethene	mg/kg	NA	1.9	14	59000	660
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000
Vinyl chloride	mg/kg	NA	2.8	29	890000	34
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]				
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact
Sample Date						
Sample Depth						
Sample Type		a	f	h	n	p
	Units					
Semi-Volatile Organic Compounds (SVOCs)						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200
Acetophenone	mg/kg	NA	210000	52000	14000000	150000
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000
Atrazine	mg/kg	NA	NLV	NLV	ID	330
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000
Carbazole	mg/kg	NA	NLV	NLV	78000	2400
Chrysene	mg/kg	NA	ID	ID	ID	8000
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8
Dibenzofuran	mg/kg	NA	3600	160	2900	ID
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000
Fluorene	mg/kg	NA	1000000	150000	4100000	87000
Hexachlorobenzene	mg/kg	NA	220	56	8500	37
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700
Hexachloroethane	mg/kg	NA	79	660	100000	730
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000
Naphthalene	mg/kg	NA	470	350	88000	52000
Nitrobenzene	mg/kg	NA	170	64	21000	340
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320
Phenanthrene	mg/kg	NA	5100	190	2900	5200
Phenol	mg/kg	NA	NLV	NLV	18000000	230000
Pyrene	mg/kg	NA	1000000	780000	2900000	84000

TABLE 3.2

STAINED SURFACE SOIL ANALYTICAL DATA - STAINED AREAS
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential (1)				
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact
Sample Date						
Sample Depth						
Sample Type		a	f	h	n	p
	Units					
Metals						
Aluminum	mg/kg	6900	NLV	NLV	ID	370000
Antimony	mg/kg	NA	NLV	NLV	5900	670
Arsenic	mg/kg	5.8	NLV	NLV	910	37
Barium	mg/kg	75	NLV	NLV	150000	130000
Beryllium	mg/kg	NA	NLV	NLV	590	1600
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100
Calcium	mg/kg	NA	NA	NA	NA	NA
Chromium	mg/kg	18	NLV	NLV	240	9200
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000
Copper	mg/kg	32	NLV	NLV	59000	73000
Iron	mg/kg	12000	NLV	NLV	ID	580000
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000
Manganese	mg/kg	440	NLV	NLV	1500	90000
Mercury	mg/kg	0.13	89	62	8800	580
Nickel	mg/kg	20	NLV	NLV	16000	150000
Potassium	mg/kg	NA	NA	NA	NA	NA
Selenium	mg/kg	0.41	NLV	NLV	59000	9600
Silver	mg/kg	1	NLV	NLV	2900	9000
Sodium	mg/kg	NA	NLV	NLV	ID	1000000
Thallium	mg/kg	NA	NLV	NLV	5900	130
Vanadium	mg/kg	NA	NLV	NLV	ID	5500
Zinc	mg/kg	47	NLV	NLV	ID	630000
PCBs						
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA
Total PCBs	mg/kg	NA	16000	810	6500	16

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*SB-1*	*SB-1*	*SB-2*	*SB-2*	*SB-3*	*SB-5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-004*	*3H-48041-061208-MC-005*	*3H-48041-061208-MC-007*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p	q		*Duplicate*				
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	460	0.047 J	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)UJ	ND(0.051)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	870	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	920	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	890	0.27 J	0.1 J	0.097 J	ND(0.092)UJ	ND(0.045)	0.08
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	570	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	1100	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	0.089 J
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	110	0.34 J	0.39 J	0.28 J	0.56 J	0.034 J	2.9
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	1.2	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)UJ	ND(0.26)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	890	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	ND(0.26)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	210	ND(0.12)UJ	ND(0.15)UJ	0.092 J	0.23 J	0.032 J	0.27
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	1200	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	550	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	94	0.079 J	0.097 J	0.14 J	0.077 J	ND(0.089)	0.74
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	170	ND(0.12)UJ	ND(0.15)UJ	ND(0.38)UJ	0.092 J	ND(0.089)	0.024 J
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	NA	ND(0.12)UJ	ND(0.15)UJ	0.053 J	0.39 J	ND(0.089)	0.061 J
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	27000	ND(0.9)UJ	ND(1.2)UJ	ND(2.8)UJ	ND(1.4)UJ	0.093 J	ND(0.77)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	2500	ND(3)UJ	ND(3.9)UJ	ND(9.4)UJ	ND(4.6)UJ	ND(2.2)	ND(2.6)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	2700	0.14 J	ND(3.9)UJ	ND(9.4)UJ	ND(4.6)UJ	ND(2.2)	ND(2.6)
Acetone	mg/kg	NA	540000	160000	170000000	73000	110000	ND(0.9)UJ	ND(1.2)UJ	ND(2.8)UJ	ND(1.4)UJ	ND(0.67)U	ND(0.77)U
Benzene	mg/kg	NA	8.4	45	470000	840	400	0.02 J	0.021 J	0.099 J	0.17 J	0.038 J	0.11
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	1500	ND(0.12)UJ	ND(0.15)UJ	ND(0.38)UJ	ND(0.18)UJ	ND(0.089)UJ	ND(0.1)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	870	ND(0.12)UJ	ND(0.15)UJ	ND(0.38)UJ	ND(0.18)UJ	ND(0.089)	ND(0.1)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	2200	ND(0.24)UJ	ND(0.31)UJ	ND(0.75)UJ	ND(0.37)UJ	ND(0.18)	ND(0.21)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	280	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	0.034 J
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	390	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)UJ	ND(0.051)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	260	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	0.13 J	ND(0.045)	ND(0.051)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	950	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	0.11 J
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	1500	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	1100	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	ND(0.26)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	640	0.031 J	ND(0.077)UJ	0.24 J	ND(0.092)UJ	ND(0.045)	0.051
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)UJ	ND(0.051)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	0.092 J	0.13 J	0.38 J	0.39 J	0.5 J	0.37 J
Dibromochloromethane	mg/kg	NA	21	80	160000	500	610	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	1000	ND(0.12)UJ	ND(0.15)UJ	ND(0.38)UJ	ND(0.18)UJ	ND(0.089)	ND(0.1)
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	140	0.043 J	0.024 J	0.098 J	0.054 J	0.014 J	0.14
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	390	0.029 J	0.037 J	0.03 J	0.5 J	0.33	0.18 J
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	NA	0.11 J	0.1 J	ND(4.5)UJ	ND(2.2)UJ	0.28 J	ND(1.2)
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	NA	0.082 J	0.1 J	0.62 J	1.6 J	1.2	0.59 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	5900	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	ND(0.26)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	2300	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	0.39	ND(0.26)
Styrene	mg/kg	NA	1300	3300	6900000	1900	520	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)	ND(0.051)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	88	0.02 J	0.017 J	0.054 J	ND(0.092)UJ	ND(0.045)	ND(0.051)
Toluene	mg/kg	NA	610	3300	12000000	160000	250	0.47 J	0.36 J	0.37 J	0.047 J	0.018 J	0.2
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	1400	ND(0.06)UJ	ND(0.077)UJ	0.054 J	ND(0.092)UJ	ND(0.045)	0.04 J
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	NA	ND(0.06)UJ	ND(0.077)UJ	ND(0.19)UJ	ND(0.092)UJ	ND(0.045)UJ	ND(0.051)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	500	0.17 J	0.13 J	0.14 J	ND(0.092)UJ	ND(0.045)	0.02 J
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	560	ND(0.12)UJ	ND(0.15)UJ	ND(0.38)UJ	ND(0.18)UJ	ND(0.089)	ND(0.1)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	550	ND(0.3)UJ	ND(0.39)UJ	ND(0.94)UJ	ND(0.46)UJ	ND(0.22)	ND(0.26)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	490	ND(0.048)UJ	ND(0.062)UJ	ND(0.15)UJ	ND(0.073)UJ	ND(0.036)	ND(0.041)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	150	0.19 J	0.2 J	0.43 J	0.28 J	0.2	1.2
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	1800	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	ND(9.2)	ND(8.6)	ND(25)	ND(1.8)	ND(8.5)	ND(20)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	19000	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	NA	ND(16)	ND(15)	ND(45)	2 J	15	8.2 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	ND(12)	ND(11)	ND(34)	ND(2.4)	ND(11)	ND(27)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	NA	ND(98)	ND(91)	ND(270)	ND(19)	ND(91)	ND(220)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	ND(12)	ND(11)	ND(34)	ND(2.4)	ND(11)	ND(27)

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*SB-1*	*SB-1*	*SB-2*	*SB-2*	*SB-3*	*SB-5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-004*	*3H-48041-061208-MC-005*	*3H-48041-061208-MC-007*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p	q		*Duplicate*				
	Units												
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	NA	ND(9.2)	ND(8.6)	ND(25)	ND(1.8)	ND(8.5)	ND(20)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	NA	ND(9.2)	ND(8.6)	ND(25)	ND(1.8)	ND(8.5)	ND(20)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	NA	ND(12)	ND(11)	ND(34)	ND(2.4)	ND(11)	ND(27)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	NA	ND(20)	ND(19)	ND(56)	ND(3.9)	ND(19)	ND(45)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	NA	0.92 J	1.5 J	ND(45)	0.24 J	ND(15)	ND(36)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	1100	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	NA	1.6 J	3 J	ND(45)	2.2 J	ND(15)	ND(36)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	NA	ND(2.5)	ND(2.3)	ND(6.8)	ND(0.48)	ND(2.3)	ND(5.5)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	NA	4.2 J	11 J	ND(45)	4.1	2.1 J	2.2 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	NA	3.7 J	**9.5 J[P]**	ND(45)	3.4	ND(15)	ND(36)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	NA	4.5 J	11 J	1.2 J	4.3	ND(15)	ND(36)
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	NA	2.4 J	6.4 J	ND(45)	1.8 J	1.3 J	ND(36)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	NA	2.1 J	5.4 J	ND(45)	1.9 J	ND(15)	ND(36)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	2200	ND(4.9)	ND(4.6)	ND(14)	ND(0.96)	ND(4.6)	ND(11)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	10000	1.2 J	1.2 J	4.4 J	ND(3.2)	ND(15)	6.8 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	310	ND(16)	ND(15)	2.9 J	ND(3.2)	ND(15)	ND(36)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Chrysene	mg/kg	NA	ID	ID	ID	8000	NA	3.6 J	8.8 J	ND(45)	3.6	2.3 J	3.9 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	NA	0.62 J	1.6 J	ND(45)	0.53 J	ND(15)	ND(36)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	740	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	790	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	760	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	140000	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	NA	9 J	22	2 J	11	5.9 J	5.1 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	NA	ND(16)	ND(15)	ND(45)	0.51 J	13 J	7.4 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	350	ND(2.5)	ND(2.3)	ND(6.8)	ND(0.48)	ND(2.3)	ND(5.5)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	720	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Hexachloroethane	mg/kg	NA	79	660	100000	730	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	NA	2.2 J	5.5 J	ND(45)	1.6 J	1 J	ND(36)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	2400	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Naphthalene	mg/kg	NA	470	350	88000	52000	NA	ND(16)	ND(15)	ND(45)	0.21 J	ND(15)	1.9 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	490	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	1500	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	NA	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	NA	ND(9.2)	ND(8.6)	ND(25)	ND(1.8)	ND(8.5)	ND(20)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	NA	6 J	11 J	ND(45)	7.1	13 J	13 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	12000	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	NA	7.2 J	18	3.7 J	7	4.1 J	5.2 J
Pyridine	mg/kg	NA	2	9.8	100000	730	37	ND(16)	ND(15)	ND(45)	ND(3.2)	ND(15)	ND(36)
Metals													
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	NA	7490	4340	8150	7650	10000	5900
Antimony	mg/kg	NA	NLV	NLV	5900	670	NA	1.1 J	0.92 J	1.5 J	0.10 J	1.9 J	3.7 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	NA	23.7 J	12.1 J	6.6 J	3.5 J	**49.5 J[P]**	17.5 J
Barium	mg/kg	75	NLV	NLV	150000	130000	NA	184 J	125 J	342 J	62.7 J	238 J	322 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	NA	1.1 J	0.41 J	0.96	0.23	1.6	0.77
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	NA	0.94	0.79	3.7	0.32	1.8	3.0
Calcium	mg/kg	NA	NA	NA	NA	NA	NA	10100 J	50600 J	46000	22500	54900	26100
Chromium	mg/kg	18	NLV	NLV	240	9200	NA	16.4 J	10.9 J	52.2 J	13.3 J	120 J	41.2 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	NA	ND(0.98)UJ	ND(0.91)UJ	3.3 J	2.0 J	2.8 J	ND(1.1)UJ
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	NA	8.7	6.5	3.6	5.8	2.4	11.5
Copper	mg/kg	32	NLV	NLV	59000	73000	NA	512	307	106	16.5	166	144
Iron	mg/kg	12000	NLV	NLV	ID	580000	NA	34500 J	11100 J	17100	14700	30700	51700
Lead	mg/kg	21	NLV	NLV	44000	900	NA	--	--	--	35.5	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	NA	221	209	**984[P]**	--	**1430[P]**	403
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	NA	332	479	**1170[P]**	--	**2750[P]**	544
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	NA	249	269	1030	--	1740	426
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	NA	1760 J	23000 J	7250 J	6570 J	6210 J	3720 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]						*SB-1*	*SB-1*	*SB-2*	*SB-2*	*SB-3*	*SB-5*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	Soil Saturation	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	Concentration	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			Screening Levels	*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p	q		*Duplicate*				
	Units												
Manganese	mg/kg	440	NLV	NLV	1500	90000	NA	221	175	**1670[n]**	196	**3120[n]**	653
Mercury	mg/kg	0.13	89	62	8800	580	NA	0.16 J	0.61 J	0.80	0.20	0.89	0.68
Nickel	mg/kg	20	NLV	NLV	16000	150000	NA	27.0	27.1	16.7	13.3	8.9	48.8
Potassium	mg/kg	NA	NA	NA	NA	NA	NA	426 J	566	745	988	1060	617
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	NA	1.1	1.1	1.2	0.47	8.9	1.9
Silver	mg/kg	1	NLV	NLV	2900	9000	NA	0.50 J	0.14 J	0.33 J	0.041 J	0.44	0.32
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	NA	246	163	234	193	308	555
Thallium	mg/kg	NA	NLV	NLV	5900	130	NA	0.32	0.18	ND(0.45)U	0.14	0.43	0.24
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	NA	18.3 J	15.1 J	28.6 J	20.7 J	18.3 J	24.3 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	NA	161 J	216 J	500 J	49.7 J	321 J	655 J
PCBs													
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	ND(1.9)	ND(0.74)	ND(0.2)	ND(0.038)	ND(0.45)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	ND(1.9)	ND(0.74)	ND(0.2)	ND(0.038)	ND(0.45)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	ND(1.9)	ND(0.74)	ND(0.2)	ND(0.038)	ND(0.45)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	ND(1.9)	1.6	0.46	0.2	1.8
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	ND(1.9)	ND(0.74)	ND(0.2)	ND(0.038)	ND(0.45)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	NA	28	ND(1.9)	3.2	1.4	0.58	3.4
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	NA	ND(4)	7.8	ND(0.74)	ND(0.2)	ND(0.038)	ND(0.45)
Total PCBs	mg/kg	NA	16000	810	6500	16	NA	**28[p]**	7.8	4.8	1.86	0.78	5.2

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-5*	*SB-6*	*SB-6*	*SB-A3*	*SB-B7*	*SB-C6*	*SB-D1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-01*	*S-048041-070808-DD-001*	*S-048041-070808-DD-007*	*S-048041-070808-DD-008*	*S-048041-070908-DD-009*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*6/12/2008*	*6/12/2008*	*6/12/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/9/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(5-6) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.064 J	ND(0.098)UJ	0.18 J	ND(0.092)	0.45 J	ND(0.09)	0.63 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)UJ	ND(0.22)	ND(0.22)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.12)UJ	ND(0.098)UJ	0.29 J	ND(0.092)	0.41 J	ND(0.09)	ND(0.087)
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.12)UJ	ND(0.098)UJ	0.046 J	ND(0.092)	0.1	ND(0.09)	0.14
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.12)UJ	ND(0.098)UJ	0.055 J	ND(0.092)	0.028 J	ND(0.09)	ND(0.087)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.12)UJ	ND(0.098)UJ	0.17 J	ND(0.092)	0.089 J	ND(0.09)	ND(0.087)
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.94)UJ	ND(0.74)UJ	0.08 J	ND(0.69)	0.11 J	ND(0.67)	ND(0.65)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(3.1)UJ	ND(2.5)UJ	ND(2.8)UJ	ND(2.3)	ND(2.4)	ND(2.2)	ND(2.2)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(3.1)UJ	ND(2.5)UJ	ND(2.8)UJ	ND(2.3)	ND(2.4)	ND(2.2)	ND(2.2)
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.94)UJ	ND(0.74)UJ	ND(0.84)UJ	ND(0.69)	ND(0.71)U	ND(0.67)U	ND(0.65)U
Benzene	mg/kg	NA	8.4	45	470000	840	0.013 J	ND(0.049)UJ	0.15 J	ND(0.046)	0.36 J	ND(0.045)	ND(0.043)
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.12)UJ	ND(0.098)UJ	ND(0.11)UJ	ND(0.092)	ND(0.095)	ND(0.09)	ND(0.087)
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.12)UJ	ND(0.098)UJ	ND(0.11)UJ	ND(0.092)	ND(0.095)	ND(0.09)	ND(0.087)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.25)UJ	ND(0.2)UJ	ND(0.22)UJ	ND(0.18)	ND(0.19)	ND(0.18)	ND(0.17)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)UJ	ND(0.047)UJ	ND(0.045)UJ	ND(0.043)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.062)UJ	ND(0.049)UJ	0.077 J	ND(0.046)	0.025 J	ND(0.045)	ND(0.043)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	0.032 J	ND(0.045)	ND(0.043)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.062)UJ	ND(0.049)UJ	0.025 J	ND(0.046)	0.34	ND(0.045)	ND(0.043)
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)UJ	ND(0.047)UJ	ND(0.045)UJ	ND(0.043)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.5)UJ	ND(1.2)UJ	0.69 J	ND(1.1)UJ	0.29 J	ND(1.1)UJ	ND(1)
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.12)UJ	ND(0.098)UJ	ND(0.11)UJ	ND(0.092)UJ	ND(0.095)UJ	ND(0.09)UJ	ND(0.087)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.024 J	ND(0.049)UJ	0.068 J	ND(0.046)	0.19	ND(0.045)	0.023 J
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.31)UJ	0.017 J	1.3 J	ND(0.23)	0.24	ND(0.22)	0.049 J
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(1.5)UJ	ND(1.2)UJ	0.11 J	ND(1.1)	0.12 J	ND(1.1)	ND(1)
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.5)UJ	0.069 J	2 J	ND(1.1)UJ	1.2 J	ND(1.1)UJ	0.057 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	ND(0.047)	ND(0.045)	ND(0.043)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	0.022 J	ND(0.045)	ND(0.043)
Toluene	mg/kg	NA	610	3300	12000000	160000	0.032 J	ND(0.098)UJ	0.12 J	ND(0.092)	0.54 J	ND(0.09)	ND(0.087)U
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)UJ	0.13 J	ND(0.045)UJ	ND(0.043)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)UJ	ND(0.047)UJ	ND(0.045)UJ	ND(0.043)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.062)UJ	ND(0.049)UJ	ND(0.056)UJ	ND(0.046)	0.048	ND(0.045)	ND(0.043)
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.12)UJ	ND(0.098)UJ	ND(0.11)UJ	ND(0.092)	ND(0.095)	ND(0.09)	ND(0.087)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.31)UJ	ND(0.25)UJ	ND(0.28)UJ	ND(0.23)	ND(0.24)	ND(0.22)	ND(0.22)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.05)UJ	ND(0.039)UJ	ND(0.045)UJ	ND(0.037)	0.06	ND(0.036)	ND(0.035)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.071 J	ND(0.15)UJ	0.28 J	ND(0.14)	0.85	ND(0.13)	0.061 J
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	ND(21)	ND(0.17)	ND(4.8)	ND(0.67)	ND(0.17)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.28 J	ND(6.5)	ND(37)	ND(0.3)	1.1 J	0.053 J	0.0086 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.7)	ND(4.9)	ND(28)	ND(0.23)	ND(6.4)	ND(0.9)	ND(0.23)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(38)	ND(39)	ND(220)	ND(1.8)	ND(52)	ND(7.2)	ND(1.8)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.7)	ND(4.9)	ND(28)	ND(0.23)	ND(6.4)	ND(0.9)	ND(0.23)

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-5*	*SB-6*	*SB-6*	*SB-A3*	*SB-B7*	*SB-C6*	*SB-D1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-00*	*3H-48041-061208-MC-01*	*S-048041-070808-DD-001*	*S-048041-070808-DD-007*	*S-048041-070808-DD-008*	*S-048041-070908-DD-009*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*6/12/2008*	*6/12/2008*	*6/12/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/9/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(5-6) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(3.6)	ND(3.7)	ND(21)	ND(0.17)	ND(4.8)	ND(0.67)	ND(0.17)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(3.6)	ND(3.7)	ND(21)	ND(0.17)	ND(4.8)	ND(0.67)	ND(0.17)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.7)	ND(4.9)	ND(28)	ND(0.23)	ND(6.4)	ND(0.9)	ND(0.23)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(7.8)	ND(8.1)	ND(46)	ND(0.38)	ND(11)	ND(1.5)	ND(0.38)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	0.74 J	ND(1.2)	0.047 J
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	0.21 J	ND(6.5)	ND(37)	ND(0.3)	0.24 J	ND(1.2)	0.023 J
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	0.16 J	ND(6.5)	ND(37)	ND(0.3)	1.4 J	ND(1.2)	0.13 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.95)	ND(0.98)	ND(5.6)	ND(0.046)	ND(1.3)	ND(0.18)	ND(0.046)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	ND(6.2)	ND(6.5)	ND(37)	0.0085 J	3.8 J	0.033 J	0.65 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	0.33 J	ND(6.5)	ND(37)	0.013 J	3.1 J	0.032 J	0.67
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	0.56 J	ND(6.5)	ND(37)	0.02 J	4.6 J	0.044 J	0.85
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	0.64 J	ND(6.5)	ND(37)	0.015 J	2.6 J	0.067 J	0.43
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	ND(6.2)	ND(6.5)	ND(37)	0.0073 J	1.5 J	ND(1.2)	0.42 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(1.9)	ND(2)	ND(11)	ND(0.092)	ND(2.6)	ND(0.36)	ND(0.092)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)U	ND(8.5)	ND(1.2)	ND(0.31)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	0.11 J
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	0.66 J	ND(1.2)	0.089 J
Chrysene	mg/kg	NA	ID	ID	ID	8000	0.27 J	ND(6.5)	ND(37)	0.011 J	3.9 J	0.068 J	0.67
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	0.59 J	ND(1.2)	0.11 J
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	0.024 J
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	0.57 J	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	0.57 J	ND(6.5)	1.7 J	0.016 J	8.2 J	0.061 J	1.5 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(6.2)	ND(6.5)	1.5 J	ND(0.3)	1.6 J	ND(1.2)	0.06 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.95)	ND(0.98)	ND(5.6)	ND(0.046)	ND(1.3)	ND(0.18)	ND(0.046)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	R
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	0.32 J	ND(6.5)	ND(37)	0.013 J	2.1 J	0.035 J	0.39
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Naphthalene	mg/kg	NA	470	350	88000	52000	0.19 J	ND(6.5)	ND(37)	ND(0.3)	0.71 J	0.033 J	0.01 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(3.6)	ND(3.7)	ND(21)	ND(0.17)	ND(4.8)	ND(0.67)	ND(0.17)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.42 J	ND(6.5)	ND(37)	0.0084 J	6 J	0.077 J	0.76 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	0.53 J	ND(6.5)	1.3 J	0.013 J	8.2 J	0.053 J	1.1 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(6.2)	ND(6.5)	ND(37)	ND(0.3)	ND(8.5)	ND(1.2)	ND(0.31)
Metals													
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	5830	4400	4620	7280	4910	5570	9740
Antimony	mg/kg	NA	NLV	NLV	5900	670	3.6 J	1.6 J	1.8 J	0.051 J	2.8 J	5.1 J	0.56 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	14.3 J	1.2 J	12.2 J	5.2 J	17.2 J	4.3 J	9.6
Barium	mg/kg	75	NLV	NLV	150000	130000	268 J	258 J	692 J	45.3 J	245 J	189 J	110 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.60	0.39	0.84	ND(0.18)	0.49	ND(0.18)	0.28
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	2.2	1.3	1.8	ND(0.092)	1.8 J	4.9 J	0.51
Calcium	mg/kg	NA	NA	NA	NA	NA	16000	9400	17800	788	37200	12200	46100
Chromium	mg/kg	18	NLV	NLV	240	9200	15.9 J	25.2 J	15.3 J	15.6 J	19.3 J	24.2 J	22.5
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	4.3 J	2.9 J	ND(1.1)UJ	2.4	ND(1.0)	0.37 J	0.88 J
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	6.0	5.6	3.6	3.3	4.9	3.3	9.8
Copper	mg/kg	32	NLV	NLV	59000	73000	152	101	75.7	15.8 J	92.3 J	30.7 J	47.4 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	31400	22800	15100	20300	28500	30300	33200
Lead	mg/kg	21	NLV	NLV	44000	900	--	--	--	12.5	--	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	576	197	**1420 P**	--	**2690 J P**	275 J	233
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	592	240	**1910 P**	--	**3230 J P**	775 J	371
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	580	209	1530	--	2900	390 J	264
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	1680 J	1180 J	2590 J	1730 J	12500 J	1910 J	15400 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-5*	*SB-6*	*SB-6*	*SB-A3*	*SB-B7*	*SB-C6*	*SB-D1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*3H-48041-061208-MC-003*	*3H-48041-061208-MC-005*	*3H-48041-061208-MC-01*	*S-048041-070808-DD-001*	*S-048041-070808-DD-007*	*S-048041-070808-DD-008*	*S-048041-070908-DD-009*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*6/12/2008*	*6/12/2008*	*6/12/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/9/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*	*(1-2) ft BGS*	*(5-6) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
Manganese	mg/kg	440	NLV	NLV	1500	90000	386	264	129	63.3	603	1350	713
Mercury	mg/kg	0.13	89	62	8800	580	0.35	0.041 J	0.24	0.021 J	0.22	0.042 J	0.025 J
Nickel	mg/kg	20	NLV	NLV	16000	150000	25.2	19.1	13.1	8.7	22.3	14.7	29.7
Potassium	mg/kg	NA	NA	NA	NA	NA	552	478 J	470 J	560	563	428 J	1770
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	2.0	ND(0.98)	1.3	0.44	1.3	0.54	0.74
Silver	mg/kg	1	NLV	NLV	2900	9000	0.40	0.30	0.28	ND(0.092)	0.26 J	0.26 J	0.096
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	161	334	355	ND(91.9)	226	268	176
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.23	0.12	0.26	0.13 J	0.19 J	0.070 J	0.17
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	18.8 J	11.9 J	15.5 J	21.0	14.9	9.4	25.8
Zinc	mg/kg	47	NLV	NLV	ID	630000	543 J	712 J	479 J	26.7	294	31.2	68.7
PCBs													
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	ND(0.81)	ND(0.92)	ND(0.038)	ND(0.43)	ND(1.8)	ND(0.38)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	ND(0.81)	ND(0.92)	ND(0.038)	ND(0.43)	ND(1.8)	ND(0.38)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	ND(0.81)	ND(0.92)	ND(0.038)	ND(0.43)	ND(1.8)	ND(0.38)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	ND(0.81)	4.4	ND(0.038)	ND(0.43)	ND(1.8)	ND(0.38)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	2.9	ND(0.92)	ND(0.038)	ND(0.43)	ND(1.8)	ND(0.38)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	0.57	ND(0.81)	7.1	0.22	3.4	ND(1.8)	5.6
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	ND(0.078)	3.2	ND(0.92)	ND(0.038)	ND(0.43)	14	ND(0.38)
Total PCBs	mg/kg	NA	16000	810	6500	16	0.57	6.1	11.5	0.22	3.4	14	5.6

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-E6*	*SB-F4*	*SB-F4*	*SB-F4*	*SB-G6*	*SB-H1*	*SB-H1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-070808-DD-002*	*S-048041-070808-DD-003*	*S-048041-070808-DD-004*	*S-048041-070808-DD-00*	*S-048041-070808-DD-00*	*H-48041-061208-MC-01*	*H-48041-061208-MC-01*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4.5-5.5) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*
Sample Type		a	f	h	n	p			*Duplicate*				
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)UJ	ND(0.11)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.23)	0.11 J	0.14 J	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.092)	0.62	0.65	0.64 J	ND(0.087)	1.2	7.2 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)UJ	ND(0.53)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.092)	ND(0.086)	ND(0.09)	0.4 J	0.031 J	ND(0.087)	ND(0.21)UJ
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.092)	ND(0.086)	ND(0.09)	0.15 J	ND(0.087)	0.17	2.2 J
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.092)	0.014 J	0.024 J	0.089 J	ND(0.087)	ND(0.087)	ND(0.21)UJ
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.092)	0.012 J	0.014 J	0.32 J	ND(0.087)	ND(0.087)	ND(0.21)UJ
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.69)	ND(0.64)	ND(0.68)	ND(0.75)UJ	ND(0.65)	ND(0.65)	ND(1.6)UJ
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.3)	ND(2.1)	ND(2.3)	ND(2.5)UJ	ND(2.2)	ND(2.2)	ND(5.3)UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.3)	ND(2.1)	ND(2.3)	ND(2.5)UJ	ND(2.2)	ND(2.2)	ND(5.3)UJ
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.69)U	ND(0.64)U	ND(0.68)U	ND(0.75)UJ	ND(0.65)U	ND(0.65)U	ND(1.6)UJ
Benzene	mg/kg	NA	8.4	45	470000	840	0.009 J	ND(0.043)	ND(0.045)	0.18 J	0.012 J	0.011 J	0.032 J
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.092)	ND(0.086)	ND(0.09)	ND(0.1)UJ	ND(0.087)	ND(0.087)UJ	ND(0.21)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.092)	ND(0.086)	ND(0.09)	ND(0.1)UJ	ND(0.087)	ND(0.087)	ND(0.21)UJ
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.18)	ND(0.17)	ND(0.18)	ND(0.2)UJ	ND(0.17)	ND(0.17)	ND(0.43)UJ
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.23)	0.057 J	0.026 J	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.046)UJ	ND(0.043)UJ	ND(0.045)UJ	ND(0.05)UJ	ND(0.043)UJ	ND(0.043)UJ	ND(0.11)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.046)	ND(0.043)	ND(0.045)	0.099 J	ND(0.043)	ND(0.043)	ND(0.11)UJ
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	0.054	ND(0.043)	ND(0.045)	ND(0.05)UJ	0.051	ND(0.043)	ND(0.11)UJ
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.046)UJ	ND(0.043)UJ	ND(0.045)UJ	ND(0.05)UJ	ND(0.043)UJ	ND(0.043)UJ	ND(0.11)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.1)UJ	ND(1)UJ	ND(1.1)UJ	0.81 J	0.075 J	ND(1)	ND(2.6)UJ
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.092)UJ	ND(0.086)UJ	ND(0.09)UJ	ND(0.1)UJ	ND(0.087)UJ	ND(0.087)	ND(0.21)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.011 J	0.072	0.068	0.19 J	0.016 J	0.039 J	0.036 J
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.23)	0.033 J	0.029 J	1.5 J	0.014 J	0.13 J	1 J
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(1.1)	0.086 J	0.14 J	0.1 J	ND(1)	ND(1)	ND(2.6)UJ
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.054 J	0.055 J	0.061 J	2.1 J	0.075 J	0.047 J	0.15 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.23)	ND(0.21)	ND(0.23)	0.19 J	ND(0.22)	ND(0.22)	ND(0.53)UJ
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.046)	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.01 J	ND(0.043)	ND(0.045)	ND(0.05)UJ	ND(0.043)	ND(0.043)	ND(0.11)UJ
Toluene	mg/kg	NA	610	3300	12000000	160000	0.015 J	0.015 J	0.015 J	0.14 J	0.018 J	0.018 J	0.059 J
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.046)UJ	ND(0.043)UJ	ND(0.045)UJ	ND(0.05)UJ	ND(0.043)UJ	ND(0.043)	ND(0.11)UJ
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.046)UJ	ND(0.043)UJ	ND(0.045)UJ	ND(0.05)UJ	ND(0.043)UJ	ND(0.043)UJ	ND(0.11)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.097	ND(0.043)	ND(0.045)	ND(0.05)UJ	0.12	ND(0.043)	ND(0.11)UJ
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.092)	ND(0.086)	ND(0.09)	ND(0.1)UJ	ND(0.087)	ND(0.087)	ND(0.21)UJ
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.23)	ND(0.21)	ND(0.23)	ND(0.25)UJ	ND(0.22)	ND(0.22)	ND(0.53)UJ
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	0.036 J	ND(0.034)	ND(0.036)	0.031 J	ND(0.035)	ND(0.035)	ND(0.086)UJ
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.033 J	0.25	0.26	0.58 J	0.036 J	0.097 J	1.2 J
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(3.4)	ND(8)	ND(8.5)	ND(9)	ND(1.8)	ND(0.41)	ND(10)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	ND(6)	ND(14)	ND(15)	1.1 J	0.16 J	0.041 J	3 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(11)	ND(11)	ND(12)	ND(2.3)	ND(0.54)	ND(14)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(37)	ND(86)	ND(90)	ND(96)	ND(19)	ND(4.3)UJ	ND(110)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(11)	ND(11)	ND(12)	ND(2.3)	ND(0.54)	ND(14)

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-E6*	*SB-F4*	*SB-F4*	*SB-F4*	*SB-G6*	*SB-H1*	*SB-H1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-070808-DD-002*	*S-048041-070808-DD-003*	*S-048041-070808-DD-004*	*S-048041-070808-DD-00*	*S-048041-070808-DD-00*	*H-48041-061208-MC-01*	*H-48041-061208-MC-01*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4.5-5.5) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*
Sample Type		a	f	h	n	p			*Duplicate*				
	Units												
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(3.4)	ND(8)	ND(8.5)	ND(9)	ND(1.8)	ND(0.41)UJ	ND(10)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(3.4)	ND(8)	ND(8.5)	ND(9)	ND(1.8)	ND(0.41)	ND(10)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(4.6)	ND(11)	ND(11)	ND(12)	ND(2.3)	ND(0.54)	ND(14)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(7.6)	ND(18)	ND(19)	ND(20)	ND(3.9)	ND(0.9)	ND(22)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(6)	ND(14)	ND(15)	ND(16)	0.18 J	0.28 J	ND(18)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.92)	ND(2.1)	ND(2.3)	ND(2.4)	ND(0.47)	ND(0.11)UJ	ND(2.7)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	0.18 J	ND(14)	ND(15)	1.3 J	0.51 J	1.2 J	ND(18)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	0.22 J	ND(14)	ND(15)	1.4 J	0.45 J	1.1	ND(18)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	0.38 J	ND(14)	0.45 J	1.7 J	0.62 J	1.4	ND(18)
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	0.33 J	ND(14)	ND(15)	1.5 J	0.4 J	0.72	ND(18)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	0.18 J	ND(14)	ND(15)	0.72 J	0.31 J	0.61 J	ND(18)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(1.8)	ND(4.3)	ND(4.5)	ND(4.8)	ND(0.93)	ND(0.22)	ND(5.5)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(6)	ND(14)U	ND(15)U	ND(16)U	ND(3.1)	0.12 J	1.4 J
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
Chrysene	mg/kg	NA	ID	ID	ID	8000	0.35 J	ND(14)	0.45 J	1.8 J	0.56 J	1.2 J	ND(18)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(6)	ND(14)	ND(15)	ND(16)	0.088 J	0.15 J	ND(18)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	0.36 J	0.38 J	ND(15)	2.6 J	0.98 J	3.2 J	1.2 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(6)	ND(14)	ND(15)	0.76 J	0.094 J	0.044 J	ND(18)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.92)	ND(2.1)	ND(2.3)	ND(2.4)	ND(0.47)	ND(0.11)	ND(2.7)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	0.22 J	ND(14)	ND(15)	0.97 J	0.33 J	0.64 J	ND(18)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Naphthalene	mg/kg	NA	470	350	88000	52000	ND(6)	ND(14)	ND(15)	0.52 J	0.1 J	ND(0.72)	ND(18)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)UJ	ND(18)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(3.4)	ND(8)	ND(8.5)	ND(9)	ND(1.8)	ND(0.41)UJ	ND(10)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.27 J	ND(14)	ND(15)	1.7 J	0.59 J	1 J	2.3 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	0.46 J	0.51 J	0.74 J	3.3 J	0.93 J	2.4 J	0.92 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(6)	ND(14)	ND(15)	ND(16)	ND(3.1)	ND(0.72)	ND(18)
Metals													
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	8860	4160	4320	7170	8920	3040	5230
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.41 J	0.44 J	0.52 J	1.2 J	0.50 J	9.3 J	1.4 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	3.8 J	2.9 J	3.5 J	15.2 J	8.5 J	4.2 J	14.5 J
Barium	mg/kg	75	NLV	NLV	150000	130000	212 J	100 J	175 J	303 J	168 J	59.1 J	300 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	1.2	0.075 J	0.060 J	0.54	0.38	ND(0.17)	1.4
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	0.92 J	1.8 J	1.8 J	1.2 J	0.80 J	0.32	2.1
Calcium	mg/kg	NA	NA	NA	NA	NA	40500	91300	49700	30600	13800	26700	32500
Chromium	mg/kg	18	NLV	NLV	240	9200	19.0 J	23.3 J	21.3 J	17.1 J	19.0 J	11.5 J	17.4 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	0.45 J	ND(0.86)	ND(0.90)	ND(0.96)	ND(0.93)	ND(0.87)UJ	ND(1.1)UJ
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	2.8	3.1	3.2	5.9	6.3	2.1	6.2
Copper	mg/kg	32	NLV	NLV	59000	73000	22.0 J	32.8 J	34.3 J	140 J	42.8 J	23.1	76.0
Iron	mg/kg	12000	NLV	NLV	ID	580000	8270	9240	13000	23200	18100	17800	32400
Lead	mg/kg	21	NLV	NLV	44000	900	--	--	--	--	--	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	415 J	435 J	312 J	**944 J[p]**	334 J	190	419
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	149 J	465 J	406 J	**1250 J[p]**	432 J	486	674
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	227 J	442 J	337 J	1060	366 J	268	487
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	7470 J	7160 J	9160 J	4950 J	5170 J	2660 J	9170 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-E6*	*SB-F4*	*SB-F4*	*SB-F4*	*SB-G6*	*SB-H1*	*SB-H1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-070808-DD-002*	*S-048041-070808-DD-003*	*S-048041-070808-DD-004*	*S-048041-070808-DD-005*	*S-048041-070808-DD-006*	*H-48041-061208-MC-01*	*H-48041-061208-MC-01*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*7/8/2008*	*6/12/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4.5-5.5) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(12-14) ft BGS*
Sample Type		a	f	h	n	p			*Duplicate*				
	Units												
Manganese	mg/kg	440	NLV	NLV	1500	90000	836	302	792	322	358	331	371
Mercury	mg/kg	0.13	89	62	8800	580	0.11	0.037 J	0.079	0.67	0.60	0.020 J	0.18
Nickel	mg/kg	20	NLV	NLV	16000	150000	9.9	16.1	18.5	22.5	17.9	8.2	20.4
Potassium	mg/kg	NA	NA	NA	NA	NA	1280	465	444 J	543	1060	211 J	279 J
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	1.2	0.58	0.66	1.7	1.0	0.40	1.3
Silver	mg/kg	1	NLV	NLV	2900	9000	0.088 J	0.092 J	0.098 J	0.29 J	0.11 J	0.085 J	0.18
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	342	158	109	415	425	100	295
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.17 J	0.19 J	0.13 J	0.21 J	0.17 J	ND(0.087)U	0.18
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	15.6	11.9	14.4	19.9	25.9	6.7 J	21.0 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	139	202	299	377	120	16.2 J	291 J
PCBs													
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(3.5)	ND(0.75)	ND(0.39)	ND(1.9)	ND(0.036)	ND(0.045)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(3.5)	ND(0.75)	ND(0.39)	ND(1.9)	ND(0.036)	ND(0.045)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(3.5)	ND(0.75)	ND(0.39)	ND(1.9)	ND(0.036)	ND(0.045)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(3.5)	ND(0.75)	ND(0.39)	ND(1.9)	ND(0.036)	ND(0.045)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	ND(3.5)	ND(0.75)	6.5	ND(1.9)	ND(0.036)	ND(0.045)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	16	ND(3.5)	ND(0.75)	ND(0.39)	21	0.45	ND(0.045)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	ND(1.9)	2.6 J	2.8	3.7	ND(1.9)	ND(0.036)	0.49 J
Total PCBs	mg/kg	NA	16000	810	6500	16	16	2.6 J	2.8	10.2	**21[p]**	0.45	0.49 J

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-48041-071808-EV-003*
Sample Date							*7/18/2008*
Sample Depth							*(1-2) ft BGS*
Sample Type		a	f	h	n	p	
	Units						
Volatile Organic Compounds (VOCs)							
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.052)
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.052)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.052)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.052)
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.052)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.26)
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.1)
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.26)
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.26)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.1)
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.052)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.052)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.1)
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.1)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.1)
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.78)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.6)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.6)
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.78)U
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.052)
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.1)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.1)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.21)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.26)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.052)
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.052)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.26)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.052)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.26)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.052)
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.052)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.2)
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.052)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.1)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	ND(0.052)
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.26)
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(1.2)
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.2)
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.26)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.26)
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.052)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	ND(0.052)
Toluene	mg/kg	NA	610	3300	12000000	160000	ND(0.1)
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.052)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.052)
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.052)
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.1)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.26)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.041)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	ND(0.16)
Semi-Volatile Organic Compounds (SVOCs)							
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(0.29)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(0.29)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(0.29)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(0.29)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(0.16)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(0.29)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(0.29)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(0.29)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	ND(0.29)
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(0.29)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(0.29)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(1.7)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-48041-071808-EV-003*
Sample Date							*7/18/2008*
Sample Depth							*(1-2) ft BGS*
Sample Type		a	f	h	n	p	
	Units						
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(0.16)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(0.29)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.16)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(0.29)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(0.36)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(0.29)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(0.29)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(0.29)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(0.29)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.043)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	ND(0.29)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	ND(0.29)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	ND(0.29)
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	0.02 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	ND(0.29)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(0.29)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(0.087)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(0.29)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(0.29)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(0.29)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(0.29)
Chrysene	mg/kg	NA	ID	ID	ID	8000	ND(0.29)
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(0.29)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(0.29)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(0.29)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(0.29)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(0.29)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(0.29)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	ND(0.29)
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(0.29)
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(0.29)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.043)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(0.29)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(0.29)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	ND(0.29)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(0.29)
Naphthalene	mg/kg	NA	470	350	88000	52000	ND(0.29)
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(0.29)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(0.29)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(0.29)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(0.16)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.009 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(0.29)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	ND(0.29)
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(0.29)
Metals							
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	23700
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.044 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	1.4
Barium	mg/kg	75	NLV	NLV	150000	130000	251 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	4.4 J
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	0.11 J
Calcium	mg/kg	NA	NA	NA	NA	NA	49000
Chromium	mg/kg	18	NLV	NLV	240	9200	6.8 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	0.33 J
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	0.65
Copper	mg/kg	32	NLV	NLV	59000	73000	3.4
Iron	mg/kg	12000	NLV	NLV	ID	580000	2820
Lead	mg/kg	21	NLV	NLV	44000	900	11.9
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	--
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	--
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	--
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	45100 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-48041-071808-EV-003*
Sample Date							*7/18/2008*
Sample Depth							*(1-2) ft BGS*
Sample Type		a	f	h	n	p	
	Units						
Manganese	mg/kg	440	NLV	NLV	1500	90000	**1910[n]**
Mercury	mg/kg	0.13	89	62	8800	580	ND(0.043)
Nickel	mg/kg	20	NLV	NLV	16000	150000	1.1 J
Potassium	mg/kg	NA	NA	NA	NA	NA	2500
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	2.4
Silver	mg/kg	1	NLV	NLV	2900	9000	0.035 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	1190
Thallium	mg/kg	NA	NLV	NLV	5900	130	ND(0.27)U
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	5.6
Zinc	mg/kg	47	NLV	NLV	ID	630000	23.5
PCBs							
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(0.036)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	0.35
Total PCBs	mg/kg	NA	16000	810	6500	16	0.35

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*	*SB-4*	*SB-K1*	*SB-K1*	*SB-L6*	*SB-M3*	*SB-M3*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-48041-071808-EV-004*	*H-48041-061208-MC-00*	*S-48041-071808-EV-005*	*S-48041-071808-EV-006*	*H-48041-061208-MC-01*	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/18/2008*	*6/12/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*	*7/9/2008*	*7/9/2008*
Sample Depth		Background	Inhalation	Inhalation			*(4-5) ft BGS*	*(1-2) ft BGS*	*(1.5-2.5) ft BGS*	*(11-12) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4-5) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.053)UJ	ND(0.58)UJ	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.053)UJ	ND(0.58)	0.14 J	ND(0.047)	ND(0.048)UJ	0.037 J	0.051 J
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	0.038 J	0.095 J
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	0.058 J	1.7	3.8 J	0.62	ND(0.095)UJ	1.7	0.93
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.26)UJ	ND(2.9)UJ	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.11)UJ	1.2	0.13 J	ND(0.094)	ND(0.095)UJ	0.14	0.27
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.11)UJ	0.67 J	1.2 J	0.14	ND(0.095)UJ	0.49	0.23
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.11)UJ	ND(1.2)	ND(0.1)UJ	ND(0.094)	ND(0.095)UJ	ND(0.086)	ND(0.11)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.11)UJ	0.42 J	0.014 J	ND(0.094)	ND(0.095)UJ	0.025 J	0.025 J
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	0.073 J	ND(8.6)	0.079 J	ND(0.71)	ND(0.72)UJ	ND(0.65)	ND(0.82)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.6)UJ	ND(29)	ND(2.6)UJ	ND(2.4)	ND(2.4)UJ	ND(2.2)	ND(2.7)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	0.019 J	ND(29)	ND(2.6)UJ	ND(2.4)	ND(2.4)UJ	ND(2.2)	ND(2.7)
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.79)UJ	ND(8.6)	ND(0.77)UJ	ND(0.71)	ND(0.72)UJ	ND(0.65)	ND(0.82)U
Benzene	mg/kg	NA	8.4	45	470000	840	0.013 J	0.51 J	0.071 J	0.27	ND(0.048)UJ	0.071	0.15
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.11)UJ	ND(1.2)UJ	ND(0.1)UJ	ND(0.094)UJ	ND(0.095)UJ	ND(0.086)	ND(0.11)
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.11)UJ	ND(1.2)	ND(0.1)UJ	ND(0.094)	ND(0.095)UJ	ND(0.086)	ND(0.11)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.21)UJ	ND(2.3)	ND(0.21)UJ	ND(0.19)	ND(0.19)UJ	ND(0.17)	ND(0.22)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.26)UJ	ND(2.9)	0.031 J	0.048 J	ND(0.24)UJ	ND(0.22)	ND(0.27)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.053)UJ	ND(0.58)UJ	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)UJ	ND(0.055)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.053)UJ	0.21 J	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.053)UJ	ND(0.58)	0.035 J	ND(0.047)	ND(0.048)UJ	1.2	0.21
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.053)UJ	ND(0.58)UJ	ND(0.051)UJ	ND(0.047)UJ	ND(0.048)UJ	ND(0.043)UJ	ND(0.055)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.042 J	2.8 J	0.093 J	0.038 J	ND(1.1)UJ	ND(1)	0.14 J
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)	ND(0.055)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.11)UJ	ND(1.2)	ND(0.1)UJ	ND(0.094)UJ	ND(0.095)UJ	ND(0.086)UJ	ND(0.11)UJ
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	0.023 J	0.24 J	0.64 J	0.34	ND(0.048)UJ	0.43	0.32
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	0.0094 J	4.4	0.31 J	0.067 J	ND(0.24)UJ	0.14 J	0.37
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	0.13 J	ND(14)	0.15 J	0.082 J	ND(1.1)UJ	0.084 J	0.13 J
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.084 J	5.8 J	0.16 J	0.069 J	ND(1.1)UJ	0.083 J	0.16 J
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.26)UJ	ND(2.9)	0.18 J	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	0.13	ND(0.048)UJ	ND(0.043)	ND(0.055)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.014 J	ND(0.58)	0.013 J	ND(0.047)	ND(0.048)UJ	0.073	ND(0.055)
Toluene	mg/kg	NA	610	3300	12000000	160000	0.091 J	0.3 J	0.71 J	0.18	ND(0.095)UJ	0.76	0.29
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.053)UJ	ND(0.58)	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	0.059 J	ND(0.055)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.053)UJ	ND(0.58)UJ	ND(0.051)UJ	ND(0.047)	ND(0.048)UJ	ND(0.043)UJ	ND(0.055)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	0.035 J	ND(0.58)	0.07 J	ND(0.047)	0.016 J	0.15	0.022 J
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.11)UJ	ND(1.2)	ND(0.1)UJ	ND(0.094)	ND(0.095)UJ	ND(0.086)	ND(0.11)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.26)UJ	ND(2.9)	ND(0.26)UJ	ND(0.24)	ND(0.24)UJ	ND(0.22)	ND(0.27)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.042)UJ	ND(0.46)	0.18 J	ND(0.038)	ND(0.038)UJ	0.083	0.064
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.11 J	2.2	2.6 J	0.71	ND(0.14)UJ	1.8	1
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(0.17)	ND(18)	ND(9.3)	ND(8.9)	ND(0.18)	ND(33)	ND(39)
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.034 J	32	8.6 J	5.9 J	ND(0.32)	3.2 J	7.7 J
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)	ND(24)	ND(12)	ND(12)	ND(0.24)	ND(45)	ND(52)
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(1.8)	ND(190)	ND(100)	ND(94)	ND(1.9)	ND(360)	ND(410)
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)	ND(24)	ND(12)	ND(12)	ND(0.24)	ND(45)	ND(52)

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*	*SB-4*	*SB-K1*	*SB-K1*	*SB-L6*	*SB-M3*	*SB-M3*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-48041-071808-EV-004*	*H-48041-061208-MC-00*	*S-48041-071808-EV-005*	*S-48041-071808-EV-006*	*H-48041-061208-MC-01*	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/18/2008*	*6/12/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*	*7/9/2008*	*7/9/2008*
Sample Depth		Background	Inhalation	Inhalation			*(4-5) ft BGS*	*(1-2) ft BGS*	*(1.5-2.5) ft BGS*	*(11-12) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4-5) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(0.17)	ND(18)	ND(9.3)	ND(8.9)	ND(0.18)	ND(33)	ND(39)
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.17)	ND(18)	ND(9.3)	ND(8.9)	ND(0.18)	ND(33)	ND(39)
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.22)	ND(24)	ND(12)	ND(12)	ND(0.24)	ND(45)	ND(52)
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(0.37)	ND(40)	ND(21)	ND(19)	ND(0.39)	ND(74)	ND(85)
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	ND(0.29)	ND(32)	ND(16)	3.3 J	ND(0.32)	ND(59)	ND(68)
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(0.29)	ND(32)	ND(16)	0.6 J	ND(0.32)	ND(59)	ND(68)
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.044)	ND(4.8)	ND(2.5)	ND(2.4)	ND(0.048)	ND(8.9)	ND(10)
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	ND(0.29)	2.2 J	ND(16)	1.5 J	0.016 J	ND(59)	ND(68)
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	ND(0.29)	ND(32)	ND(16)	1.2 J	0.015 J	ND(59)	ND(68)
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	ND(0.29)	ND(32)	ND(16)	1 J	0.018 J	ND(59)	2 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	0.14 J	ND(32)	ND(16)	0.66 J	0.013 J	ND(59)	ND(68)
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	ND(0.29)	ND(32)	ND(16)	ND(16)	0.0079 J	ND(59)	ND(68)
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	1.5 J	ND(16)	ND(0.32)	ND(59)	ND(68)
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(0.089)	ND(9.7)	ND(5)	ND(4.7)	ND(0.095)	ND(18)	ND(21)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	0.063 J	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Chrysene	mg/kg	NA	ID	ID	ID	8000	ND(0.29)	2.8 J	1.2 J	2.4 J	0.016 J	ND(59)	2.2 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	0.052 J	8.3 J	2.3 J	5.3 J	0.026 J	ND(59)	4 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	ND(0.29)	14 J	ND(16)	2.5 J	ND(0.32)	2 J	6 J
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.044)	ND(4.8)	ND(2.5)	ND(2.4)	ND(0.048)	ND(8.9)	ND(10)
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	ND(0.29)	ND(32)	ND(16)	0.4 J	0.0084 J	ND(59)	ND(68)
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Naphthalene	mg/kg	NA	470	350	88000	52000	0.022 J	ND(32)	2.6 J	8.1 J	ND(0.32)	1.7 J	2.5 J
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(0.17)	ND(18)	ND(9.3)	ND(8.9)	ND(0.18)	ND(33)	ND(39)
Phenanthrene	mg/kg	NA	5100	190	2900	5200	0.053 J	18 J	8.2 J	12 J	0.018 J	4.2 J	6.3 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	0.06 J	5.6 J	2.4 J	6.7 J	0.024 J	1.8 J	3.6 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(0.29)	ND(32)	ND(16)	ND(16)	ND(0.32)	ND(59)	ND(68)
Metals													
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	11400	5040	7680	6970	7560	6240	5710
Antimony	mg/kg	NA	NLV	NLV	5900	670	0.11 J	3.6 J	2.6 J	0.72 J	0.090 J	6.2 J	3.0 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	2.4	11.8 J	13.0	9.5	5.7 J	3.9	14.6
Barium	mg/kg	75	NLV	NLV	150000	130000	141 J	493 J	1390 J	161 J	62.0 J	204 J	690 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	2.3 J	0.46	0.40 J	0.59 J	0.29	0.38	0.91
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	0.33 J	3.7	4.7 J	1.2 J	0.50	4.5	2.1
Calcium	mg/kg	NA	NA	NA	NA	NA	45400	24100	49700	23200	55000	33500	16400
Chromium	mg/kg	18	NLV	NLV	240	9200	11.3 J	58.1 J	39.5 J	19.9 J	14.8 J	22.1	185
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	1.0	4.8 J	1.7	0.36 J	ND(0.95)UJ	ND(0.89)	ND(1.0)
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	2.3	6.9	4.5	7.2	8.6	4.0	5.2
Copper	mg/kg	32	NLV	NLV	59000	73000	143	434	119	49.4	20.4	103 J	114 J
Iron	mg/kg	12000	NLV	NLV	ID	580000	9140	55300	19700	16800	18500	16900	21500
Lead	mg/kg	21	NLV	NLV	44000	900	--	--	--	--	9.3	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	85.4	**4670[P]**	**11000[P]**	175	--	**1540[P]**	**1310[P]**
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	266	**5310[P]**	**10700[P]**	252	--	**906[P]**	**1470[P]**
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	140	4750	11000	191	--	1370	1330
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	13200 J	3320 J	10300 J	4870 J	14500 J	3570 J	3170 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-I1*	*SB-4*	*SB-K1*	*SB-K1*	*SB-L6*	*SB-M3*	*SB-M3*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-48041-071808-EV-004*	*H-48041-061208-MC-00*	*S-48041-071808-EV-005*	*S-48041-071808-EV-006*	*H-48041-061208-MC-01*	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*
Sample Date							*7/18/2008*	*6/12/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*	*7/9/2008*	*7/9/2008*
Sample Depth							*(4-5) ft BGS*	*(1-2) ft BGS*	*(1.5-2.5) ft BGS*	*(11-12) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(4-5) ft BGS*
Sample Type		a	f	h	n	p							
	Units												
Manganese	mg/kg	440	NLV	NLV	1500	90000	724	374	419	399	309	463	193
Mercury	mg/kg	0.13	89	62	8800	580	0.033 J	0.42	0.092	0.15	0.019 J	0.26	0.25
Nickel	mg/kg	20	NLV	NLV	16000	150000	8.2 J	51.2	24.3 J	14.5 J	24.9	14.5	24.7
Potassium	mg/kg	NA	NA	NA	NA	NA	1170	768	1300	1350	1830	704	687
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	1.3	1.2	1.0	1.1	0.59	0.74	1.3
Silver	mg/kg	1	NLV	NLV	2900	9000	0.036 J	1.9	0.38	0.10	0.037 J	0.15	0.27
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	400	329	1000	ND(314)U	157	197	373
Thallium	mg/kg	NA	NLV	NLV	5900	130	ND(0.089)U	0.17	ND(0.26)U	ND(0.38)U	0.30	0.16	0.32
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	12.0	14.8 J	26.7	26.7	19.6 J	14.4	20.9
Zinc	mg/kg	47	NLV	NLV	ID	630000	92.1	663 J	483	70.0	44.8 J	291	551
PCBs													
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	ND(2)	ND(0.41)	ND(0.19)	ND(0.039)	ND(0.37)	ND(0.43)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	ND(2)	ND(0.41)	ND(0.19)	ND(0.039)	ND(0.37)	ND(0.43)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	ND(2)	ND(0.41)	ND(0.19)	ND(0.039)	ND(0.37)	ND(0.43)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	4.7	4.2	1.2	ND(0.039)	0.37	0.92
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	ND(2)	ND(0.41)	ND(0.19)	ND(0.039)	ND(0.37)	ND(0.43)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(0.18)	17	ND(0.41)	1.9	ND(0.039)	0.23 J	1.7
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	1.1	ND(2)	3.9	ND(0.19)	ND(0.039)	ND(0.37)	ND(0.43)
Total PCBs	mg/kg	NA	16000	810	6500	16	1.1	**21.7[p]**	8.1	3.1	ND	0.6 J	2.62

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-N8*	*SB-N8*	*SB-O4*	*SB-O4*	*SB-P1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*	*S-48041-071808-EV-001*	*S-48041-071808-EV-002*	*H-48041-061208-MC-011*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/9/2008*	*7/9/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(2-5) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p		*Duplicate*			
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	mg/kg	NA	460	4500	29000000	1000000	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)UJ
1,1,2,2-Tetrachloroethane	mg/kg	NA	23	34	68000	240	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
1,1,2-Trichloroethane	mg/kg	NA	24	57	250000	840	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
1,1-Dichloroethane	mg/kg	NA	430	2500	15000000	87000	ND(0.045)	ND(0.049)	0.058	0.022 J	ND(0.046)
1,1-Dichloroethene	mg/kg	NA	0.33	3.7	78000	660	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
1,2,4-Trichlorobenzene	mg/kg	NA	18000	34000	11000000	5800	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
1,2,4-Trimethylbenzene	mg/kg	NA	8000	25000	36000000	100000	ND(0.09)	ND(0.098)	0.16	0.046 J	ND(0.092)
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	NA	1.2	0.9	700	20	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)UJ
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	NA	3.6	5.8	18000	0.43	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
1,2-Dichlorobenzene	mg/kg	NA	20000	46000	44000000	63000	ND(0.09)	ND(0.098)	0.049 J	0.033 J	ND(0.092)
1,2-Dichloroethane	mg/kg	NA	11	21	150000	420	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
1,2-Dichloropropane	mg/kg	NA	7.4	30	120000	660	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
1,3,5-Trimethylbenzene	mg/kg	NA	4800	19000	36000000	100000	ND(0.09)	ND(0.098)	ND(0.1)	ND(0.11)	ND(0.092)
1,3-Dichlorobenzene	mg/kg	NA	48	94	88000	660	ND(0.09)	ND(0.098)	ND(0.1)	ND(0.11)	ND(0.092)
1,4-Dichlorobenzene	mg/kg	NA	100	260	570000	1900	ND(0.09)	ND(0.098)	0.037 J	ND(0.11)	ND(0.092)
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	NA	99000	35000	29000000	700000	ND(0.67)	ND(0.74)	0.14 J	0.088 J	ND(0.69)
2-Hexanone	mg/kg	NA	1800	1300	1200000	100000	ND(2.2)	ND(2.5)	ND(2.6)	ND(2.7)	ND(2.3)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	NA	69000	53000	60000000	180000	ND(2.2)	ND(2.5)	ND(2.6)	ND(2.7)	ND(2.3)
Acetone	mg/kg	NA	540000	160000	170000000	73000	ND(0.67)	ND(0.74)	ND(0.77)U	ND(0.8)U	ND(0.69)U
Benzene	mg/kg	NA	8.4	45	470000	840	ND(0.045)	ND(0.049)	0.066	0.034 J	ND(0.046)
Bromodichloromethane	mg/kg	NA	6.4	31	110000	490	ND(0.09)	ND(0.098)	ND(0.1)UJ	ND(0.11)UJ	ND(0.092)UJ
Bromoform	mg/kg	NA	770	3100	3600000	3800	ND(0.09)	ND(0.098)	ND(0.1)	ND(0.11)	ND(0.092)
Bromomethane (Methyl bromide)	mg/kg	NA	1.6	13	150000	1000	ND(0.18)	ND(0.2)	ND(0.21)	ND(0.21)	ND(0.18)
Carbon disulfide	mg/kg	NA	140	1600	21000000	43000	ND(0.22)	ND(0.25)	0.035 J	0.043 J	ND(0.23)
Carbon tetrachloride	mg/kg	NA	0.99	12	170000	440	ND(0.045)UJ	ND(0.049)UJ	ND(0.052)	ND(0.054)	ND(0.046)UJ
Chlorobenzene	mg/kg	NA	220	920	2100000	14000	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
Chloroethane	mg/kg	NA	5300	36000	290000000	12000	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
Chloroform (Trichloromethane)	mg/kg	NA	38	150	1600000	5500	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
Chloromethane (Methyl chloride)	mg/kg	NA	10	120	2600000	7400	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
cis-1,2-Dichloroethene	mg/kg	NA	41	210	1000000	8000	ND(0.045)	ND(0.049)	0.067	ND(0.054)	ND(0.046)
cis-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.045)UJ	ND(0.049)UJ	ND(0.052)UJ	ND(0.054)UJ	ND(0.046)UJ
Cyclohexane	mg/kg	NA	NA	NA	NA	NA	ND(1.1)	ND(1.2)	0.29 J	0.25 J	ND(1.1)
Dibromochloromethane	mg/kg	NA	21	80	160000	500	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
Dichlorodifluoromethane (CFC-12)	mg/kg	NA	1700	63000	1500000000	170000	ND(0.09)UJ	ND(0.098)UJ	ND(0.1)UJ	ND(0.11)UJ	ND(0.092)
Ethylbenzene	mg/kg	NA	460	2400	13000000	71000	ND(0.045)	ND(0.049)	0.15	0.036 J	ND(0.046)
Isopropyl benzene	mg/kg	NA	730	2000	2600000	80000	ND(0.22)	ND(0.25)	0.11 J	0.12 J	ND(0.23)
Methyl acetate	mg/kg	NA	NA	NA	NA	NA	ND(1.1)	ND(1.2)	0.27 J	0.23 J	ND(1.1)
Methyl cyclohexane	mg/kg	NA	NA	NA	NA	NA	0.06 J	0.062 J	0.3 J	0.64 J	ND(1.1)
Methyl tert butyl ether (MTBE)	mg/kg	NA	18000	30000	88000000	7100	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
Methylene chloride	mg/kg	NA	240	700	8300000	5800	ND(0.22)	ND(0.25)	ND(0.26)	0.13 J	ND(0.23)
Styrene	mg/kg	NA	1300	3300	6900000	1900	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
Tetrachloroethene	mg/kg	NA	21	210	1200000	930	0.36	0.35	0.018 J	ND(0.054)	ND(0.046)
Toluene	mg/kg	NA	610	3300	12000000	160000	ND(0.09)	ND(0.098)U	0.41	0.13	ND(0.092)
trans-1,2-Dichloroethene	mg/kg	NA	43	330	2100000	12000	ND(0.045)	ND(0.049)	ND(0.052)	ND(0.054)	ND(0.046)
trans-1,3-Dichloropropene	mg/kg	NA	NA	NA	NA	NA	ND(0.045)UJ	ND(0.049)UJ	ND(0.052)	ND(0.054)	ND(0.046)UJ
Trichloroethene	mg/kg	NA	1.9	14	59000	660	ND(0.045)	ND(0.049)	0.091	0.027 J	ND(0.046)
Trichlorofluoromethane (CFC-11)	mg/kg	NA	5100	110000	1700000000	260000	ND(0.09)	ND(0.098)	ND(0.1)	ND(0.11)	ND(0.092)
Trifluorotrichloroethane (Freon 113)	mg/kg	NA	9300	210000	2300000000	1000000	ND(0.22)	ND(0.25)	ND(0.26)	ND(0.27)	ND(0.23)
Vinyl chloride	mg/kg	NA	2.8	29	890000	34	ND(0.036)	ND(0.039)	ND(0.041)	ND(0.043)	ND(0.037)
Xylenes (total)	mg/kg	NA	12000	54000	130000000	1000000	0.022 J	0.03 J	0.69	0.19	ND(0.14)
Semi-Volatile Organic Compounds (SVOCs)											
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,4,5-Trichlorophenol	mg/kg	NA	NLV	NLV	10000000	73000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,4,6-Trichlorophenol	mg/kg	NA	NLV	NLV	1300000	3300	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,4-Dichlorophenol	mg/kg	NA	NLV	NLV	2300000	3900	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,4-Dimethylphenol	mg/kg	NA	NLV	NLV	2100000	36000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,4-Dinitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(0.69)	ND(0.7)	ND(16)	ND(95)	ND(3.2)UJ
2,4-Dinitrotoluene	mg/kg	NA	NLV	NLV	20000	220	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2,6-Dinitrotoluene	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2-Chloronaphthalene	mg/kg	NA	ID	ID	ID	180000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2-Chlorophenol	mg/kg	NA	800	1100	530000	4500	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2-Methylnaphthalene	mg/kg	NA	4900	1800	290000	26000	0.078 J	0.11 J	1.2 J	ND(170)	ND(5.6)UJ
2-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
2-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.93)	ND(0.94)	ND(22)	ND(130)	ND(4.3)UJ
2-Nitrophenol	mg/kg	NA	NLV	NLV	ID	2000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
3,3'-Dichlorobenzidine	mg/kg	NA	NLV	NLV	8200	30	ND(7.4)	ND(7.5)	ND(170)	ND(1000)	ND(34)UJ
3-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.93)	ND(0.94)	ND(22)	ND(130)	ND(4.3)UJ

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-N8*	*SB-N8*	*SB-O4*	*SB-O4*	*SB-P1*
Sample Identification		Statewide	Nonresidential Soil Volatilization	Nonresidential Infinite Source	Nonresidential Particulate	Nonresidential Direct	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*	*S-48041-071808-EV-001*	*S-48041-071808-EV-002*	*H-48041-061208-MC-011*
Sample Date		Default	to Indoor Air	Volatile Soil	Soil Inhalation	Contact	*7/9/2008*	*7/9/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*
Sample Depth		Background	Inhalation	Inhalation			*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(2-5) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p		*Duplicate*			
	Units										
4,6-Dinitro-2-methylphenol	mg/kg	NA	NLV	NLV	59000	260	ND(0.69)	ND(0.7)	ND(16)	ND(95)	ND(3.2)UJ
4-Bromophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
4-Chloro-3-methylphenol	mg/kg	NA	NLV	NLV	ID	15000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
4-Chloroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.69)	ND(0.7)	ND(16)	ND(95)	ND(3.2)UJ
4-Chlorophenyl phenyl ether	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
4-Methylphenol	mg/kg	NA	NLV	NLV	2900000	36000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
4-Nitroaniline	mg/kg	NA	NA	NA	NA	NA	ND(0.93)	ND(0.94)	ND(22)	ND(130)	ND(4.3)UJ
4-Nitrophenol	mg/kg	NA	NA	NA	NA	NA	ND(1.5)	ND(1.5)	ND(35)	ND(210)	ND(7)UJ
Acenaphthene	mg/kg	NA	350000	97000	6200000	130000	0.12 J	0.16 J	0.99 J	ND(170)	ND(5.6)UJ
Acenaphthylene	mg/kg	NA	3000	2700	1000000	5200	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Acetophenone	mg/kg	NA	210000	52000	14000000	150000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Anthracene	mg/kg	NA	1000000	1600000	29000000	730000	0.22 J	0.33 J	ND(28)	ND(170)	0.42 J
Atrazine	mg/kg	NA	NLV	NLV	ID	330	ND(0.19)	ND(0.19)	ND(4.3)	ND(25)	ND(0.85)UJ
Benzaldehyde	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Benzo(a)anthracene	mg/kg	NA	NLV	NLV	ID	80	2.1	2.7	ND(28)	ND(170)	0.94 J
Benzo(a)pyrene	mg/kg	NA	NLV	NLV	1900	8	2.9	3.5	ND(28)	ND(170)	0.83 J
Benzo(b)fluoranthene	mg/kg	NA	ID	ID	ID	80	4.5	5.6	ND(28)	ND(170)	0.78 J
Benzo(g,h,i)perylene	mg/kg	NA	NLV	NLV	350000	7000	2.3	2.9	ND(28)	ND(170)	0.56 J
Benzo(k)fluoranthene	mg/kg	NA	NLV	NLV	ID	800	1.6	1.7	ND(28)	ND(170)	0.27 J
Biphenyl (1,1-Biphenyl)	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
bis(2-Chloroethoxy)methane	mg/kg	NA	NA	NA	NA	NA	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
bis(2-Chloroethyl)ether	mg/kg	NA	44	13	12000	58	ND(0.37)	ND(0.37)	ND(8.6)	ND(51)	ND(1.7)UJ
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	NA	NLV	NLV	890000	12000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Butyl benzylphthalate (BBP)	mg/kg	NA	NLV	NLV	21000000	120000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Caprolactam	mg/kg	NA	NLV	NLV	290000	310000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Carbazole	mg/kg	NA	NLV	NLV	78000	2400	0.18 J	0.24 J	ND(28)	ND(170)	ND(5.6)UJ
Chrysene	mg/kg	NA	ID	ID	ID	8000	2.8	3.4	ND(28)	ND(170)	0.95 J
Dibenz(a,h)anthracene	mg/kg	NA	NLV	NLV	ID	8	0.76 J	0.85 J	ND(28)	ND(170)	ND(5.6)UJ
Dibenzofuran	mg/kg	NA	3600	160	2900	ID	ND(1.2)	0.11 J	ND(28)	ND(170)	ND(5.6)UJ
Diethyl phthalate	mg/kg	NA	NLV	NLV	1500000	550000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Dimethyl phthalate	mg/kg	NA	NLV	NLV	1500000	1000000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Di-n-butylphthalate (DBP)	mg/kg	NA	NLV	NLV	1500000	87000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Di-n-octyl phthalate (DnOP)	mg/kg	NA	NLV	NLV	14000000	20000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Fluoranthene	mg/kg	NA	1000000	890000	4100000	130000	3	3.7	2.2 J	ND(170)	1.7 J
Fluorene	mg/kg	NA	1000000	150000	4100000	87000	0.076 J	0.12 J	ND(28)	ND(170)	ND(5.6)UJ
Hexachlorobenzene	mg/kg	NA	220	56	8500	37	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Hexachlorobutadiene	mg/kg	NA	710	460	180000	470	ND(0.19)	ND(0.19)	ND(4.3)	ND(25)	ND(0.85)UJ
Hexachlorocyclopentadiene	mg/kg	NA	56	60	5900	6700	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Hexachloroethane	mg/kg	NA	79	660	100000	730	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NLV	NLV	ID	80	2	2.5	ND(28)	ND(170)	0.39 J
Isophorone	mg/kg	NA	NLV	NLV	8200000	22000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Naphthalene	mg/kg	NA	470	350	88000	52000	0.1 J	0.15 J	ND(28)	ND(170)	ND(5.6)UJ
Nitrobenzene	mg/kg	NA	170	64	21000	340	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
N-Nitrosodi-n-propylamine	mg/kg	NA	NLV	NLV	2000	5.4	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
N-Nitrosodiphenylamine	mg/kg	NA	NLV	NLV	2800000	7800	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Pentachlorophenol	mg/kg	NA	NLV	NLV	130000	320	ND(0.69)	ND(0.7)	ND(16)	ND(95)	ND(3.2)UJ
Phenanthrene	mg/kg	NA	5100	190	2900	5200	1.1 J	1.7	ND(28)	ND(170)	1 J
Phenol	mg/kg	NA	NLV	NLV	18000000	230000	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Pyrene	mg/kg	NA	1000000	780000	2900000	84000	2.6	3.3	2 J	ND(170)	1.8 J
Pyridine	mg/kg	NA	2	9.8	100000	730	ND(1.2)	ND(1.2)	ND(28)	ND(170)	ND(5.6)UJ
Metals											
Aluminum	mg/kg	6900	NLV	NLV	ID	370000	10100	13500	12000	5850	3410
Antimony	mg/kg	NA	NLV	NLV	5900	670	1.5 J	1.2 J	1.5 J	2.2 J	0.15 J
Arsenic	mg/kg	5.8	NLV	NLV	910	37	14.7	12.2	7.8	10.2	4.6 J
Barium	mg/kg	75	NLV	NLV	150000	130000	394 J	423 J	342 J	410 J	32.4 J
Beryllium	mg/kg	NA	NLV	NLV	590	1600	0.14 J	ND(0.19)	1.6 J	0.48 J	ND(0.17)
Cadmium	mg/kg	1.2	NLV	NLV	2200	2100	1.9	1.7	7.3 J	3.9 J	0.23
Calcium	mg/kg	NA	NA	NA	NA	NA	19400	29300	41900	59000	49600
Chromium	mg/kg	18	NLV	NLV	240	9200	55.0	46.0	30.2 J	41.8 J	6.4 J
Chromium VI (hexavalent)	mg/kg	NA	NLV	NLV	240	9200	1.8 J	2.2 J	0.64 J	2.3	3.4 J
Cobalt	mg/kg	6.8	NLV	NLV	5900	9000	9.9	8.3	5.8	6.7	2.7
Copper	mg/kg	32	NLV	NLV	59000	73000	115 J	108 J	143	250	12.4
Iron	mg/kg	12000	NLV	NLV	ID	580000	97800	88600	22900	25300	7380
Lead	mg/kg	21	NLV	NLV	44000	900	--	--	--	--	--
Lead - coarse fraction	mg/kg	21	NLV	NLV	44000	900	682	**1120[P]**	**965[P]**	**1830[P]**	163
Lead - fine fraction	mg/kg	21	NLV	NLV	44000	900	490	498	**1090[P]**	**1980[P]**	113
Lead - total (calculated by fine/coarse fraction)	mg/kg	NA	NA	NA	NA	NA	605	860	982	1860	150
Magnesium	mg/kg	NA	NLV	NLV	2900000	1000000	1250 J	1460 J	8720 J	6200 J	16200 J

TABLE 3.3

SUBSURFACE ANALYTICAL DATA
STANDARD OF CARE PLAN
DEARBORN REFINERY SITE
DEARBORN, MICHIGAN

Sample Location		EGLE Generic Cleanup Criteria: Nonresidential [1]					*SB-N8*	*SB-N8*	*SB-O4*	*SB-O4*	*SB-P1*
Sample Identification		Statewide Default Background	Nonresidential Soil Volatilization to Indoor Air Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Nonresidential Particulate Soil Inhalation	Nonresidential Direct Contact	*S-048041-070908-DD-01*	*S-048041-070908-DD-01*	*S-48041-071808-EV-001*	*S-48041-071808-EV-002*	*H-48041-061208-MC-011*
Sample Date							*7/9/2008*	*7/9/2008*	*7/18/2008*	*7/18/2008*	*6/12/2008*
Sample Depth							*(1-2) ft BGS*	*(1-2) ft BGS*	*(1-2) ft BGS*	*(2-5) ft BGS*	*(1-2) ft BGS*
Sample Type		a	f	h	n	p		*Duplicate*			
	Units										
Manganese	mg/kg	440	NLV	NLV	1500	90000	**1640[n]**	**1920[n]**	960	438	171
Mercury	mg/kg	0.13	89	62	8800	580	0.28 J	0.17 J	0.75	0.80	0.083
Nickel	mg/kg	20	NLV	NLV	16000	150000	103 J	21.8 J	25.4 J	25.0 J	11.3
Potassium	mg/kg	NA	NA	NA	NA	NA	839	1150	1090	778	558
Selenium	mg/kg	0.41	NLV	NLV	59000	9600	0.96	1.1	1.2	1.1	0.17
Silver	mg/kg	1	NLV	NLV	2900	9000	0.13	0.14	0.41	0.60	0.021 J
Sodium	mg/kg	NA	NLV	NLV	ID	1000000	228	202	394	ND(269)U	159
Thallium	mg/kg	NA	NLV	NLV	5900	130	0.17	0.15	ND(0.22)U	ND(0.21)U	0.095
Vanadium	mg/kg	NA	NLV	NLV	ID	5500	26.1	23.3	17.1	17.5	29.9 J
Zinc	mg/kg	47	NLV	NLV	ID	630000	445	345	605	601	30.6 J
PCBs											
Aroclor-1016 (PCB-1016)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	ND(0.18)	ND(0.42)	ND(0.035)
Aroclor-1221 (PCB-1221)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	ND(0.18)	ND(0.42)	ND(0.035)
Aroclor-1232 (PCB-1232)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	ND(0.18)	ND(0.42)	ND(0.035)
Aroclor-1242 (PCB-1242)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	1.2	ND(0.42)	ND(0.035)
Aroclor-1248 (PCB-1248)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	ND(0.18)	4.9	ND(0.035)
Aroclor-1254 (PCB-1254)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	ND(0.18)	ND(0.42)	ND(0.035)
Aroclor-1260 (PCB-1260)	mg/kg	NA	NA	NA	NA	NA	ND(0.038)	ND(0.039)	1.5	2.8	ND(0.035)
Total PCBs	mg/kg	NA	16000	810	6500	16	ND	ND	2.7	7.7	ND

Notes:

(1) EGLE - Michigan Department of Environment, Great Lakes and Energy (EGLE) Generic cleanup criteria for nonresidential category, administrative rule R 299.46 and R 299.48, respectively, effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended
-- - Not Analyzed
NA- Not Available
BGS - Below Ground Surface
mg/kg - milligrams per kilogram
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

Table 3.4

Groundwater Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		EGLE Generic Groundwater Cleanup Criteria: Nonresidential (1)				MW1-08	MW1-08	MW1-08	MW1-08	MW1-08	MW1-08	MW1-08
Sample Identification:		Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Water Solubility	Flammability and Explosivity Screening Levels	GW-48041-071913-CB-001	GW-48041-050614-CB-005	GW-48041-080715-CB-005	GW-48041-080715-CB-006	GW-48041-081116-DC-006	GW-48041-091417-DC-001	GW-48041-092018-DC-001
Sample Date:						7/19/2013	5/6/2014	8/7/2015	8/7/2015	8/11/2016	9/14/2017	9/20/2018
Sample Type:									Duplicate			
	Units	a	b	c	d							
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	89	1300000	1330000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	µg/L	78	77000	2970000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	µg/L	330	110000	4420000	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	740	2300000	5060000	380000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	130	1300	2250000	97000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	µg/L	99	300000	300000	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	NA	1200	1230	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	5.7	15000	4200000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	µg/L	13	160000	156000	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	360	59000	8520000	2500000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	µg/L	230	36000	2800000	550000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	µg/L	28	41000	111000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	µg/L	17	74000	73800	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	2200	240000000	240000000	ID	ND(10)UJ	ND(10)	ND(50)	ND(50)	ND(10)	ND(10)	ND(10)
2-Hexanone	µg/L	ID	8700000	16000000	NA	ND(10)	ND(10)	ND(50)	ND(50)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ID	20000000	20000000	ID	ND(10)	ND(10)	ND(50)	ND(50)	ND(10)	ND(10)	ND(10)
Acetone	µg/L	1700	1000000000	1000000000	15000000	R	ND(10)U	ND(50)	ND(50)	ND(10)	ND(10)	ND(10)
Benzene	µg/L	200	35000	1750000	68000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	0.17 J
Bromodichloromethane	µg/L	ID	37000	6740000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	µg/L	ID	3100000	3100000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	5	9000	14500000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	µg/L	ID	550000	1190000	13000	ND(5.0)	ND(5.0)U	ND(25)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	µg/L	38	2400	793000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	µg/L	25	470000	472000	160000	0.19 J	0.18 J	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroethane	µg/L	1100	5700000	5740000	110000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	µg/L	350	180000	7920000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ID	45000	6340000	36000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	µg/L	620	210000	3500000	530000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	µg/L	NA	NA	NA	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dibromochloromethane	µg/L	ID	110000	2600000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	µg/L	ID	300000	300000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	µg/L	18	170000	169000	43000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropyl benzene	µg/L	28	56000	56000	29000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl acetate	µg/L	NA	NA	NA	NA	ND(10)	ND(10)	ND(50)	ND(50)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	µg/L	NA	NA	NA	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl tert butyl ether (MTBE)	µg/L	7100	47000000	46800000	ID	0.18 J	0.18 J	ND(5.0)	ND(5.0)	0.23 J	ND(1.0)	ND(1.0)
Methylene chloride	µg/L	1500	1400000	17000000	ID	ND(5.0)	ND(5.0)	ND(25)U	ND(25)U	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	µg/L	80	310000	310000	140000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	µg/L	60	170000	200000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	270	530000	526000	61000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	1500	200000	6300000	230000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	µg/L	NA	NA	NA	NA	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	200	4900	1100000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	µg/L	NA	1100000	1100000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (CFC-113)	µg/L	32	170000	170000	ID	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	µg/L	13	13000	2760000	33000	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Xylenes (total)	µg/L	49	190000	186000	70000	ND(2.0)	ND(2.0)	ND(10)	ND(10)	ND(2.0)	ND(2.0)	ND(2.0)

Notes:

(1) EGLE Generic groundwater cleanup criteria,
administrative rule R 299.44 effective December 30, 2013,
pursuant to Part 201 of 1994 PA 451 as amended
(Part 201 Groundwater Criteria).

EGLE - Michigan Department of Environment, Great Lakes and Energy
µg/L - micrograms per liter.
NA - Not available.
ND ( ) - Not detected at the associated reporting limit.
ND ( ) U - The analyte was analyzed for, but was qualified
as not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J - Estimated concentration.
R - Rejected.
ID - insufficient data to develop criterion.
Non-Residential Drinking Water Criteria do not apply to the
Site because of the executed groundwater drinking water restriction.

Table 3.4

Groundwater Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**MW1-08**	**MW1-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**	**MW3R-08**
Sample Identification:		**GW-048041-091019-PB-004**	**GW-048041-092420-PB-001**	**GW-48041-071913-CB-005**	**GW-48041-050614-CB-001**	**GW-48041-080615-CB-003**	**GW-48041-081116-DC-002**	**GW-48041-091417-DC-005**	**GW-48041-092018-DC-004**	**GW-048041-091019-PB-002**	**GW-048041-091019-PB-003**
Sample Date:		**9/10/2019**	**09/24/20**	**7/19/2013**	**5/6/2014**	**8/6/2015**	**8/11/2016**	**9/14/2017**	**9/20/2018**	**9/10/2019**	**9/10/2019**
Sample Type:											**Duplicate**
	Units										
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	0.28 J	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND(10)	ND(50)	3.1 J	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(10)
2-Hexanone	µg/L	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(10)
Acetone	µg/L	ND(10)	ND(50)	32	ND(10)U	ND(50)	ND(10)	ND(50)	7.6 J	ND(10)	ND(10)
Benzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	15	2.0 J	8.3	13	0.15 J	3.2	3.2
Bromodichloromethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromoform	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Carbon disulfide	µg/L	ND(5.0)	ND(25)	0.32 J	ND(5.0)U	ND(25)	ND(5.0)	ND(25)U	ND(5.0)	ND(5.0)	ND(5.0)
Carbon tetrachloride	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chlorobenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	2.6	ND(5.0)	1.9	2.4 J	ND(1.0)	0.60 J	0.63 J
Chloroethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	0.30 J	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	0.37 J	0.35 J
cis-1,3-Dichloropropene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Cyclohexane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	14	ND(5.0)	4.7	6.6	ND(1.0)	0.26 J	0.29 J
Dibromochloromethane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Isopropyl benzene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	7.9	ND(5.0)	1.8	2.0 J	ND(1.0)	0.68 J	0.69 J
Methyl acetate	µg/L	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(10)
Methyl cyclohexane	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	12	ND(5.0)	2.3	ND(5.0)	ND(1.0)	0.69 J	0.72 J
Methyl tert butyl ether (MTBE)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methylene chloride	µg/L	ND(5.0)	ND(25)	ND(5.0)	ND(5.0)	ND(25)U	ND(5.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)
Styrene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(5.0)	0.18 J	0.49 J	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(1.0)	1.2 J	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (CFC-113)	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
Vinyl chloride	µg/L	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	0.82 J	0.60 J
Xylenes (total)	µg/L	ND(2.0)	ND(10)	ND(2.0)	1.2 J	ND(10)	ND(2.0)	ND(10)	ND(2.0)	0.54 J	1.1 J

Notes:

(1) EGLE Generic groundwater cleanup criteria,
administrative rule R 299.44 effective December 30, 2013,
pursuant to Part 201 of 1994 PA 451 as amended
(Part 201 Groundwater Criteria).

EGLE - Michigan Department of Environment, Great Lakes and Energy
µg/L - micrograms per liter.
NA - Not available.
ND ( ) - Not detected at the associated reporting limit.
ND ( ) U - The analyte was analyzed for, but was qualified
as not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J - Estimated concentration.
R - Rejected.
ID - insufficient data to develop criterion.
Non-Residential Drinking Water Criteria do not apply to the
Site because of the executed groundwater drinking water restriction.

Table 3.4

Groundwater Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**MW3R-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**	**MW4-08**
Sample Identification:		**GW-048041-092420-PB-002**	**GW-48041-071913-CB-002**	**GW-48041-050614-CB-006**	**GW-48041-080615-CB-001**	**GW-48041-081116-DC-001**	**GW-48041-091417-DC-002**	**GW-48041-091417-DC-003**	**GW-48041-092018-DC-002**	**GW-48041-092018-DC-003**	**GW-048041-091019-PB-001**	**GW-048041-092420-PB-003**
Sample Date:		**09/24/20**	**7/19/2013**	**5/6/2014**	**8/6/2015**	**8/11/2016**	**9/14/2017**	**9/14/2017**	**9/20/2018**	**9/20/2018**	**9/10/2019**	**09/24/20**
Sample Type:								**Duplicate**		**Duplicate**		
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,1,2,2-Tetrachloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,1,2-Trichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,1-Dichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,1-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2,4-Trichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2-Dichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2-Dichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,2-Dichloropropane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,3-Dichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
1,4-Dichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND(50)	ND(10)	2.3 J	0.54 J	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
2-Hexanone	µg/L	ND(50)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND(50)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
Acetone	µg/L	ND(50)	ND(10)	ND(10)U	ND(10)U	ND(10)	ND(10)U	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
Benzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Bromodichloromethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Bromoform	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Bromomethane (Methyl bromide)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Carbon disulfide	µg/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)U	ND(5.0)U	ND(5.0)	ND(5.0)	ND(5.0)	1.7 J
Carbon tetrachloride	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Chlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Chloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Chloroform (Trichloromethane)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Chloromethane (Methyl chloride)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
cis-1,2-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
cis-1,3-Dichloropropene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Cyclohexane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Dibromochloromethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Dichlorodifluoromethane (CFC-12)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Ethylbenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Isopropyl benzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Methyl acetate	µg/L	ND(50)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
Methyl cyclohexane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Methyl tert butyl ether (MTBE)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Methylene chloride	µg/L	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(25)
Styrene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	0.62 J	ND(5.0)
Tetrachloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Toluene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
trans-1,2-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
trans-1,3-Dichloropropene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Trichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Trichlorofluoromethane (CFC-11)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Trifluorotrichloroethane (CFC-113)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Vinyl chloride	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Xylenes (total)	µg/L	ND(10)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	1.1 J	ND(10)

Notes:

(1) EGLE Generic groundwater cleanup criteria,
administrative rule R 299.44 effective December 30, 2013,
pursuant to Part 201 of 1994 PA 451 as amended
(Part 201 Groundwater Criteria).

EGLE - Michigan Department of Environment, Great Lakes and Energy
µg/L - micrograms per liter.
NA - Not available.
ND ( ) - Not detected at the associated reporting limit.
ND ( ) U - The analyte was analyzed for, but was qualified
as not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J - Estimated concentration.
R - Rejected.
ID - insufficient data to develop criterion.
Non-Residential Drinking Water Criteria do not apply to the
Site because of the executed groundwater drinking water restriction.

Table 3.4

Groundwater Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**MW4-08**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-2**	**TW-2**
Sample Identification:		**GW-048041-092420-PB-004**	**GW-48041-071913-CB-006**	**GW-48041-050614-CB-004**	**GW-48041-080615-CB-002**	**GW-48041-081116-DC-005**	**GW-48041-091417-DC-004**	**GW-48041-092018-DC-006**	**GW-048041-091019-PB-005**	**GW-048041-092420-PB-006**	**GW-48041-071913-CB-003**	**GW-48041-071913-CB-004**
Sample Date:		**09/24/20**	**7/19/2013**	**5/6/2014**	**8/6/2015**	**8/11/2016**	**9/14/2017**	**9/20/2018**	**9/10/2019**	**09/24/20**	**7/19/2013**	**7/19/2013**
Sample Type:		**Duplicate**										**Duplicate**
	Units											
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,1,2,2-Tetrachloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	0.15 J	ND(5.0)	ND(1.0)	ND(1.0)
1,1,2-Trichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,2,4-Trichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,2-Dichlorobenzene	µg/L	ND(5.0)	0.24 J	ND(1.0)	ND(5.0)	0.66 J	ND(5.0)	1.9	0.61 J	0.84 J	0.45 J	0.45 J
1,2-Dichloroethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,2-Dichloropropane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
1,3-Dichlorobenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	0.16 J	0.16 J	ND(5.0)	ND(1.0)	ND(1.0)
1,4-Dichlorobenzene	µg/L	ND(5.0)	0.46 J	ND(1.0)	ND(5.0)	0.97 J	1.2 J	0.69 J	0.73 J	0.93 J	ND(1.0)	ND(1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND(50)	0.80 J	1.1 J	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	0.90 J	ND(10)
2-Hexanone	µg/L	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)
Acetone	µg/L	ND(50)	ND(10)	ND(10)U	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)
Benzene	µg/L	ND(5.0)	5.9	3.1	8.1	5.9	9.8	1.5	2.6	ND(5.0)	2.4	2.4
Bromodichloromethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Bromoform	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Carbon disulfide	µg/L	ND(25)	ND(5.0)	ND(5.0)	ND(25)	ND(5.0)	ND(25)U	ND(5.0)	ND(5.0)	ND(25)	ND(5.0)	ND(5.0)
Carbon tetrachloride	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Chlorobenzene	µg/L	ND(5.0)	4.1	1.8	3.6 J	4.8	4.7 J	0.44 J	2.3	1.7 J	0.15 J	0.16 J
Chloroethane	µg/L	ND(5.0)	0.60 J	ND(1.0)	ND(5.0)	0.51 J	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	0.29 J	0.29 J
Chloroform (Trichloromethane)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
cis-1,3-Dichloropropene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Cyclohexane	µg/L	ND(5.0)	4.7	2.7	ND(5.0)	2.8	ND(5.0)	ND(1.0)	0.76 J	1.3 J	0.79 J	0.87 J
Dibromochloromethane	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Ethylbenzene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Isopropyl benzene	µg/L	ND(5.0)	4.8	1.8	ND(5.0)	2.7	1.6 J	0.49 J	1.1	1.5 J	0.57 J	0.55 J
Methyl acetate	µg/L	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(50)	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)
Methyl cyclohexane	µg/L	ND(5.0)	4.3	2.5	ND(5.0)	1.9	ND(5.0)	ND(1.0)	0.91 J	ND(5.0)	0.31 J	0.32 J
Methyl tert butyl ether (MTBE)	µg/L	ND(5.0)	0.44 J	ND(1.0)	ND(5.0)	0.93 J	ND(5.0)	ND(1.0)	0.54 J	ND(5.0)	ND(1.0)	ND(1.0)
Methylene chloride	µg/L	ND(25)	ND(5.0)	ND(5.0)	ND(25)U	ND(5.0)	ND(25)	ND(5.0)	ND(5.0)	ND(25)	ND(5.0)	ND(5.0)
Styrene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Tetrachloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(5.0)	0.58 J	0.36 J	ND(5.0)	0.69 J	ND(5.0)	ND(1.0)	0.24 J	ND(5.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
trans-1,3-Dichloropropene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Trichlorofluoromethane (CFC-11)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Trifluorotrichloroethane (CFC-113)	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Vinyl chloride	µg/L	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)
Xylenes (total)	µg/L	ND(10)	1.8 J	1.1 J	ND(10)	1.5 J	ND(10)	ND(2.0)	0.71 J	ND(10)	ND(2.0)	ND(2.0)

Notes:

(1) EGLE Generic groundwater cleanup criteria,
administrative rule R 299.44 effective December 30, 2013,
pursuant to Part 201 of 1994 PA 451 as amended
(Part 201 Groundwater Criteria).

EGLE - Michigan Department of Environment, Great Lakes and Energy
µg/L - micrograms per liter.
NA - Not available.
ND ( ) - Not detected at the associated reporting limit.
ND ( ) U - The analyte was analyzed for, but was qualified
as not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J - Estimated concentration.
R - Rejected.
ID - insufficient data to develop criterion.
Non-Residential Drinking Water Criteria do not apply to the
Site because of the executed groundwater drinking water restriction.

Table 3.4

Groundwater Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**TW-2**	**TW-2**	**TW-2**	**TW-2**	**TW-2**	**TW-2**	**TW-2**
Sample Identification:		**GW-48041-050614-CB-002**	**GW-48041-050614-CB-003**	**GW-48041-080715-CB-004**	**GW-48041-081116-DC-003**	**GW-48041-081116-DC-004**	**GW-48041-091417-DC-006**	**GW-48041-092018-DC-005**
Sample Date:		**5/6/2014**	**5/6/2014**	**8/7/2015**	**8/11/2016**	**8/11/2016**	**9/14/2017**	**9/20/2018**
Sample Type:			**Duplicate**			**Duplicate**		
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,1,2,2-Tetrachloroethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,1,2-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,2,4-Trichlorobenzene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,2-Dibromoethane (Ethylene dibromide)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,2-Dichlorobenzene	µg/L	1.2	1.4	2.4 J	2.3	2.4	ND(10)	0.32 J
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,2-Dichloropropane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
1,3-Dichlorobenzene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	0.25 J	0.22 J	ND(10)	ND(1.0)
1,4-Dichlorobenzene	µg/L	0.16 J	0.23 J	ND(5.0)	0.98 J	0.94 J	ND(10)	0.59 J
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND(10)	ND(10)	ND(50)	1.0 J	1.5 J	ND(100)	1.2 J
2-Hexanone	µg/L	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)	ND(100)	0.64 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND(10)	ND(10)	ND(50)	1.1 J	1.1 J	ND(100)	ND(10)
Acetone	µg/L	ND(10)U	ND(10)U	ND(50)	ND(10)	ND(10)	ND(100)	11
Benzene	µg/L	4.2	5.5	3.7 J	4.7	5.4	ND(10)	0.47 J
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Bromoform	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Carbon disulfide	µg/L	ND(5.0)U	ND(5.0)U	ND(25)	0.65 J	0.56 J	ND(50)U	ND(5.0)
Carbon tetrachloride	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Chlorobenzene	µg/L	0.65 J	0.79 J	ND(5.0)	0.99 J	0.70 J	ND(10)	0.48 J
Chloroethane	µg/L	0.50 J	0.71 J	ND(5.0)	0.59 J	0.81 J	ND(10)	ND(1.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	0.28 J	ND(1.0)	ND(10)	ND(1.0)
cis-1,3-Dichloropropene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Cyclohexane	µg/L	ND(1.0)UJ	8.0 J	5.8	ND(1.0)	1.4	ND(10)	0.36 J
Dibromochloromethane	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Dichlorodifluoromethane (CFC-12)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Ethylbenzene	µg/L	0.19 J	0.25 J	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Isopropyl benzene	µg/L	1.6	2.3	ND(5.0)	1.6	1.6	ND(10)	0.34 J
Methyl acetate	µg/L	ND(10)	ND(10)	ND(50)	ND(10)	ND(10)	ND(100)	ND(10)
Methyl cyclohexane	µg/L	1.1 J	2.2 J	ND(5.0)	0.78 J	0.95 J	ND(10)	ND(1.0)
Methyl tert butyl ether (MTBE)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Methylene chloride	µg/L	ND(5.0)	ND(5.0)	ND(25)U	ND(5.0)	ND(5.0)	ND(50)	ND(5.0)
Styrene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Toluene	µg/L	0.24 J	0.31 J	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	0.17 J
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
trans-1,3-Dichloropropene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Trichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Trichlorofluoromethane (CFC-11)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Trifluorotrichloroethane (CFC-113)	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Vinyl chloride	µg/L	ND(1.0)	ND(1.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(10)	ND(1.0)
Xylenes (total)	µg/L	1.5 J	2.0	ND(10)	ND(2.0)	ND(2.0)	ND(20)	0.44 J

Notes:

(1) EGLE Generic groundwater cleanup criteria,
administrative rule R 299.44 effective December 30, 2013,
pursuant to Part 201 of 1994 PA 451 as amended
(Part 201 Groundwater Criteria).

EGLE - Michigan Department of Environment, Great Lakes and Energy
µg/L - micrograms per liter.
NA - Not available.
ND ( ) - Not detected at the associated reporting limit.
ND ( ) U - The analyte was analyzed for, but was qualified
as not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated.
J - Estimated concentration.
R - Rejected.
ID - insufficient data to develop criterion.
Non-Residential Drinking Water Criteria do not apply to the
Site because of the executed groundwater drinking water restriction.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		MDEQ MSSLs [1]					EX-11	EX-11	EX-11	EX-11	EX-24
Sample Identification:		Soil Vapor (Including Subslab)					GE-48041-081216-DC-006	SG-48041-091918-DC-004	SG-048041-090919-PB-002	)41-092320	GE-48041-080615-CB-004
Sample Date:		Residential	Residential	NonResidential	NonResidential	NonResidential	8/12/2016	9/19/2018	9/9/2019	09/23/20	8/6/2015
Sample Type:		RIASL	TSRIASL	RIASL	RIASL 12	TSRIASL 12					
	Units	a	b	c	d	e					
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	µg/m^3	170000	170000	230000	230000	230000	ND(110)	ND(47)	ND(11)	ND(16)	ND(40)
1,1,2,2-Tetrachloroethane	µg/m^3						ND(190)	ND(80)	ND(14)	ND(21)	ND(67)
1,1,2-Trichloroethane	µg/m^3						ND(150)	ND(63)	ND(11)	ND(16)	ND(53)
1,1-Dichloroethane	µg/m^3	530	5300	1200	2500	25000	34 J	31 J	79	88	420 J
1,1-Dichloroethene	µg/m^3	7000	21000	10000	20000	61000	ND(220)	ND(92)	1.3 J	ND(12)	ND(77)
1,2,4-Trichlorobenzene	µg/m^3	70	210	100	200	610	ND(1000)	ND(430)	ND(74)	ND(110)	ND(360)
1,2,4-Trimethylbenzene	µg/m^3	2100	6300	3100	6100	18000	ND(270)	ND(110)	74	280	41 J
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3						ND(420)	ND(180)	ND(15)	ND(23)	ND(150)
1,2-Dichlorobenzene	µg/m^3						ND(160)	ND(70)	6.6 J	57	ND(59)
1,2-Dichloroethane	µg/m^3						ND(220)	ND(94)	ND(8.1)	ND(12)	ND(79)
1,2-Dichloropropane	µg/m^3						ND(130)	ND(54)	ND(9.2)	ND(14)	ND(45)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3						ND(190)	ND(81)	ND(14)	ND(21)	ND(68)
1,3,5-Trimethylbenzene	µg/m^3	2100	6300	3100	6100	18000	ND(130)	ND(57)	11	34	22 J
1,3-Dichlorobenzene	µg/m^3	100	310	150	310	920	ND(160)	ND(70)	ND(12)	24	ND(59)
1,4-Dichlorobenzene	µg/m^3	220	2200	510	1000	10000	ND(160)	ND(70)	10 J	79	35 J
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3						6300	860	320	260	890 J
2-Hexanone	µg/m^3						ND(110)	ND(48)	ND(16)	ND(25)	ND(40)
4-Ethyl toluene	µg/m^3						ND(130)	27 J	86	240	67 J
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3						ND(110)	ND(48)	ND(41)	ND(62)	ND(40)
Acetone	µg/m^3	1000000	1000000	1000000	1000000	1000000	1400	620	890	730	980 J
Benzene	µg/m^3	110	630	260	510	1800	ND(88)	96	**490[ac]**	**780[abcd]**	**730 J[abcd]**
Benzyl chloride	µg/m^3						ND(280)	ND(120)	ND(21)	ND(31)	ND(100)
Bromodichloromethane	µg/m^3						ND(140)	ND(58)	ND(13)	ND(20)	ND(49)
Bromoform	µg/m^3						ND(280)	ND(120)	ND(21)	ND(31)	ND(100)
Bromomethane (Methyl bromide)	µg/m^3						ND(210)	ND(90)	ND(7.8)	ND(12)	ND(76)
Carbon disulfide	µg/m^3						42 J	ND(72)U	19	11 J	ND(61)
Carbon tetrachloride	µg/m^3						ND(340)	ND(150)	ND(13)	ND(19)	ND(120)
Chlorobenzene	µg/m^3	1700	5200	2600	5100	15000	ND(95)	17 J	41	60	ND(34)
Chloroethane	µg/m^3	140000	420000	200000	410000	1200000	ND(140)	ND(61)	52	40	270 J
Chloroform (Trichloromethane)	µg/m^3	37	370	87	170	1700	ND(100)	ND(42)	ND(9.8)	ND(15)	ND(36)
Chloromethane (Methyl chloride)	µg/m^3	3100	9400	4600	9200	14000	ND(110)	ND(48)	6.9 J	7.7 J	ND(40)
cis-1,2-Dichloroethene	µg/m^3	280	830	410	820	2500	ND(110)	ND(46)	48	51	31 J
cis-1,3-Dichloropropene	µg/m^3						ND(120)	ND(53)	ND(18)	ND(27)	ND(44)
Dibromochloromethane	µg/m^3						ND(230)	ND(99)	ND(17)	ND(26)	ND(83)
Dichlorodifluoromethane (CFC-12)	µg/m^3						ND(140)	ND(57)	ND(9.9)	ND(15)	ND(48)
Ethylbenzene	µg/m^3	340	3400	800	1600	16000	ND(120)	13 J	95	110	170 J
Hexachlorobutadiene	µg/m^3						ND(1500)	ND(620)	ND(110)	ND(160)	ND(520)
m&p-Xylenes	µg/m^3						ND(240)	48 J	240	320	220 J

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**MDEQ MSSLs (1)**					**EX-11**	**EX-11**	**EX-11**	**EX-11**	**EX-24**
Sample Identification:		**Soil Vapor (Including Subslab)**					**GE-48041-081216-DC-006**	**SG-48041-091918-DC-004**	**SG-048041-090919-PB-002**	**)41-092320**	**GE-48041-080615-CB-004**
Sample Date:		**Residential**	**Residential**	**NonResidential**	**NonResidential**	**NonResidential**	**8/12/2016**	**9/19/2018**	**9/9/2019**	**09/23/20**	**8/6/2015**
Sample Type:		**RIASL**	**TSRIASL**	**RIASL**	**$RIASL_{12}$**	**$TSRIASL_{12}$**					
	Units	**a**	**b**	**c**	**d**	**e**					
Volatile Organic Compounds (VOCs)											
Volatile Organic Compounds (VOCs) cont'd											
Methylene chloride	$\mu g/m^3$	21000	33000	31000	61000	97000	ND(95)	ND(40)	ND(35)	61	ND(34)
o-Xylene	$\mu g/m^3$						ND(120)	54	270	360	160 J
Tetrachloroethene	$\mu g/m^3$	1400	1400	1400	2700	2700	ND(190)	ND(79)	11 J	7.6 J	ND(66)
Toluene	$\mu g/m^3$	170000	250000	250000	250000	250000	ND(100)	23 J	120	110	ND(37)
trans-1,2-Dichloroethene	$\mu g/m^3$	9000	26000	26000	26000	26000	ND(110)	ND(46)	17	34	12 J
trans-1,3-Dichloropropene	$\mu g/m^3$						ND(120)	ND(53)	ND(9.1)	ND(14)	ND(44)
Trichloroethene	$\mu g/m^3$	67	200	67	130	400	ND(150)	20 J	51	63	ND(52)
Trichlorofluoromethane (CFC-11)	$\mu g/m^3$						ND(150)	ND(65)	ND(11)	ND(17)	ND(55)
Trifluorotrichloroethane (CFC-113)	$\mu g/m^3$						ND(210)	ND(89)	ND(15)	ND(23)	ND(75)
Vinyl acetate	$\mu g/m^3$	7000	21000	10000	20000	61000	ND(190)	ND(82)	ND(35)	ND(53)	ND(69)
Vinyl chloride	$\mu g/m^3$	54	540	450	910	9100	ND(70)	ND(30)	37	**61[a]**	**89 J[a]**

Notes:

ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**
Sample Identification:		**GE-48041-050514-CB-001**	**GE-48041-080615-CB-001**	**GE-48041-081216-DC-001**	**GE-48041-091417-DC-001**	**GE-48041-091417-DC-002**	**SG-48041-091918-DC-001**	**SG-048041-090919-PB-005**	**SG-048041-090919-PB-006**
Sample Date:		**5/5/2014**	**8/6/2015**	**8/12/2016**	**9/14/2017**	**9/14/2017**	**9/19/2018**	**9/9/2019**	**9/9/2019**
Sample Type:						**Duplicate**			**Duplicate**
	Units								
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	µg/m^3	ND(8.2)	ND(40)	5.5 J	4.4 J	4.0 J	5.3 J	3.8 J	3.2 J
1,1,2,2-Tetrachloroethane	µg/m^3	ND(14)	ND(66)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,1,2-Trichloroethane	µg/m^3	ND(11)	ND(53)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
1,1-Dichloroethane	µg/m^3	ND(6.1)	8.7 J	3.2 J	ND(6.1)	ND(6.1)	ND(6.1)	ND(8.1)	ND(8.1)
1,1-Dichloroethene	µg/m^3	ND(16)	ND(77)	ND(16)	ND(16)	ND(16)	ND(16)	ND(7.9)	ND(7.9)
1,2,4-Trichlorobenzene	µg/m^3	ND(74)	ND(360)	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)
1,2,4-Trimethylbenzene	µg/m^3	ND(20)	20 J	ND(20)	ND(20)	ND(20)	ND(20)	ND(9.8)	ND(9.8)
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3	ND(31)	ND(150)	ND(31)	ND(31)	ND(31)	ND(31)	ND(15)	ND(15)
1,2-Dichlorobenzene	µg/m^3	ND(12)	ND(58)	ND(12)	ND(12)	ND(12)	ND(12)	ND(24)	ND(24)
1,2-Dichloroethane	µg/m^3	ND(16)	40 J	ND(16)	ND(16)	ND(16)	ND(16)	ND(8.1)	ND(8.1)
1,2-Dichloropropane	µg/m^3	ND(9.2)	ND(45)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3	ND(14)	ND(68)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,3,5-Trimethylbenzene	µg/m^3	ND(9.8)	ND(48)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)
1,3-Dichlorobenzene	µg/m^3	ND(12)	ND(58)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)
1,4-Dichlorobenzene	µg/m^3	ND(12)	ND(58)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3	ND(12)	ND(57)	ND(12)	ND(12)	ND(12)	ND(12)	ND(29)	ND(29)
2-Hexanone	µg/m^3	ND(8.2)	ND(40)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(16)	ND(16)
4-Ethyl toluene	µg/m^3	ND(9.8)	ND(48)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3	ND(8.2)	ND(40)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(41)	ND(41)
Acetone	µg/m^3	57	90 J	17 J	6.9 J	8.5 J	19 J	ND(180)	ND(180)
Benzene	µg/m^3	ND(6.4)	**120[a]**	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)
Benzyl chloride	µg/m^3	ND(21)	ND(100)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromodichloromethane	µg/m^3	ND(10)	ND(49)	ND(10)	ND(10)	ND(10)	ND(10)	ND(13)	ND(13)
Bromoform	µg/m^3	ND(21)	ND(100)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromomethane (Methyl bromide)	µg/m^3	ND(16)	ND(75)	ND(16)	ND(16)	ND(16)	ND(16)	ND(7.8)	ND(7.8)
Carbon disulfide	µg/m^3	ND(12)	ND(60)	ND(12)	ND(12)	5.8 J	ND(12)U	ND(12)	ND(12)
Carbon tetrachloride	µg/m^3	ND(25)	ND(120)	ND(25)	ND(25)	ND(25)	ND(25)	ND(13)	ND(13)
Chlorobenzene	µg/m^3	ND(6.9)	ND(33)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(9.2)	ND(9.2)
Chloroethane	µg/m^3	ND(11)	ND(51)	ND(11)	ND(11)	ND(11)	ND(11)	ND(5.3)	ND(5.3)
Chloroform (Trichloromethane)	µg/m^3	ND(7.3)	ND(35)	4.6 J	9.5	9.7	11	6.5 J	4.9 J
Chloromethane (Methyl chloride)	µg/m^3	ND(8.3)	ND(40)	ND(8.3)	ND(8.3)	ND(8.3)	ND(8.3)	ND(21)	ND(21)
cis-1,2-Dichloroethene	µg/m^3	ND(7.9)	ND(38)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
cis-1,3-Dichloropropene	µg/m^3	ND(9.1)	ND(44)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(18)	ND(18)
Dibromochloromethane	µg/m^3	ND(17)	ND(82)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)
Dichlorodifluoromethane (CFC-12)	µg/m^3	5.8 J	ND(48)	ND(9.9)	3.8 J	3.7 J	3.7 J	4.2 J	ND(9.9)
Ethylbenzene	µg/m^3	ND(8.7)	ND(42)	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)
Hexachlorobutadiene	µg/m^3	ND(110)	ND(520)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)
m&p-Xylenes	µg/m^3	ND(17)	ND(84)U	5.1 J	ND(17)	ND(17)	ND(17)	5.8 J	ND(8.7)

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**	**GP1-12**
Sample Identification:		**GE-48041-050514-CB-001**	**GE-48041-080615-CB-001**	**GE-48041-081216-DC-001**	**GE-48041-091417-DC-001**	**GE-48041-091417-DC-002**	**SG-48041-091918-DC-001**	**SG-048041-090919-PB-005**	**SG-048041-090919-PB-006**
Sample Date:		**5/5/2014**	**8/6/2015**	**8/12/2016**	**9/14/2017**	**9/14/2017**	**9/19/2018**	**9/9/2019**	**9/9/2019**
Sample Type:						**Duplicate**			**Duplicate**
	Units								
Volatile Organic Compounds (VOCs)									
Volatile Organic Compounds (VOCs) cont'd									
Methylene chloride	$\mu g/m^3$	ND(6.9)	ND(34)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(35)	ND(35)
o-Xylene	$\mu g/m^3$	ND(8.7)	ND(42)U	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)
Tetrachloroethene	$\mu g/m^3$	4.8 J	31 J	31	37	37	28	26	18
Toluene	$\mu g/m^3$	2.0 J	9.6 J	2.9 J	ND(7.5)	ND(7.5)	ND(7.5)	ND(38)	ND(38)
trans-1,2-Dichloroethene	$\mu g/m^3$	ND(7.9)	ND(38)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
trans-1,3-Dichloropropene	$\mu g/m^3$	ND(9.1)	ND(44)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Trichloroethene	$\mu g/m^3$	2.9 J	20 J	22	22	23	18	14	10 J
Trichlorofluoromethane (CFC-11)	$\mu g/m^3$	ND(11)	ND(54)	16	17	17	20	15	12
Trifluorotrichloroethane (CFC-113)	$\mu g/m^3$	ND(15)	ND(74)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)
Vinyl acetate	$\mu g/m^3$	ND(14)	ND(68)	ND(14)	ND(14)	ND(14)	ND(14)	ND(35)	ND(35)
Vinyl chloride	$\mu g/m^3$	ND(5.1)	ND(25)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)	ND(10)	ND(10)

Notes:
ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP1-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**
Sample Identification:		**SG-048041-092320-PB-001**	**GE-48041-050614-CB-004**	**GE-48041-050614-CB-005**	**GE-48041-080615-CB-002**	**GE-48041-081216-DC-002**	**GE-48041-091417-DC-003**	**SG-048041-090919-PB-004**
Sample Date:		**09/23/20**	**5/6/2014**	**5/6/2014**	**8/6/2015**	**8/12/2016**	**9/14/2017**	**9/9/2019**
Sample Type:				**Duplicate**				
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/m^3	3.1 J	ND(8.2)	ND(8.2)	ND(41)	ND(35)	ND(16)	ND(11)
1,1,2,2-Tetrachloroethane	µg/m^3	ND(14)	ND(14)	ND(14)	ND(69)	ND(59)	ND(27)	ND(14)
1,1,2-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(55)	ND(47)	ND(21)	ND(11)
1,1-Dichloroethane	µg/m^3	1.2 J	ND(6.1)	ND(6.1)	ND(30)	ND(26)	ND(12)	ND(8.1)
1,1-Dichloroethene	µg/m^3	ND(7.9)	ND(16)	ND(16)	ND(79)	ND(69)	ND(31)	ND(7.9)
1,2,4-Trichlorobenzene	µg/m^3	ND(74)	ND(74)	ND(74)	ND(370)	ND(320)	ND(140)	ND(74)
1,2,4-Trimethylbenzene	µg/m^3	ND(9.8)	ND(20)	ND(20)	29 J	ND(85)	ND(38)	ND(9.8)
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3	ND(15)	ND(31)	ND(31)	ND(150)	ND(130)	ND(60)	ND(15)
1,2-Dichlorobenzene	µg/m^3	ND(24)	ND(12)	ND(12)	ND(60)	ND(52)	ND(23)	ND(24)
1,2-Dichloroethane	µg/m^3	ND(8.1)	ND(16)	ND(16)	ND(81)	ND(70)	ND(32)	ND(8.1)
1,2-Dichloropropane	µg/m^3	ND(9.2)	ND(9.2)	ND(9.2)	ND(46)	ND(40)	ND(18)	ND(9.2)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3	ND(14)	ND(14)	ND(14)	ND(70)	ND(60)	ND(27)	ND(14)
1,3,5-Trimethylbenzene	µg/m^3	4.7 J	ND(9.8)	ND(9.8)	ND(49)	ND(42)	ND(19)	ND(9.8)
1,3-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	ND(60)	ND(52)	ND(23)	ND(12)
1,4-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	14	29 J	ND(52)	ND(23)	ND(12)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3	ND(29)	ND(12)	ND(12)	23 J	69	68	34
2-Hexanone	µg/m^3	ND(16)	ND(8.2)	ND(8.2)	ND(41)	ND(35)	ND(16)	ND(16)
4-Ethyl toluene	µg/m^3	ND(20)	ND(9.8)	ND(9.8)	ND(49)	ND(42)	ND(19)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3	ND(41)	ND(8.2)	ND(8.2)	150	35	5.7 J	ND(41)
Acetone	µg/m^3	ND(180)	190	160	1000	1000	760	300
Benzene	µg/m^3	ND(6.4)	ND(6.4)	1.4 J	ND(32)	ND(28)	ND(12)	ND(6.4)
Benzyl chloride	µg/m^3	ND(21)	ND(21)	ND(21)	ND(100)	ND(89)	ND(40)	ND(21)
Bromodichloromethane	µg/m^3	ND(13)	ND(10)	ND(10)	ND(50)	ND(43)	ND(20)	ND(13)
Bromoform	µg/m^3	ND(21)	ND(21)	ND(21)	ND(100)	ND(89)	ND(40)	ND(21)
Bromomethane (Methyl bromide)	µg/m^3	ND(7.8)	ND(16)	ND(16)	ND(78)	ND(67)	ND(30)	ND(7.8)
Carbon disulfide	µg/m^3	1.7 J	4.5 J	ND(12)	ND(62)	ND(54)	ND(24)	0.99 J
Carbon tetrachloride	µg/m^3	ND(13)	ND(25)	ND(25)	ND(130)	ND(110)	ND(49)	ND(13)
Chlorobenzene	µg/m^3	ND(9.2)	ND(6.9)	ND(6.9)	ND(35)	ND(30)	ND(13)	ND(9.2)
Chloroethane	µg/m^3	ND(5.3)	ND(11)	ND(11)	ND(53)	ND(46)	ND(21)	ND(5.3)
Chloroform (Trichloromethane)	µg/m^3	3.6 J	ND(7.3)	ND(7.3)	ND(37)	ND(32)	ND(14)	ND(9.8)
Chloromethane (Methyl chloride)	µg/m^3	ND(21)	2.7 J	2.2 J	ND(41)	ND(36)	ND(16)	ND(21)
cis-1,2-Dichloroethene	µg/m^3	ND(7.9)	ND(7.9)	ND(7.9)	ND(40)	ND(34)	ND(15)	ND(7.9)
cis-1,3-Dichloropropene	µg/m^3	ND(18)	ND(9.1)	ND(9.1)	ND(45)	ND(39)	ND(18)	ND(18)
Dibromochloromethane	µg/m^3	ND(17)	ND(17)	ND(17)	ND(85)	ND(74)	ND(33)	ND(17)
Dichlorodifluoromethane (CFC-12)	µg/m^3	4.4 J	ND(9.9)	3.7 J	ND(49)	ND(43)	ND(19)	ND(9.9)
Ethylbenzene	µg/m^3	ND(8.7)	ND(8.7)	ND(8.7)	ND(43)	ND(38)	ND(17)	ND(8.7)
Hexachlorobutadiene	µg/m^3	ND(110)	ND(110)	ND(110)	ND(530)	ND(460)	ND(210)	ND(110)
m&p-Xylenes	µg/m^3	ND(8.7)	3.1 J	4.6 J	ND(87)U	ND(75)	ND(34)	ND(8.7)

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP1-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**	**GP3-12**
Sample Identification:		**SG-048041-092320-PB-001**	**GE-48041-050614-CB-004**	**GE-48041-050614-CB-005**	**GE-48041-080615-CB-002**	**GE-48041-081216-DC-002**	**GE-48041-091417-DC-003**	**SG-048041-090919-PB-004**
Sample Date:		**09/23/20**	**5/6/2014**	**5/6/2014**	**8/6/2015**	**8/12/2016**	**9/14/2017**	**9/9/2019**
Sample Type:				**Duplicate**				
	Units							
Volatile Organic Compounds (VOCs)								
Volatile Organic Compounds (VOCs) cont'd								
Methylene chloride	$\mu g/m^3$	ND(35)	2.9 J	3.9 J	ND(35)	ND(30)	ND(14)	ND(35)
o-Xylene	$\mu g/m^3$	ND(8.7)	ND(8.7)	ND(8.7)	ND(43)U	ND(38)	ND(17)	ND(8.7)
Tetrachloroethene	$\mu g/m^3$	21	ND(14)	ND(14)	64 J	69	91	47
Toluene	$\mu g/m^3$	ND(38)	130 J	310 J	ND(38)	ND(33)	ND(15)	ND(38)
trans-1,2-Dichloroethene	$\mu g/m^3$	ND(7.9)	ND(7.9)	ND(7.9)	ND(40)	ND(34)	ND(15)	ND(7.9)
trans-1,3-Dichloropropene	$\mu g/m^3$	ND(9.1)	ND(9.1)	ND(9.1)	ND(45)	ND(39)	ND(18)	ND(9.1)
Trichloroethene	$\mu g/m^3$	11	ND(11)	ND(11)	19 J	26 J	26	14
Trichlorofluoromethane (CFC-11)	$\mu g/m^3$	14	ND(11)	ND(11)	ND(56)	ND(49)	12 J	8.6 J
Trifluorotrichloroethane (CFC-113)	$\mu g/m^3$	ND(15)	ND(15)	ND(15)	ND(77)	ND(66)	ND(30)	ND(15)
Vinyl acetate	$\mu g/m^3$	ND(35)	ND(14)	ND(14)	ND(70)	ND(61)	ND(27)	ND(35)
Vinyl chloride	$\mu g/m^3$	ND(10)	ND(5.1)	ND(5.1)	ND(26)	ND(22)	ND(10)	ND(10)

Notes:

ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP4-12**	**GP4-12**	**GP4-12**	**GP5-12**	**GP5-12**	**GP5-12**	**GP5-12**
Sample Identification:		**GE-48041-091417-DC-004**	**SG-48041-091918-DC-002**	**SG-48041-091918-DC-003**	**GE-48041-050614-CB-003**	**GE-48041-080615-CB-003**	**GE-48041-081216-DC-003**	**GE-48041-081216-DC-004**
Sample Date:		**9/14/2017**	**9/19/2018**	**9/19/2018**	**5/6/2014**	**8/6/2015**	**8/12/2016**	**8/12/2016**
Sample Type:				**Duplicate**				**Duplicate**
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/m^3	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
1,1,2,2-Tetrachloroethane	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,1,2-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
1,1-Dichloroethane	µg/m^3	ND(6.1)	ND(6.1)	ND(6.1)	ND(6.1)	2.0 J	3.0 J	3.1 J
1,1-Dichloroethene	µg/m^3	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
1,2,4-Trichlorobenzene	µg/m^3	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)
1,2,4-Trimethylbenzene	µg/m^3	ND(20)	ND(20)	ND(20)	ND(20)	24	ND(20)	ND(20)
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3	ND(31)	ND(31)	ND(31)	ND(31)	ND(31)	ND(31)	ND(31)
1,2-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)
1,2-Dichloroethane	µg/m^3	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
1,2-Dichloropropane	µg/m^3	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,3,5-Trimethylbenzene	µg/m^3	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)U	ND(9.8)	ND(9.8)
1,3-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)
1,4-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	ND(12)	28	ND(12)	ND(12)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3	ND(12)	ND(12)	3.3 J	10 J	3.2 J	ND(12)	ND(12)
2-Hexanone	µg/m^3	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
4-Ethyl toluene	µg/m^3	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
Acetone	µg/m^3	21 J	ND(24)	16 J	150	200	8.5 J	11 J
Benzene	µg/m^3	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)	ND(6.4)
Benzyl chloride	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromodichloromethane	µg/m^3	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Bromoform	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromomethane (Methyl bromide)	µg/m^3	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
Carbon disulfide	µg/m^3	ND(12)	ND(12)U	ND(12)U	ND(12)	ND(12)	ND(12)	ND(12)
Carbon tetrachloride	µg/m^3	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
Chlorobenzene	µg/m^3	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)
Chloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
Chloroform (Trichloromethane)	µg/m^3	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)
Chloromethane (Methyl chloride)	µg/m^3	ND(8.3)	ND(8.3)	ND(8.3)	ND(8.3)	ND(8.3)	ND(8.3)	ND(8.3)
cis-1,2-Dichloroethene	µg/m^3	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	2.6 J	4.8 J	5.0 J
cis-1,3-Dichloropropene	µg/m^3	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Dibromochloromethane	µg/m^3	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)
Dichlorodifluoromethane (CFC-12)	µg/m^3	ND(9.9)	ND(9.9)	ND(9.9)	10	8.0 J	11	11
Ethylbenzene	µg/m^3	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	4.1 J	ND(8.7)	ND(8.7)
Hexachlorobutadiene	µg/m^3	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)
m&p-Xylenes	µg/m^3	ND(17)	ND(17)	ND(17)	4.2 J	23	2.8 J	2.8 J

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP4-12**	**GP4-12**	**GP4-12**	**GP5-12**	**GP5-12**	**GP5-12**	**GP5-12**
Sample Identification:		**GE-48041-091417-DC-004**	**SG-48041-091918-DC-002**	**SG-48041-091918-DC-003**	**GE-48041-050614-CB-003**	**GE-48041-080615-CB-003**	**GE-48041-081216-DC-003**	**GE-48041-081216-DC-004**
Sample Date:		**9/14/2017**	**9/19/2018**	**9/19/2018**	**5/6/2014**	**8/6/2015**	**8/12/2016**	**8/12/2016**
Sample Type:				**Duplicate**				**Duplicate**
	Units							
Volatile Organic Compounds (VOCs)								
Volatile Organic Compounds (VOCs) cont'd								
Methylene chloride	$\mu g/m^3$	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)
o-Xylene	$\mu g/m^3$	ND(8.7)	ND(8.7)	ND(8.7)	ND(8.7)	ND(9.7)U	ND(8.7)	ND(8.7)
Tetrachloroethene	$\mu g/m^3$	3.4 J	ND(14)	ND(14)	5.1 J	9.3 J	17	18
Toluene	$\mu g/m^3$	ND(7.5)	ND(7.5)	ND(7.5)	8.5	3.0 J	ND(7.5)	ND(7.5)
trans-1,2-Dichloroethene	$\mu g/m^3$	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
trans-1,3-Dichloropropene	$\mu g/m^3$	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Trichloroethene	$\mu g/m^3$	ND(11)	ND(11)	ND(11)	29	54	**77[ac]**	**80[ac]**
Trichlorofluoromethane (CFC-11)	$\mu g/m^3$	10 J	8.9 J	9.4 J	ND(11)	ND(11)	ND(11)	ND(11)
Trifluorotrichloroethane (CFC-113)	$\mu g/m^3$	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)
Vinyl acetate	$\mu g/m^3$	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
Vinyl chloride	$\mu g/m^3$	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)

Notes:

ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP5-12**	**GP5-12**	**GP7-12**	**GP7-12**	**GP7-12**	**GP7-12**	**GP7-12**
Sample Identification:		**SG-048041-090919-PB-003**	**SG-048041-092320-PB-002**	**GE-48041-050514-CB-002**	**GE-48041-080615-CB-005**	**GE-48041-080615-CB-006**	**GE-48041-081216-DC-005**	**GE-48041-091417-DC-005**
Sample Date:		**9/9/2019**	**09/23/20**	**5/5/2014**	**8/6/2015**	**8/6/2015**	**8/12/2016**	**9/14/2017**
Sample Type:						**Duplicate**		
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
1,1,2,2-Tetrachloroethane	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,1,2-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
1,1-Dichloroethane	µg/m^3	2.4 J	2.0 J	ND(6.1)	4.3 J	4.3 J	3.0 J	2.4 J
1,1-Dichloroethene	µg/m^3	ND(7.9)	ND(8.0)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
1,2,4-Trichlorobenzene	µg/m^3	ND(74)	ND(75)	ND(74)	ND(74)	ND(74)	ND(74)	ND(74)
1,2,4-Trimethylbenzene	µg/m^3	3.6 J	ND(9.9)	ND(20)	5.6 J	4.9 J	ND(20)	ND(20)
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3	ND(15)	ND(15)	ND(31)	ND(31)	ND(31)	ND(31)	ND(31)
1,2-Dichlorobenzene	µg/m^3	ND(24)	ND(24)	ND(12)	ND(12)	ND(12)	ND(12)	ND(12)
1,2-Dichloroethane	µg/m^3	ND(8.1)	ND(8.1)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
1,2-Dichloropropane	µg/m^3	ND(9.2)	ND(9.3)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
1,3,5-Trimethylbenzene	µg/m^3	ND(9.8)	4.9 J	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)
1,3-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	3.6 J	3.5 J	ND(12)	ND(12)
1,4-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	5.4 J	6.0 J	ND(12)	ND(12)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3	ND(29)	ND(30)	ND(12)	4.0 J	3.8 J	ND(12)	ND(12)
2-Hexanone	µg/m^3	ND(16)	ND(16)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
4-Ethyl toluene	µg/m^3	ND(20)	ND(20)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)	ND(9.8)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3	ND(41)	ND(41)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)	ND(8.2)
Acetone	µg/m^3	69 J	ND(180)	30	190	190	18 J	5.6 J
Benzene	µg/m^3	ND(6.4)	ND(6.4)	ND(6.4)	1.6 J	1.6 J	ND(6.4)	ND(6.4)
Benzyl chloride	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromodichloromethane	µg/m^3	ND(13)	ND(13)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Bromoform	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)	ND(21)
Bromomethane (Methyl bromide)	µg/m^3	ND(7.8)	ND(7.8)	ND(16)	ND(16)	ND(16)	ND(16)	ND(16)
Carbon disulfide	µg/m^3	ND(12)	7.3 J	1.3 J	ND(12)	ND(12)	ND(12)	ND(12)
Carbon tetrachloride	µg/m^3	ND(13)	ND(13)	ND(25)	ND(25)	ND(25)	ND(25)	ND(25)
Chlorobenzene	µg/m^3	ND(9.2)	ND(9.3)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)	ND(6.9)
Chloroethane	µg/m^3	ND(5.3)	ND(5.3)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
Chloroform (Trichloromethane)	µg/m^3	ND(9.8)	ND(9.8)	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)	ND(7.3)
Chloromethane (Methyl chloride)	µg/m^3	ND(21)	ND(21)	ND(8.3)	ND(8.3)	2.4 J	ND(8.3)	ND(8.3)
cis-1,2-Dichloroethene	µg/m^3	5.2 J	2.5 J	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
cis-1,3-Dichloropropene	µg/m^3	ND(18)	ND(18)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Dibromochloromethane	µg/m^3	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)	ND(17)
Dichlorodifluoromethane (CFC-12)	µg/m^3	14	12 J+	3.9 J	ND(9.9)	ND(9.9)	ND(9.9)	ND(9.9)
Ethylbenzene	µg/m^3	ND(8.7)	ND(8.7)	ND(8.7)	2.4 J	ND(8.7)	ND(8.7)	ND(8.7)
Hexachlorobutadiene	µg/m^3	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)	ND(110)
m&p-Xylenes	µg/m^3	9.7	ND(8.7)	2.9 J	10 J	9.6 J	6.1 J	ND(17)

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP5-12**	**GP5-12**	**GP7-12**	**GP7-12**	**GP7-12**	**GP7-12**	**GP7-12**
Sample Identification:		**SG-048041-090919-PB-003**	**SG-048041-092320-PB-002**	**GE-48041-050514-CB-002**	**GE-48041-080615-CB-005**	**GE-48041-080615-CB-006**	**GE-48041-081216-DC-005**	**GE-48041-091417-DC-005**
Sample Date:		**9/9/2019**	**09/23/20**	**5/5/2014**	**8/6/2015**	**8/6/2015**	**8/12/2016**	**9/14/2017**
Sample Type:						**Duplicate**		
	Units							
Volatile Organic Compounds (VOCs)								
Volatile Organic Compounds (VOCs) cont'd								
Methylene chloride	µg/m^3	ND(35)	ND(35)	1.9 J	ND(6.9)	ND(6.9)	ND(6.9)	2.0 J
o-Xylene	µg/m^3	2.9 J	ND(8.7)	ND(8.7)	4.0 J	3.9 J	2.4 J	ND(8.7)
Tetrachloroethene	µg/m^3	15	18	ND(14)	4.7 J	4.8 J	5.9 J	11 J
Toluene	µg/m^3	5.3 J	ND(38)	9.2	3.6 J	3.4 J	3.2 J	ND(7.5)
trans-1,2-Dichloroethene	µg/m^3	ND(7.9)	ND(8.0)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
trans-1,3-Dichloropropene	µg/m^3	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Trichloroethene	µg/m^3	**72**[ac]	64	ND(11)	3.2 J	3.2 J	3.8 J	5.7 J
Trichlorofluoromethane (CFC-11)	µg/m^3	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)	ND(11)
Trifluorotrichloroethane (CFC-113)	µg/m^3	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)	ND(15)
Vinyl acetate	µg/m^3	ND(35)	ND(35)	ND(14)	ND(14)	ND(14)	ND(14)	ND(14)
Vinyl chloride	µg/m^3	ND(10)	ND(10)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)	ND(5.1)

Notes:

ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP7-12**	**GP7-12**	**GP7-12**	**MW6-10**
Sample Identification:		**SG-048041-090919-PB-001**	**SG-048041-092320-PB-004**	**SG-048041-092320-PB-005**	**GE-48041-091417-DC-006**
Sample Date:		**9/9/2019**	**09/23/20**	**09/23/20**	**9/14/2017**
Sample Type:				**Duplicate**	
	Units				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(8.2)
1,1,2,2-Tetrachloroethane	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)
1,1,2-Trichloroethane	µg/m^3	ND(11)	ND(11)	ND(11)	ND(11)
1,1-Dichloroethane	µg/m^3	1.4 J	1.4 J	1.4 J	ND(6.1)
1,1-Dichloroethene	µg/m^3	ND(7.9)	ND(7.9)	ND(7.9)	ND(16)
1,2,4-Trichlorobenzene	µg/m^3	ND(74)	ND(74)	ND(74)	ND(74)
1,2,4-Trimethylbenzene	µg/m^3	ND(9.8)	ND(9.8)	ND(9.8)	45
1,2-Dibromoethane (Ethylene dibromide)	µg/m^3	ND(15)	ND(15)	ND(15)	ND(31)
1,2-Dichlorobenzene	µg/m^3	ND(24)	ND(24)	ND(24)	ND(12)
1,2-Dichloroethane	µg/m^3	ND(8.1)	ND(8.1)	ND(8.1)	ND(16)
1,2-Dichloropropane	µg/m^3	ND(9.2)	ND(9.2)	ND(9.2)	ND(9.2)
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m^3	ND(14)	ND(14)	ND(14)	ND(14)
1,3,5-Trimethylbenzene	µg/m^3	ND(9.8)	ND(9.8)	ND(9.8)	14
1,3-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	ND(12)
1,4-Dichlorobenzene	µg/m^3	ND(12)	ND(12)	ND(12)	7.2 J
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m^3	ND(29)	ND(29)	ND(29)	14
2-Hexanone	µg/m^3	ND(16)	ND(16)	ND(16)	ND(8.2)
4-Ethyl toluene	µg/m^3	ND(20)	ND(20)	ND(20)	19
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m^3	ND(41)	ND(41)	ND(41)	ND(8.2)
Acetone	µg/m^3	54 J	ND(180)	ND(180)	21 J
Benzene	µg/m^3	ND(6.4)	ND(6.4)	ND(6.4)	7.3
Benzyl chloride	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)
Bromodichloromethane	µg/m^3	ND(13)	ND(13)	ND(13)	ND(10)
Bromoform	µg/m^3	ND(21)	ND(21)	ND(21)	ND(21)
Bromomethane (Methyl bromide)	µg/m^3	ND(7.8)	ND(7.8)	ND(7.8)	ND(16)
Carbon disulfide	µg/m^3	ND(12)	ND(12)	ND(12)	ND(12)
Carbon tetrachloride	µg/m^3	ND(13)	ND(13)	ND(13)	ND(25)
Chlorobenzene	µg/m^3	ND(9.2)	ND(9.2)	ND(9.2)	ND(6.9)
Chloroethane	µg/m^3	ND(5.3)	ND(5.3)	ND(5.3)	ND(11)
Chloroform (Trichloromethane)	µg/m^3	ND(9.8)	ND(9.8)	ND(9.8)	ND(7.3)
Chloromethane (Methyl chloride)	µg/m^3	ND(21)	ND(21)	ND(21)	2.4 J
cis-1,2-Dichloroethene	µg/m^3	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
cis-1,3-Dichloropropene	µg/m^3	ND(18)	ND(18)	ND(18)	ND(9.1)
Dibromochloromethane	µg/m^3	ND(17)	ND(17)	ND(17)	ND(17)
Dichlorodifluoromethane (CFC-12)	µg/m^3	ND(9.9)	ND(9.9)	ND(9.9)	3.8 J
Ethylbenzene	µg/m^3	ND(8.7)	ND(8.7)	ND(8.7)	32
Hexachlorobutadiene	µg/m^3	ND(110)	ND(110)	ND(110)	ND(110)
m&p-Xylenes	µg/m^3	5.2 J	ND(8.7)	ND(8.7)	240

Table 3.5

Soil Gas Analytical Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Sample Location:		**GP7-12**	**GP7-12**	**GP7-12**	**MW6-10**
Sample Identification:		**SG-048041-090919-PB-001**	**SG-048041-092320-PB-004**	**SG-048041-092320-PB-005**	**GE-48041-091417-DC-006**
Sample Date:		**9/9/2019**	**09/23/20**	**09/23/20**	**9/14/2017**
Sample Type:				**Duplicate**	
	Units				
Volatile Organic Compounds (VOCs)					
Volatile Organic Compounds (VOCs) cont'd					
Methylene chloride	$\mu g/m^3$	ND(35)	ND(35)	ND(35)	3.2 J
o-Xylene	$\mu g/m^3$	ND(8.7)	ND(8.7)	ND(8.7)	66
Tetrachloroethene	$\mu g/m^3$	3.6 J	ND(14)	ND(14)	14
Toluene	$\mu g/m^3$	ND(38)	ND(38)	ND(38)	13
trans-1,2-Dichloroethene	$\mu g/m^3$	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)
trans-1,3-Dichloropropene	$\mu g/m^3$	ND(9.1)	ND(9.1)	ND(9.1)	ND(9.1)
Trichloroethene	$\mu g/m^3$	2.0 J	ND(11)	ND(11)	4.2 J
Trichlorofluoromethane (CFC-11)	$\mu g/m^3$	1.6 J	1.4 J	1.6 J	ND(11)
Trifluorotrichloroethane (CFC-113)	$\mu g/m^3$	ND(15)	ND(15)	ND(15)	ND(15)
Vinyl acetate	$\mu g/m^3$	ND(35)	ND(35)	ND(35)	ND(14)
Vinyl chloride	$\mu g/m^3$	ND(10)	ND(10)	ND(10)	ND(5.1)

Notes:

ND( ) Not detected at the associated reporting limit.
U Not detected at the associated reporting limit.
J Estimated concentration.
J+ Estimated concentration, result may be biased high.
(1) MDEQ Media-Specific Volatilization to Indoor Air Interim Action Screening Levels (MSSLs), August 2017.
RIASL - Recommended Interim Action Screening Levels .
$RIASL_{12}$ - Recommended Interim Action Screening Levels for exposures less than 12 hours.
$TSRIASL_{12}$ - Time Sensitive Recommended Interim Action Screening Levels.

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Location ID	4/26/2013				4/29/2013				5/7/2013			
	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)
GP1-12	0.0	2.2	17.2	3	nm				nm			
GP2-12	0.0	1.9	16.2	3	nm				nm			
GP3-12	0.0	0.0	20.7	3	nm				nm			
GP4-12	screen flooded				nm				nm			
GP5-12	screen flooded				nm				nm			
GP6-12	screen flooded				nm				nm			
GP7-12	screen flooded				nm				nm			
GP8-12	0.0	0.0	20.9	3	nm				nm			
MPE Exhaust	**<0.1**	0.0	20.8	3	nm				nm			
EX-1	nm				0.0	3.7	4.5	2	nm			
EX-2	nm				0.0	0.3	17.8	2	nm			
EX-3[7]	0.0	0.0	21.1	0	1.0	2.8	1.4	2	nm			
EX-4[7]	nm				**4.5**	0.3	11.5	2	nm			
EX-5	nm				**29.8**	0.3	6.6	2	nm			
EX-6	nm				**2.3**	2.5	0	0	nm			
EX-7	nm				0.0	0.4	19.2	2	nm			
EX-8[7]	nm				0.0	0.0	20.3	2	nm			
EX-9	nm				**3.2**	3.6	0	2	nm			
EX-10[7]	nm				**1.9**	1.1	5.9	2	nm			
EX-11	nm				**18.7**	0.0	13.8	2	nm			
EX-12	nm				0.3	2.4	5.9	2	nm			
EX-13	nm				0.0	2.6	2.2	2	nm			
EX-14	nm				0.0	1.5	10.4	2	nm			
EX-15	nm				nm				nm			
EX-16[7]	nm				nm				nm			
EX-17	nm				nm				nm			
EX-18[7]	nm				nm				nm			
EX-19	nm				0.0	0.0	20.4	2	nm			
EX-20	nm				0.0	0.0	20.6	2	nm			
EX-21[7]	0.0	0.1	17.2	0	0.0	2.6	0.4	2	nm			
EX-22	nm				**3.0**	0.6	3	2	nm			
EX-23	nm				nm				nm			
EX-24[7]	nm				nm				nm			
EX-25	nm				0.0	0.0	20.3	2	nm			
EX-26	nm				0.2	4.9	2	2	nm			
EX-27	nm				0.0	0.0	20.3	2	nm			
EX-28[7]	nm				**2.6**	1.2	3.7	2	nm			
EX-29	**5.0**	0.2	15.7	0	**7.4**	1.1	5	5	nm			
EX-30[7]	nm				0.0	0.0	20.5	2	nm			
EX-31[7]	nm				0.0	0.0	20.5	2	nm			
EX-32[7]	0.0	0.0	21.2	0	0.0	0.0	20.6	2	nm			
EX-33[7]	nm				0.0	0.0	20.6	2	nm			
EX-34[7]	nm				nm				0.9	0.0	20.4	2
EX-35 [6][7]	nm				nm				**2.2**	0.0	20.2	2
EX-36[7]	nm				**7.2**	1.0	18	2	nm			
MW1-08	nm[4]				nm[4]				nm[4]			
MW2-08	nm[4]				nm[4]				nm[4]			
MW3R-08[7]	nm				0.0	0.0	20.1	3	nm			
MW4-08	nm[4]				nm[4]				nm[4]			
MW5-08	nm[4]				nm[4]				nm[4]			
MW6-10[7]	**2.6**	0.1	19.9	0	nm				nm			
MW7-10[7]	**8.6**	0.1	19.1	0	nm				nm			
MW8-10	nm				0.4	0.4	13.9	2	nm			
MW9-10	nm				0.0	0.0	20.6	2	nm			
MW10-10	0.0	0.0	21.2	0	**1.8**	0.2	18.5	3	nm			
MW11-12	nm[5]				nm[5]				nm[5]			
MW13-12	nm[5]				nm[5]				nm[5]			
MW14-12	nm[5]				nm[5]				nm[5]			
MW15-12	nm[5]				nm[5]				nm[5]			
MW16-12	nm[5]				nm[5]				nm[5]			
TW-1	nm				**1.6**	0.3	19.6	2	nm			
TW-2	0.0	0.0	20.9	0	0.0	0.2	20.2	2	nm			
LNAPL AST	0.0	0.0	21.4	0	nm				nm			
GV1-15	nm[9]				nm[9]				nm[9]			
GV2-15	nm[9]				nm[9]				nm[9]			
GV3-15	nm[9]				nm[9]				nm[9]			
GV4-15	nm[9]				nm[9]				nm[9]			
GV5-17	nm				nm				nm			
GV6-17	nm				nm				nm			
GV7-17	nm				nm				nm			
GV8-17	nm				nm				nm			
GV9-17	nm				nm				nm			
GV10-17	nm				nm				nm			
GV11-17	nm				nm				nm			

Location ID	6/5/2013				8/30/2013				9/26/2013			
	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)
GP1-12	0.1	9.1	0.2	2	0.0	3.3	16.3	2	0.0	8.0	0.3	2
GP2-12	0.0	5.0	5.2	2	0.0	5.2	5.5	2	0.0	6.1	10.4	2
GP3-12	0.0	7.9	1.9	2	0.0	13.4	1.6	2	0.0	13.1	1.2	2
GP4-12	0.0	0.8	17.0	2	0.0	10.2	8.0	2	0.0	9.7	6.7	2
GP5-12	0.0	0.9	16.3	2	0.0	3.0	14.9	2	0.0	7.2	2.6	2
GP6-12	**8.3**	4.5	0.1	2	nm				nm			
GP7-12	0.0	7.7	1.4	2	0.0	11.4	8.8	2	0.0	11.3	0.2	2
GP8-12	0.0	1.7	17.7	2	0.0	0.0	20.0	2	0.0	1.8	16.0	2
MPE Exhaust	nm				nm				nm			
EX-1	0.0	6.4	2.7	2	0.0	5.9	8.5	2	0.0	10.6	0.4	2
EX-2	0.0	2.7	11.6	2	0.0	0.1	20.2	2	0.0	9.9	0.1	2
EX-3[7]	**7.2**	4.2	0.0	2	**2.2**	3.9	5.2	2	**4.9**	9.5	0.0	2
EX-4[7]	**16.1**	0.8	0.0	2	**9.7**	0.8	3.4	2	**10.6**	4.4	0.7	2
EX-5	**11.1**	3.9	0.5	2	**21.8**	5.0	1.6	2	**11.8**	6.5	0.0	2
EX-6	**5.0**	2.6	0.1	2	0.0	0.0	20.6	2	**1.4**	3.6	1.7	2
EX-7	0.0	4.5	6.4	2	0.0	0.7	17.4	2	0.0	10.3	0.0	2
EX-8[7]	0.0	2.2	10.5	2	0.2	1.7	14.2	2	0.6	7.7	0.0	2
EX-9	**9.1**	4.4	0.1	2	**5.1**	3.6	7.3	2	**9.6**	5.2	0.0	2
EX-10[7]	0.0	0.3	18.7	2	0.0	0.0	20.9	2	0.1	1.8	16.0	2
EX-11	**25.5**	1.9	1.9	2	0.0	0.0	20.8	2	**9.8**	1.5	0.0	2
EX-12	**3.4**	3.2	0.3	2	0.0	0.0	20.8	2	**5.6**	7.7	0.0	2
EX-13	0.0	5.0	1.7	2	0.0	3.8	16.6	2	0.0	9.5	0.0	2
EX-14	0.5	3.1	0.0	2	0.4	3.7	8.3	2	0.6	9.0	0.0	2
EX-15	0.8	5.8	0.0	2	1.0	2.0	10.8	2	**3.7**	6.1	0.0	2
EX-16[7]	**11.0**	4.3	0.1	2	**8.9**	4.9	2.1	2	**12.0**	6.8	0.0	2
EX-17	**14.6**	3.1	0.0	2	**2.8**	1.9	15.1	2	**20.0**	3.8	0.0	2
EX-18[7]	0.0	1.5	11.4	2	**1.8**	1.8	10.2	2	**6.1**	2.2	0.0	2
EX-19	0.0	4.1	6.8	2	0.0	0.3	20.5	2	0.0	11.8	0.0	2
EX-20	0.0	2.4	11.0	2	0.0	0.0	20.8	2	0.0	7.2	3.7	2
EX-21[7]	0.8	4.1	0.3	2	**6.4**	4.7	4.9	2	**2.9**	8.8	0.0	2
EX-22	**3.3**	2.5	0.5	2	0.0	0.0	20.9	2	**4.3**	8.5	2.5	2
EX-23	**6.4**	1.6	11.3	2	0.3	0.2	20.0	2	**11.6**	7.1	0.0	2
EX-24[7]	**15.2**	2.0	0.2	2	0.0	0.1	20.5	2	**28.6**	5.4	0.0	2
EX-25	0.0	5.0	6.8	2	0.0	7.5	3.7	2	0.0	9.6	0.0	2
EX-26	0.7	9.0	0.5	2	0.1	5.4	11.1	2	1.1	12.4	0.0	2
EX-27	0.0	1.7	16.6	2	0.1	5.5	8.8	2	**2.3**	10.8	0.0	2
EX-28[7]	0.1	2.5	12.7	2	0.0	0.0	20.8	2	0.3	3.1	12.6	2
EX-29	1.0	2.4	11.6	2	**8.6**	4.1	1.6	2	**15.0**	4.0	0.0	2
EX-30[7]	0.0	0.0	20.9	2	**5.7**	7.4	4.2	2	0.0	2.7	11.7	2
EX-31[7]	0.1	12.0	0.3	2	0.0	1.0	17.7	2	0.9	17.7	0.0	2
EX-32[7]	0.0	2.3	14.5	2	0.0	0.0	20.3	2	**1.8**	10.4	0.3	2
EX-33[7]	0.0	2.8	13.5	2	0.0	3.6	16.4	2	0.1	6.2	4.8	2
EX-34[7]	0.0	2.0	16.9	2	0.0	3.0	12.9	2	0.0	3.3	12.8	2
EX-35 [6][7]	0.5	0.3	20.4	2	0.0	0.0	20.4	2	**1.4**	7.5	3.5	2
EX-36[7]	**5.5**	0.7	18.7	2	**7.7**	1.0	17.3	2	**8.5**	3.9	3.6	2
MW1-08	nm[4]				nm[4]				nm[4]			
MW2-08	nm[4]				nm[4]				nm[4]			
MW3R-08[7]	0.0	0.2	20.0	2	0.0	0.0	20.5	2	0.1	2.6	11.2	2
MW4-08	nm[4]				nm[4]				nm[4]			
MW5-08	nm[4]				nm[4]				nm[4]			
MW6-10[7]	**17.1**	0.9	14.5	2	0.0	0.0	20.8	2	**23.0**	2.4	0.7	2
MW7-10[7]	**28.3**	1.4	11.4	2	0.0	0.0	20.9	2	**36.4**	2.6	0.2	2
MW8-10	0.1	1.1	16.2	2	0.3	0.4	12.5	2	0.0	0.7	11.8	2
MW9-10	0.2	1.2	16.9	2	0.0	1.5	11.1	2	0.0	2.7	0.7	2
MW10-10	**38.0**	9.0	0.8	2	0.0	0.0	20.5	2	1.2	8.6	3.4	2
MW11-12	nm[5]				nm[5]				nm[5]			
MW13-12	nm[5]				nm[5]				nm[5]			
MW14-12	nm[5]				nm[5]				nm[5]			
MW15-12	nm[5]				nm[5]				nm[5]			
MW16-12	nm[5]				nm[5]				nm[5]			
TW-1	**5.9**	3.6	11.0	2	0.0	0.0	20.8	2	**9.3**	6.4	2.9	2
TW-2	0.0	2.8	3.3	2	**3.5**	3.6	9.2	2	**3.9**	10.7	0.0	2
LNAPL AST	nm				nm				nm			
GV1-15	nm[9]				nm[9]				nm[9]			
GV2-15	nm[9]				nm[9]				nm[9]			
GV3-15	nm[9]				nm[9]				nm[9]			
GV4-15	nm[9]				nm[9]				nm[9]			
GV5-17	nm				nm				nm			
GV6-17	nm				nm				nm			
GV7-17	nm				nm				nm			
GV8-17	nm				nm				nm			
GV9-17	nm				nm				nm			
GV10-17	nm				nm				nm			
GV11-17	nm				nm				nm			

Location ID	10/23/2013				11/20/2013				12/16/2013				1/16/2014			
	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)	CH_4 (%vol)	CO_2 (%vol)	O_2 (%vol)	Purge Time (min)
GP1-12	0.0	8.2	3.8	2	0.0	0.7	19.8	2	0.0	1.0	19.8	2	nm			
GP2-12	0.0	6.3	12.9	2	0.3	3.6	16.0	2	0.0	3.2	14.7	2	nm			
GP3-12	0.0	11.5	2.4	2	0.0	8.3	3.9	2	0.0	6.6	6.1	2	nm			
GP4-12	0.0	6.2	13.5	2	0.0	0.0	20.7	2	0.0	0.0	20.1	2	nm			
GP5-12	0.0	7.3	4.2	2	0.0	2.6	15.4	2	0.0	2.4	17.0	2	0.0	1.2	19.2	2
GP6-12	0.0	3.4	17.3	2	nm				nm				nm			
GP7-12	0.0	12.2	3.0	2	0.3	1.2	16.8	2	0.0	5.4	13.7	2	0.1	3.4	4.6	2
GP8-12	0.0	0.1	20.4	4	0.0	8.9	11.1	4	0.0	6.0	5.2	2	0.0	6.0	4.4	2
MPE Exhaust	nm				nm				nm				nm			
EX-1	0.0	5.8	7.0	2	0.0	2.8	17.5	2	0.0	3.8	13.8	2	0.0	4.8	6.0	2
EX-2	0.0	6.2	4.6	2	0.0	9.7	3.1	2	0.0	7.2	6.2	2	0.0	4.2	12.5	2
EX-3[7]	**6.7**	8.6	0.1	2	1.1	3.9	0.1	2	0.0	0.1	19.9	2	0.0	0.1	19.5	2
EX-4[7]	**22.2**	2.4	0.1	2	0.8	6.4	1.3	2	**4.9**	2.7	2.6	2	0.0	0.0	20.2	2
EX-5	**25.9**	7.6	0.0	2	0.0	0.2	18.4	2	**2.9**	2.5	11.6	2	0.0	0.0	20.1	2
EX-6	**4.2**	2.8	0.3	2	0.0	0.6	15.5	2	0.0	0.0	20.2	2	**4.2**	2.4	1.8	2
EX-7	0.0	8.5	0.3	2	0.0	5.1	10.6	2	0.0	0.0	20.3	2	0.0	0.0	20.0	2
EX-8[7]	1.2	8.5	0.0	2	0.3	10.7	0.0	2	0.0	0.0	20.1	2	0.0	0.0	19.8	2
EX-9	**13.1**	5.6	0.0	2	**1.3**	9.3	0.0	2	**1.4**	5.5	0.0	2	1.0	5.2	0.0	2
EX-10[7]	**2.9**	1.6	16.3	2	0.4	7.5	1.9	2	1.1	1.7	13.9	2	0.0	0.0	20.2	2
EX-11	**15.2**	2.9	0.6	2	0.8	0.2	14.1	2	0.0	0.0	20.4	2	0.0	0.0	20.2	2
EX-12	**6.6**	6.8	2.2	2	0.3	3.7	2.3	2	0.0	0.1	19.8	2	0.5	1.1	15.8	2
EX-13	0.0	5.4	10.7	2	0.0	4.2	14.4	2	0.0	2.1	16.4	2	0.0	0.7	19.8	2
EX-14	0.0	8.6	1.0	2	0.0	9.6	3.1	2	0.0	11.7	0.4	2	0.3	3.9	14.0	2
EX-15	0.1	1.1	16.5	2	0.1	4.5	4.1	2	0.0	0.3	19.3	2	0.0	0.1	19.4	2
EX-16[7]	**12.2**	6.7	0.0	2	**2.0**	10.3	0.1	2	0.9	11.8	0.3	2	0.1	1.7	16.2	2
EX-17	**16.8**	4.0	0.2	2	**13.3**	5.2	0.1	2	**6.0**	5.2	1.3	2	**3.2**	5.8	0.6	2
EX-18[7]	**12.2**	2.0	0.0	2	**53.6**	0.3	0.0	2	**9.5**	1.8	0.0	2	**3.4**	1.9	0.8	2
EX-19	0.0	7.9	13.0	2	0.0	3.9	15.8	2	0.0	0.0	20.5	2	0.0	0.0	19.0	2
EX-20	0.0	0.0	20.5	2	0.2	6.6	2.6	2	0.0	0.0	20.3	2	0.0	0.0	18.8	2
EX-21[7]	**1.5**	7.3	3.2	2	1.1	11.5	0.6	2	0.7	12.9	0.7	2	0.0	0.8	17.7	2
EX-22	0.1	0.4	19.5	2	0.6	8.8	3.6	2	0.0	0.3	20.2	2	0.0	0.1	18.8	2
EX-23	0.0	0.0	20.4	2	**4.6**	5.3	3.3	2	0.9	1.2	17.2	2	0.0	0.0	19.3	2
EX-24[7]	**16.5**	0.3	0.0	2	**11.6**	3.6	0.0	2	**12.0**	4.0	0.3	2	**4.1**	2.3	4.1	2
EX-25	0.0	9.3	0.0	2	0.2	10.5	0.0	2	0.0	0.4	20.3	2	0.0	9.6	0.5	2
EX-26	0.0	7.3	11.0	2	0.0	13.9	0.5	2	0.0	13.2	3.1	2	0.0	11.2	3.6	2
EX-27	0.0	0.8	19.4	2	0.2	8.8	1.9	2	0.2	9.2	0.7	2	0.2	10.6	0.3	2
EX-28[7]	**7.0**	4.8	0.0	2	**3.6**	11.0	0.0	2	**3.4**	8.8	0.0	2	**3.1**	9.1	0.2	2
EX-29	0.0	0.0	20.4	2	0.0	0.4	14.4	2	0.0	0.0	19.8	2	0.0	0.1	18.5	2
EX-30[7]	0.0	2.1	19.0	2	0.0	1.9	18.4	2	0.0	0.0	20.2	2	0.0	1.5	6.3	2
EX-31[7]	0.0	7.6	13.8	2	0.1	13.3	0.0	2	0.0	14.8	0.0	2	0.0	13.4	0.3	2
EX-32[7]	0.0	0.0	21.0	2	0.1	9.4	2.2	2	0.0	0.9	19.3	2	0.0	1.2	16.9	2
EX-33[7]	0.0	0.0	20.7	2	**4.9**	11.2	0.0	2	**6.4**	8.8	1.6	2	0.0	0.0	19.0	2
EX-34[7]	0.0	1.1	19.6	2	0.0	3.0	14.7	2	0.0	0.2	20.4	2	0.0	0.7	17.5	2
EX-35 [6][7]	0.1	5.1	13.0	2	**3.6**	9.2	0.0	2	**2.2**	9.3	0.4	2	0.0	2.3	4.7	2
EX-36[7]	**4.2**	7.0	2.0	2	**9.6**	9.0	0.0	2	**10.0**	8.5	0.0	2	**11.8**	4.2	5.0	2
MW1-08	nm[4]				nm[4]				nm[4]				nm[4]			
MW2-08	nm[4]				nm[4]				nm[4]				nm[4]			
MW3R-08[7]	0.0	0.0	20.5	2	0.1	1.4	6.6	2	0.0	0.6	19.7	2	0.0	0.1	15.8	2
MW4-08	nm[4]				nm[4]				nm[4]				nm[4]			
MW5-08	nm[4]				nm[4]				nm[4]				nm[4]			
MW6-10[7]	**25.8**	2.0	2.4	2	**2.1**	0.9	16.6	2	0.0	0.0	20.3	2	0.0	0.0	19.9	2
MW7-10[7]	**29.9**	3.2	0.8	2	**10.3**	5.0	0.8	2	**9.6**	4.9	0.7	2	0.9	3.0	6.6	2
MW8-10	0.1	0.8	15.1	2	0.4	0.3	2.1	2	0.0	0.3	7.0	2	0.0	0.3	15.3	2
MW9-10	0.0	0.1	20.0	2	0.0	1.1	16.4	2	0.0	4.0	4.3	2	0.0	0.3	18.2	2
MW10-10	0.0	0.0	20.7	2	**1.9**	10.2	2.0	2	0.0	0.0	20.4	2	0.0	0.0	18.8	2
MW11-12	nm[5]				nm[5]				nm[5]				nm[5]			
MW13-12	nm[5]				nm[5]				nm[5]				nm[5]			
MW14-12	nm[5]				nm[5]				nm[5]				nm[5]			
MW15-12	nm[5]				nm[5]				nm[5]				nm[5]			
MW16-12	nm[5]				nm[5]				nm[5]				nm[5]			
TW-1	0.4	2.9	14.4	2	0.0	0.3	20.3	2	0.0	0.0	20.3	2	0.0	0.0	20.2	2
TW-2	0.0	0.2	19.8	2	**2.3**	10.8	0.1	2	0.6	4.0	12.0	2	**2.4**	6.1	2.8	2
LNAPL AST	nm				nm				nm				nm			
GV1-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV2-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV3-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV4-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV5-17	nm				nm				nm				nm			
GV6-17	nm				nm				nm				nm			
GV7-17	nm				nm				nm				nm			
GV8-17	nm				nm				nm				nm			
GV9-17	nm				nm				nm				nm			
GV10-17	nm				nm				nm				nm			
GV11-17	nm				nm				nm				nm			

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

	2/26/2014				3/24/2014				5/5/2014				8/15/2014				9/19/2014				12/11/2014			
Location ID	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time
	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)
GP1-12	nm				nm				0.0	5.3	2.5	2	**7.4**	7.9	0.0	2	0.6	9.3	0.0	2	**3.0**	5.6	0.5	2
GP2-12	nm				0.0	1.0	13.1	2	0.0	1.9	10.5	2	0.0	6.5	4.5	2	0.0	6.9	10.7	2	nm			
GP3-12	nm				nm				0.0	0.2	19.6	2	nm				nm				nm			
GP4-12	nm				nm				nm				nm				nm				nm			
GP5-12	nm				nm				0.0	5.4	2.1	2	0.0	8.8	1.4	2	0.0	8.5	3.0	2	0.0	6.4	6.7	2
GP6-12	nm				nm				nm				nm				nm				nm			
GP7-12	nm				nm				0.0	3.9	0.7	2	nm				0.0	12.6	0.1	2	0.0	10.0	5.7	2
GP8-12	nm				nm				0.0	3.0	15.2	2	0.0	3.6	6.2	2	0.0	2.6	12.0	2	nm			
MPE Exhaust	nm				nm				nm				nm				nm				nm			
EX-1	0.0	7.4	1.4	2	0.0	6.2	0.7	2	0.0	8.7	0.0	2	**2.4**	10.1	0.0	2	nm				nm			
EX-2	0.0	8.3	0.0	2	0.5	7.1	0.0	2	1.1	6.4	0.2	2	**9.2**	5.1	0.0	2	nm				nm			
EX-3[7]	0.2	7.1	2.3	2	0.2	5.0	5.3	2	0.0	1.0	17.7	2	**9.1**	1.9	4.4	2	nm				nm			
EX-4[7]	0.0	4.0	4.0	2	0.0	3.4	3.9	2	0.4	2.5	6.9	2	**12.9**	3.5	2.4	2	nm				nm			
EX-5	0.0	0.2	19.7	2	0.0	3.1	5.0	2	0.0	1.6	14.1	2	**15.2**	1.2	12.2	2	nm				nm			
EX-6	**1.7**	1.6	0.0	2	**2.6**	1.4	0.0	2	**2.6**	1.6	0.0	2	**7.0**	2.0	0.0	2	nm				nm			
EX-7	0.0	7.9	0.0	2	0.1	7.0	0.0	2	0.3	6.7	0.0	2	**3.4**	6.2	0.4	2	nm				nm			
EX-8[7]	0.0	6.2	1.8	2	0.0	5.9	0.0	2	**1.3**	5.4	0.8	2	**12.4**	5.4	0.0	2	nm				nm			
EX-9	**1.6**	5.4	0.0	2	**3.9**	4.0	0.0	2	**5.3**	3.7	0.0	2	**14.7**	4.9	0.0	2	nm				nm			
EX-10[7]	0.0	0.9	17.6	2	**1.7**	6.7	0.0	2	1.0	4.0	5.0	2	**11.9**	6.2	1.9	2	nm				nm			
EX-11	0.4	7.8	0.0	2	0.2	1.0	16.0	2	0.0	0.9	17.8	2	0.0	0.0	20.7	2	nm				nm			
EX-12	0.0	1.8	16.4	2	0.0	2.8	4.4	2	0.0	3.2	11.5	2	0.0	0.0	20.8	2	nm				nm			
EX-13	0.0	7.2	2.1	2	0.0	7.0	1.1	2	0.2	6.7	0.2	2	**2.2**	5.8	0.0	2	nm				nm			
EX-14	0.0	5.5	0.0	2	0.7	4.5	0.0	2	**1.3**	3.8	0.0	2	**9.7**	3.3	0.0	2	nm				nm			
EX-15	0.0	2.2	13.2	2	0.4	4.3	0.3	2	**1.9**	3.5	0.0	2	**7.2**	2.4	0.7	2	nm				nm			
EX-16[7]	**1.6**	7.0	0.0	2	**4.4**	6.1	0.0	2	**6.2**	5.9	0.0	2	**20.6**	7.1	0.2	2	nm				nm			
EX-17	**3.6**	3.8	0.0	2	**6.7**	2.4	0.0	2	**8.0**	3.2	0.0	2	**22.4**	4.1	0.1	2	nm				nm			
EX-18[7]	**4.3**	1.0	0.0	2	**6.3**	0.4	0.0	2	**8.0**	0.3	0.0	2	**27.3**	0.2	0.0	2	nm				nm			
EX-19	0.0	6.1	4.0	2	0.1	5.4	0.5	2	0.1	4.3	0.0	2	0.8	5.5	0.0	2	nm				nm			
EX-20	0.0	1.3	17.4	2	0.1	3.7	4.4	2	0.0	0.0	20.0	2	0.0	0.0	21.2	2	nm				nm			
EX-21[7]	0.5	8.8	2.6	2	0.8	7.3	0.3	2	**2.3**	6.1	0.0	2	**4.8**	5.2	0.8	2	nm				nm			
EX-22	**2.1**	9.4	0.0	2	**2.1**	6.6	1.7	2	**4.5**	4.6	0.0	2	**11.4**	3.2	2.5	2	nm				nm			
EX-23	**5.3**	4.9	0.7	2	**3.1**	3.2	3.4	2	**7.5**	3.7	1.3	2	**27.3**	4.2	1.6	2	nm				nm			
EX-24[7]	0.6	2.5	13.3	2	**2.8**	2.3	4.7	2	0.0	0.1	19.7	2	0.5	0.0	21.1	2	nm				nm			
EX-25	0.0	9.4	0.0	2	0.0	7.3	0.0	2	0.0	6.6	0.2	2	0.0	7.4	3.7	2	nm				nm			
EX-26	0.5	11.5	0.0	2	1.2	9.3	0.0	2	**1.9**	8.7	0.0	2	**6.6**	5.2	0.0	2	nm				nm			
EX-27	**1.6**	9.1	0.0	2	**3.8**	6.8	0.0	2	**4.8**	6.4	0.0	2	**12.0**	6.4	0.0	2	nm				nm			
EX-28[7]	**5.4**	7.6	0.0	2	**6.9**	5.8	0.0	2	**9.1**	6.0	0.0	2	**25.1**	5.0	0.8	2	nm				nm			
EX-29	0.0	2.4	15.5	2	0.2	2.3	7.1	2	0.0	0.2	19.9	2	**3.4**	1.9	15.6	2	nm				nm			
EX-30[7]	0.0	2.7	2.8	2	0.0	3.2	0.6	2	0.0	4.8	0.7	2	**2.7**	7.9	0.0	2	nm				nm			
EX-31[7]	0.6	11.4	0.0	2	**2.2**	9.0	0.0	2	**2.6**	8.8	0.0	2	**5.3**	7.9	1.0	2	nm				nm			
EX-32[7]	**4.7**	6.8	0.3	2	**2.0**	5.3	0.1	2	**2.2**	4.2	4.5	2	**11.8**	7.0	0.0	2	nm				nm			
EX-33[7]	0.6	5.9	6.7	2	**3.4**	8.5	0.0	2	**2.1**	4.0	10.7	2	**10.7**	9.4	0.0	2	nm				nm			
EX-34[7]	0.0	2.4	6.7	2	0.0	2.2	4.5	2	0.0	3.5	11.2	2	0.0	3.3	18.2	2	nm				nm			
EX-35 [6][7]	**2.9**	5.0	0.5	2	**5.5**	3.8	0.0	2	**10.8**	2.3	4.5	2	**3.6**	1.0	18.8	2	nm				nm			
EX-36[7]	0.4	1.2	18.0	2	0.2	0.1	20.8	2	0.1	0.0	20.2	2	**1.3**	0.2	20.9	2	nm				nm			
MW1-08	nm[4]				nm[4]				nm[4]				nm[4]				nm[4]				nm[4]			
MW2-08	nm[4]				nm[4]				nm[4]				nm[4]				nm[4]				nm[4]			
MW3R-08[7]	0.0	0.3	14.0	2	0.0	0.1	17.5	2	0.0	1.1	13.3	2	0.0	0.2	20.8	2	0.0	0.1	20.7	2	0.0	0.9	11.1	2
MW4-08	nm[4]				nm[4]				nm[4]				nm[4]				nm[4]				nm[4]			
MW5-08	nm[4]				nm[4]				nm[4]				nm[4]				nm[4]				nm[4]			
MW6-10[7]	0.0	0.2	18.8	2	0.0	0.0	20.1	2	**6.9**	0.3	16.4	2	0.0	0.0	21.1	2	0.0	0.0	20.7	2	**32.6**	0.9	7.6	2
MW7-10[7]	0.0	0.3	18.7	2	0.5	0.3	19.9	2	0.3	0.1	19.4	2	**9.1**	1.6	16.0	2	**18.9**	0.7	15.6	2	**31.6**	3.3	7.3	2
MW8-10	0.0	0.4	15.4	2	0.0	0.4	0.5	2	0.1	0.4	17.1	2	0.3	0.8	18.1	2	0.0	0.0	20.8	2	0.5	0.6	18.1	2
MW9-10	0.0	1.2	15.3	2	0.0	0.2	20.2	2	0.0	0.9	18.0	2	0.0	1.5	17.5	2	0.0	0.0	20.7	2	0.0	1.9	12.4	2
MW10-10	0.0	0.4	18.0	2	**13.5**	5.9	0.3	2	0.2	1.1	17.9	2	0.0	0.0	20.9	2	0.0	0.3	20.3	2	**4.5**	4.6	14.1	2
MW11-12	nm[5]				nm[5]				nm[5]				nm[5]				nm[5]				nm[5]			
MW13-12	nm[5]				nm[5]				nm[5]				nm[5]				nm[5]				nm[5]			
MW14-12	nm[5]				nm[5]				nm[5]				nm[5]				nm[5]				nm[5]			
MW15-12	nm[5]				nm[5]				nm[5]				nm[5]				nm[5]				nm[5]			
MW16-12	nm[5]				nm[5]				nm[5]				nm[5]				nm[5]				nm[5]			
TW-1	0.0	1.1	1.9	2	0.0	0.4	18.5	2	0.0	1.4	17.5	2	0.0	0.2	20.0	2	0.0	0.0	20.6	2	0.0	0.8	19.9	2
TW-2	**4.2**	6.8	1.0	2	**2.8**	4.9	1.8	2	**2.6**	2.1	2.1	2	**7.8**	4.5	3.5	2	0.0	0.0	20.7	2	**26.1**	3.4	0.2	2
LNAPL AST	nm				nm				nm				nm				nm				nm			
GV1-15	nm[9]				nm[9]				nm[9]				nm[9]				nm[9]				nm[9]			
GV2-15	nm[9]				nm[9]				nm[9]				nm[9]				nm[9]				nm[9]			
GV3-15	nm[9]				nm[9]				nm[9]				nm[9]				nm[9]				nm[9]			
GV4-15	nm[9]				nm[9]				nm[9]				nm[9]				nm[9]				nm[9]			
GV5-17	nm				nm				nm				nm				nm				nm			
GV6-17	nm				nm				nm				nm				nm				nm			
GV7-17	nm				nm				nm				nm				nm				nm			
GV8-17	nm				nm				nm				nm				nm				nm			
GV9-17	nm				nm				nm				nm				nm				nm			
GV10-17	nm				nm				nm				nm				nm				nm			
GV11-17	nm				nm				nm				nm				nm				nm			

	3/9/2015				6/1/2015				6/10/2015				6/12/2015			
Location ID	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time
	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)
GP1-12	0.2	5.1	0.0	2	**5.3**	6.0	0.0	2	**10.6**	6.0	0.0	2	**9.7**	6.8	0.0	2
GP2-12	0.0	2.5	16.1	2	0.0	4.5	15.0	2	0.0	6.2	2.2	2	0.0	5.9	5.3	2
GP3-12	0.0	5.3	4.1	2	0.0	9.7	5.5	2	0.0	8.4	4.9	2	0.0	9.0	5.7	2
GP4-12	nm				nm[3]				nm[3]				nm[3]			
GP5-12	0.0	4.7	4.0	2	0.0	8.5	0.2	2	0.0	7.7	0.2	2	0.0	8.0	1.8	2
GP6-12	**6.4**	5.1	0.2	2	**28.8**	7.3	0.0	2	**27.4**	7.4	0.0	2	**26.7**	7.8	0.0	2
GP7-12	0.0	7.0	4.5	2	0.2	9.8	1.3	2	0.0	11.8	1.5	2	0.0	12.8	2.0	2
GP8-12	0.0	4.6	2.0	2	0.1	1.7	12.7	2	0.0	4.3	5.6	0.5	0.0	4.5	9.5	30 seconds[8]
MPE Exhaust	nm[1]				nm[1]				nm[1]				nm[1]			
EX-1	nm[2]				nm[2]				nm[2]				0.0	3.1	11.5	2
EX-2	nm[2]				nm[2]				nm[2]				**2.3**	4.6	5.3	2
EX-3[7]	nm[2]				nm[2]				nm[2]				**15.5**	5.3	1.4	2
EX-4[7]	nm[2]				nm[2]				nm[2]				**9.7**	3.1	8.8	2
EX-5	nm[2]				nm[2]				nm[2]				**5.1**	1.2	15.2	2
EX-6	nm[2]				nm[2]				nm[2]				**8.3**	3.9	0.0	2
EX-7	nm[2]				nm[2]				nm[2]				**1.3**	5.1	0.0	2
EX-8[7]	nm[2]				nm[2]				nm[2]				**10.0**	6.1	0.0	2
EX-9	nm[2]				nm[2]				nm[2]				**10.2**	5.6	3.7	2
EX-10[7]	nm[2]				nm[2]				nm[2]				**17.5**	6.0	1.8	2
EX-11	nm[2]				nm[2]				0.0	0.0	18.0	2	0.1	0.0	18.4	2
EX-12	nm[2]				nm[2]				0.1	0.1	17.7	2	0.3	0.6	17.7	2
EX-13	nm[2]				nm[2]				nm[2]				0.5	6.9	0.0	2
EX-14	nm[2]				nm[2]				nm[2]				**5.5**	3.4	2.1	2
EX-15	nm[2]				nm[2]				nm[2]				**9.7**	4.0	0.2	2
EX-16[7]	nm[2]				nm[2]				nm[2]				**24.2**	5.8	0.3	2
EX-17	nm[2]				nm[2]				nm[2]				0.9	0.4	17.7	2
EX-18[7]	nm[2]				nm[2]				nm[2]				**24.8**	3.5	1.3	2
EX-19	nm[2]				nm[2]				nm[2]				0.1	7.5	0.0	2
EX-20	nm[2]				nm[2]				nm[2]				0.0	0.0	18.6	2
EX-21[7]	nm[2]				nm[2]				nm[2]				**8.5**	5.4	1.0	2
EX-22	nm[2]				nm[2]				nm[2]				**4.0**	1.8	14.3	2
EX-23	nm[2]				nm[2]				nm[2]				**1.6**	0.4	17.5	2
EX-24[7]	nm[2]				nm[2]				**15.6**	0.6	8.1	2	**18.5**	2.7	3.9	2
EX-25	nm[2]				nm[2]				nm[2]				0.0	2.4	15.8	2
EX-26	nm[2]				nm[2]				nm[2]				**7.2**	7.4	0.2	2
EX-27	nm[2]				nm[2]				nm[2]				**13.8**	8.5	0.4	2
EX-28[7]	nm[2]				nm[2]				nm[2]				**27.2**	5.3	0.4	2
EX-29	nm[2]				nm[2]				nm[2]				**5.5**	5.5	5.6	2
EX-30[7]	nm[2]				nm[2]				nm[2]				0.0	8.8	0.7	2
EX-31[7]	nm[2]				nm[2]				nm[2]				0.0	4.3	7.9	2
EX-32[7]	nm[2]				nm[2]				nm[2]				**5.8**	8.6	0.0	2
EX-33[7]	nm[2]				nm[2]				nm[2]				**6.0**	10.9	1.5	2
EX-34[7]	nm[2]				nm[2]				nm[2]				0.1	0.9	16.7	2
EX-35 [6][7]	nm[2]				nm[2]				0.3	0.0	17.9	2	0.5	0.1	18.2	2
EX-36[7]	nm[2]				nm[2]				0.2	0.0	17.9	2	1.1	0.1	18.0	2
MW1-08	nm[4]				0.0	0.0	21.3	2	0.0	0.0	18.1	2	0.0	0.3	18.1	2
MW2-08	nm[4]				0.0	7.5	3.3	2	0.0	6.6	5.8	2	0.0	7.3	5.5	2
MW3R-08[7]	1.1	0.3	7.1	2	0.5	0.3	10.5	2	0.0	2.3	12.8	2	0.0	2.6	13.8	2
MW4-08	nm[4]				0.0	8.6	4.3	2	0.0	4.4	10.8	2	0.0	2.0	15.5	2
MW5-08	nm[4]				0.0	0.5	20.1	2	0.0	1.6	15.4	2	0.0	4.7	13.0	2
MW6-10[7]	**11.5**	0.7	6.4	2	**49.6**	0.4	4.6	2	**40.6**	0.2	6.1	2	**42.4**	0.3	6.0	2
MW7-10[7]	0.7	0.0	17.4	2	**66.8**	2.9	0.3	2	**55.5**	2.0	2.8	2	**46.6**	1.7	6.4	2
MW8-10	0.0	0.8	17.6	2	0.0	0.5	20.0	2	0.2	0.2	17.1	2	0.1	0.2	18.0	2
MW9-10	0.0	2.2	3.3	2	0.0	2.1	11.0	2	0.1	1.4	11.9	2	0.0	1.4	12.7	2
MW10-10	**3.6**	2.5	0.3	2	**3.9**	1.2	3.5	2	0.0	8.0	6.0	2	0.0	9.3	5.3	2
MW11-12	nm[5]				nm[5]				0.0	0.0	17.6	2	0.0	0.0	18.4	2
MW13-12	nm[5]				nm[5]				0.0	2.5	13.7	2	0.0	1.3	16.1	2
MW14-12	nm[5]				nm[5]				0.0	0.5	16.9	2	0.0	1.0	17.2	2
MW15-12	nm[5]				nm[5]				0.0	0.5	17.2	2	0.0	0.5	18.1	2
MW16-12	nm[5]				nm[5]				0.0	0.0	17.8	2	0.0	0.1	18.5	2
TW-1	**31.8**	4.5	0.2	2	0.0	0.1	21.2	2	0.1	0.0	17.7	2	0.4	0.1	18.0	2
TW-2	**16.4**	4.2	0.0	2	**24.3**	2.9	0.0	2	**16.4**	2.0	6.9	2	**18.3**	2.2	5.3	2
LNAPL AST	nm[1]				nm[1]				nm[1]				nm[1]			
GV1-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV2-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV3-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV4-15	nm[9]				nm[9]				nm[9]				nm[9]			
GV5-17	nm				nm				nm				nm			
GV6-17	nm				nm				nm				nm			
GV7-17	nm				nm				nm				nm			
GV8-17	nm				nm				nm				nm			
GV9-17	nm				nm				nm				nm			
GV10-17	nm				nm				nm				nm			
GV11-17	nm				nm				nm				nm			

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

	8/5/2015				8/7/2015				8/27/2015				9/25/2015				11/30/2015				1/8/2016				3/18/2016				5/26/2016				8/12/2016				10/20/2016			
Location ID	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time
	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)
GP1-12	**14.2**	7.1	0.2	2	**16.1**	6.8	0.0	2	**15.6**	7.0	0.0	2	**14.7**	7.1	0.0	2	**12.2**	4.8	0.0	2	0.0	5.3	0.1	2	0.0	5.2	5.2	2	0.0	9.3	1.7	2	0.0	12.9	1.0	2	0.0	8.6	6.0	2
GP2-12	0.0	8.6	6.1	2	0.0	8.1	7.7	2	0.0	7.7	10.8	2	0.0	7.8	11.1	2	0.0	4.7	14.2	2	0.0	3.5	13.2	2	0.0	2.4	15.4	2	0.0	4.1	7.4	2	0.0	5.4	14.3	2	0.0	5.2	14.9	2
GP3-12	0.0	13.0	3.0	2	0.0	13.6	3.1	2	0.0	14.0	3.2	2	0.0	12.5	5.3	2	0.0	6.8	6.6	2	**nm(3)**				**nm(3)**				0.0	7.2	7.1	2	0.0	5.6	14.7	2	0.0	7.7	11.4	1
GP4-12	0.0	13.6	5.3	2	0.0	12.9	6.4	2	0.0	10.9	7.5	2	0.0	8.4	14.5	2	0.0	3.2	12.7	2	**nm(3)**				**nm(3)**				**nm(3)**				0.0	3.5	16.9	2	**nm(1)**			
GP5-12	0.0	9.4	2.0	2	0.0	8.8	0.8	2	0.0	9.0	3.0	2	0.0	9.0	3.0	2	0.0	8.1	0.5	2	0.0	6.6	1.1	2	0.0	5.6	2.1	2	0.0	6.4	1.6	2	0.0	11.4	0.0	2	0.0	8.3	3.2	2
GP6-12	**29.9**	9.5	0.5	20 seconds(8)	**32.3**	9.1	0.0	2	**33.3**	9.1	0.0	2	**32.8**	8.7	0.0	2	**20.0**	7.1	0.0	2	**30.3**	5.6	2.4	30 seconds(8)	**nm(3)**				**53.0**	3.4	0.0	2	**21.7**	8.0	0.0	2	**56.2**	6.3	0.6	2
GP7-12	0.0	16.6	0.8	2	0.0	15.8	0.9	2	0.0	15.6	0.0	2	0.0	16.4	2.7	2	0.0	13.1	1.0	2	0.0	9.8	4.2	2	0.0	7.7	7.0	2	0.0	9.7	2.2	2	0.0	13.4	2.1	2	0.0	12.7	3.6	2
GP8-12	0.0	7.3	6.8	2	0.0	7.2	10.8	20 seconds(8)	0.0	5.0	3.9	30 seconds(8)	0.0	5.0	2.4	30 seconds(8)	0.1	4.3	2.3	2	0.0	4.3	2.0	2	0.0	4.2	13.9	20 seconds(8)	0.0	6.0	11.3	30 seconds(8)	0.0	3.3	6.7	2	0.0	8.0	9.6	20 seconds
MPE Exhaust	**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**			
EX-1	0.0	4.0	11.4	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	2.8	15.5	2	0.0	0.5	20.6	2
EX-2	**4.7**	6.4	1.6	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**10.2**	7.8	0.0	2	0.1	2.6	14.9	2
EX-3(7)	**4.1**	6.5	5.4	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				1.0	0.4	18.4	2	0.1	0.0	21.2	2
EX-4(7)	**7.0**	5.9	4.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				1.0	0.3	18.5	2	0.1	0.0	21.3	2
EX-5	**7.3**	5.0	6.9	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**43.8**	9.7	0.0	2	0.6	0.0	21.2	2
EX-6	**12.8**	5.7	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**14.4**	6.7	0.1	2	**19.1**	6.5	0.2	2
EX-7	**3.9**	5.5	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**6.2**	5.4	0.0	2	**1.7**	5.8	0.0	2
EX-8(7)	**11.2**	6.9	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.4	0.3	18.3	2	0.2	0.1	21.2	2
EX-9	**10.3**	6.4	3.9	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**21.6**	9.1	0.5	2	**2.0**	1.1	18.3	2
EX-10(7)	**4.4**	4.0	9.7	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.4	0.2	19.0	2	0.3	0.1	21.0	2
EX-11	0.0	0.0	19.5	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**1.7**	5.2	5.8	2	0.1	0.0	21.2	2
EX-12	**2.0**	1.1	18.5	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**32.3**	9.5	0.0	2	0.5	0.1	21.1	2
EX-13	0.6	7.5	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.6	10.2	0.0	2	0.0	2.3	15.8	2
EX-14	**5.3**	4.0	2.4	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**8.7**	4.7	1.2	2	**2.2**	1.5	15.0	2
EX-15	**5.4**	5.1	0.5	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**21.7**	5.7	0.0	2	0.7	4.6	9.2	2
EX-16(7)	**7.4**	6.2	4.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				1.0	0.2	18.8	2	0.3	0.4	19.5	2
EX-17	**8.9**	1.2	16.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**33.0**	7.1	1.0	2	0.5	0.1	20.8	2
EX-18(7)	0.7	3.1	8.3	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.4	0.0	19.2	2	0.0	0.0	21.2	2
EX-19	0.5	7.6	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	12.4	0.1	2	0.1	3.7	12.5	2
EX-20	0.2	0.2	18.6	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**3.0**	1.5	7.1	2	0.0	0.0	21.2	2
EX-21(7)	**1.6**	2.7	10.2	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.6	0.6	17.9	2	0.0	0.1	21.0	2
EX-22	**6.5**	2.0	14.6	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**49.1**	9.1	0.3	2	0.3	0.9	19.8	2
EX-23	**8.5**	1.0	16.4	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**10.8**	2.6	14.6	2	0.6	0.1	20.8	2
EX-24(7)	**8.4**	5.2	4.7	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.2	0.0	19.4	2	0.0	0.0	20.9	2
EX-25	0.0	3.1	15.7	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	4.5	14.5	2	0.0	0.8	19.8	2
EX-26	**12.4**	8.8	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**15.3**	8.8	0.0	2	**1.5**	4.0	12.1	2
EX-27	**13.7**	9.3	0.2	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**38.6**	9.7	0.0	2	0.0	1.9	18.0	2
EX-28(7)	**22.0**	8.5	0.5	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**1.9**	0.4	18.7	2	0.0	0.0	20.7	2
EX-29	**9.6**	6.2	3.9	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**19.0**	11.4	0.0	2	**1.3**	0.3	20.0	2
EX-30(7)	0.9	9.4	2.6	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	0.0	20.1	2	0.0	0.0	21.2	2
EX-31(7)	**1.9**	3.0	9.9	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	0.0	19.9	2	0.0	0.1	21.2	2
EX-32(7)	**31.0**	7.7	0.0	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				1.0	0.3	19.0	2	0.0	0.0	21.3	2
EX-33(7)	**17.1**	13.9	0.9	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	0.0	19.5	2	0.0	0.1	21.2	2
EX-34(7)	0.0	3.0	16.8	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	0.0	20.1	2	**nm(1)**			
EX-35 (6)(7)	0.7	0.0	19.8	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.5	0.0	19.7	2	**nm(1)**			
EX-36(7)	**1.5**	0.0	19.8	2	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				0.0	0.0	19.7	2	0.0	0.0	21.3	2
MW1-08	**21.2**	7.6	0.2	2	**23.9**	6.4	0.0	2	**24.3**	6.4	0.0	2	**25.7**	6.0	0.0	2	**25.7**	4.0	0.0	2	**21.0**	3.2	0.1	2	**13.8**	3.1	0.0	2	**19.8**	3.8	0.0	2	**25.1**	7.5	0.0	2	**34.4**	4.7	0.0	2
MW2-08	0.0	9.5	3.4	2	0.0	8.6	5.2	2	0.0	10.0	2.3	2	0.0	10.9	1.5	2	0.0	11.1	1.0	2	0.0	8.2	4.4	2	0.0	5.1	8.3	2	0.0	6.1	5.3	2	0.0	11.4	2.5	2	0.0	10.9	1.5	2
MW3R-08(7)	0.1	1.6	11.3	2	0.0	0.3	19.7	2	0.4	3.6	4.6	2	0.0	0.0	20.6	2	0.0	0.0	20.1	2	0.0	0.0	21.1	2	0.0	0.0	20.3	2	0.6	0.0	20.5	2	0.0	0.0	18.0	2	0.0	0.1	20.1	2
MW4-08	0.0	6.6	13.6	2	0.0	1.9	17.4	2	0.0	5.4	15.5	2	0.0	6.4	13.2	2	0.0	9.2	0.2	2	0.0	8.3	1.6	2	0.0	2.9	17.7	2	0.0	2.6	18.5	2	0.0	7.7	3.9	2	0.1	2.9	18.7	2
MW5-08	0.0	2.0	19.4	2	0.0	1.5	19.0	2	0.0	1.7	19.5	2	0.0	2.5	18.0	2	0.0	1.6	16.1	2	0.0	0.8	19.1	2	0.0	0.3	19.6	2	0.0	1.6	18.2	2	0.0	6.7	5.2	2	0.0	1.2	20.1	2
MW6-10(7)	**85.4**	0.4	0.0	2	**60.4**	0.1	4.7	2	**77.5**	3.6	4.6	2	0.0	0.0	20.7	2	0.0	0.0	20.3	2	0.0	0.0	20.3	2	0.0	0.0	20.7	2	0.0	0.0	20.4	2	0.0	0.0	19.4	2	0.0	0.0	21.2	2
MW7-10(7)	**71.7**	2.9	0.0	2	**50.9**	2.0	4.9	2	**76.7**	0.4	0.0	2	0.0	0.0	20.6	2	0.0	0.0	20.1	2	0.0	0.0	20.6	2	0.0	0.0	20.6	2	0.0	0.0	20.5	2	**1.3**	0.1	18.9	2	0.1	0.0	21.0	2
MW8-10	0.2	0.2	18.9	2	0.1	0.1	19.8	2	0.2	0.5	19.3	2	0.0	0.7	17.5	2	0.0	1.1	16.7	2	0.5	0.7	16.7	2	0.0	0.0	20.6	2	0.0	0.0	20.1	2	0.0	1.2	16.7	2	0.0	0.0	21.1	2
MW9-10	0.0	1.0	16.0	2	0.0	0.7	16.9	2	0.0	1.2	17.0	2	0.0	1.1	15.3	2	0.0	2.9	2.6	2	0.0	1.4	6.0	2	0.8	1.0	14.8	2	0.1	0.9	17.7	2	0.3	3.2	0.6	2	0.0	0.0	21.3	2
MW10-10	**5.0**	7.0	9.2	2	**31.4**	12.0	0.0	2	**12.1**	8.6	6.9	2	0.0	5.9	14.2	2	**17.9**	1.5	1.1	2	**44.6**	7.5	0.0	2	0.2	0.6	1.0	2	**2.1**	4.0	1.2	2	**29.7**	14.0	0.6	2	0.0	0.2	20.1	2
MW11-12	0.0	0.0	20.8	2	0.0	0.0	19.4	2	0.0	0.0	20.8	2	0.0	0.0	20.1	2	0.0	5.4	17.8	2	0.0	5.2	14.9	2	0.0	0.0	18.3	20 seconds(8)	0.0	0.0	17.8	1(8)	0.0	0.0	18.5	2	0.0	0.0	21.2	2
MW13-12	0.0	1.3	6.7	2	0.0	1.3	17.7	2	0.2	0.2	0.8	2	0.4	3.8	13.7	2	0.0	0.0	3.0	2	0.0	0.3	19.0	2	0.0	0.1	19.9	2	0.0	0.1	19.9	2	0.0	2.1	16.5	2	0.0	2.1	16.1	2
MW14-12	**8.3**	7.1	0.2	2	0.5	6.2	4.0	2	**7.6**	6.2	2.4	2	**10.7**	5.3	0.0	2	**1.6**	3.9	0.1	2	0.0	3.2	3.8	2	0.0	2.3	7.9	2	0.0	3.2	6.5	2	**3.8**	8.7	0.7	2	0.0	5.6	9.5	2
MW15-12	0.0	6.0	6.7	2	0.0	0.2	19.9	2	0.0	1.5	19.1	2	0.0	0.7	19.2	2	0.0	1.7	13.3	2	0.4	0.6	15.1	2	0.0	0.5	14.3	2	0.0	1.1	17.4	2	0.0	6.8	3.7	2	0.0	4.9	4.6	2
MW16-12	**2.8**	0.2	20.2	2	0.7	0.2	19.6	2	0.5	0.8	19.8	2	0.2	1.1	18.4	2	0.0	6.2	0.2	2	0.0	3.9	1.4	2	0.0	3.1	0.9	2	0.0	1.6	12.6	2	0.0	7.1	3.9	2	0.0	0.0	20.1	2
TW-1	0.5	0.1	19.3	2	0.4	0.0	20.2	2	0.2	0.3	20.2	2	0.1	0.3	19.4	2	0.0	1.2	19.0	2	0.1	0.3	20.0	2	0.0	0.0	20.5	2	0.0	0.0	20.5	2	0.9	1.1	16.4	2	0.0	0.0	21.2	2
TW-2	**35.3**	3.0	0.0	2	**1.9**	0.1	18.9	2	**36.0**	3.6	0.0	2	**44.2**	3.8	0.0	2	**43.8**	3.1	0.0	2	**40.5**	1.6	0.0	2	**30.9**	0.4	0.0	2	**24.0**	0.4	5.5	2	**58.5**	4.2	0.0	2	0.0	0.0	21.3	2
LNAPL AST	**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**				**nm(1)**			
GV1-15	**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				0.0	0.0	20.2	2	0.0	0.1	20.5	2	0.0	0.2	19.3	2	0.0	1.0	18.7	2	0.0	0.0	21.4	2
GV2-15	**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				0.0	0.1	19.5	2	0.0	0.1	20.7	2	0.0	0.3	19.2	2	0.0	0.7	19.2	2	0.0	0.0	21.4	2
GV3-15	**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				0.0	0.0	20.0	2	0.0	0.0	21.0	2	0.0	0.2	19.5	2	0.0	0.0	20.1	2	0.0	0.0	21.4	2
GV4-15	**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				**nm(9)**				0.0	0.7	18.9	2	0.0	0.3	20.4	2	0.0	0.0	20.2	2	0.0	0.0	20.3	2	0.0	0.0	21.4	2
GV5-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV6-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV7-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV8-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV9-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV10-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			
GV11-17	**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**				**nm**			

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

	12/9/2016				2/27/2017				6/19/2017				9/13/2017				11/16/2017				3/22/2018				5/17/2018				9/17/2018				9/19/2018				11/29/2018			
Location ID	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time
	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)
GP1-12	0.0	5.3	13.3	2	0.0	2.8	17.1	2	0.0	8.0	8.4	1	0.0	12.1	3.9	2	0.0	6.4	9.7	2	0.0	4.0	16.6	1	0.0	5.2	1.6	1	0.0	10.1	5.9	2.0	0.0	14.5	6.3	1.0	0.2	4.2	13.2	1.0
GP2-12	0.0	3.2	18.6	2	0.0	1.8	18.8	2	0.1	4.7	16.2	2	0.0	7.9	13.0	2	0.0	3.2	16.1	2	0.0	2.8	17.9	1	0.0	5.1	5.1	1	0.0	5.0	14.4	1.0	0.0	5.9	15.4	2.0	0.2	3.0	19.4	1.0
GP3-12	0.0	0.4	20.5	0.5	nm(3)				nm(3)				nm(3)				0.0	4.4	15.5	2	nm				nm				0.0	6.5	13.9	1.0	nm(3)				nm(3)			
GP4-12	0.0	0.1	20.8	2	nm(3)				0.0	9.3	13.0	2	0.0	6.4	17.2	2	0.0	2.8	14.9	2	nm				nm				0.0	4.3	16.4	1.0	0.0	5.3	16.9	1.0	nm(3)			
GP5-12	0.0	6.2	4.7	2	0.0	3.3	11.9	2	0.0	7.1	4.5	2	0.0	10.1	0.4	2	0.0	8.1	1.3	2	0.0	5.2	7.0	1	nm				0.0	10.2	0.6	1.0	0.0	14.3	1.0	1.0	0.1	5.8	8.7	1.0
GP6-12	nm(3)				nm(3)				**65.4**	4.7	1.1	2	**60.8**	5.0	0.4	2	**41.7**	4.0	0.4	2	**42.7**	3.4	0.0	2	nm				**33.3**	4.5	0.2	2.0	**49.7**	5.5	0.1	2.0	nm(12)			
GP7-12	0.0	5.8	12.8	2	0.0	5.8	10.3	2	0.1	9.5	7.5	2	0.0	13.9	16.9	2	0.0	11.7	5.5	2	0.0	3.8	12.0	2	nm				0.1	7.8	7.4	1.0	nm(3)				nm(3)			
GP8-12	0.0	0.0	20.9	2	0.0	2.5	14.8	30 seconds	0.0	5.6	14.6	30 seconds	0.0	4.0	8.8	2	0.0	0.6	19.9	2	0.0	4.8	13.0	0.33	0.0	4.8	13.0	0.33	nm(3)				nm(3)				nm(3)			
MPE Exhaust	nm(1)				nm				nm				nm				nm				nm				nm				nm				nm				nm			
EX-1	nm(1)				nm				nm				0.0	1.1	21.7	2	nm				nm				nm				0.1	0.0	20.0	1.0	0.1	0.9	19.2	1.0	nm			
EX-2	nm(1)				nm				nm				1.0	12.0	22.4	2	nm				nm				nm				**1.6**	2.4	14.6	1.0	**9.8**	10.2	3.3	1.0	nm			
EX-3(7)	nm(1)				nm				nm				0.0	0.2	22.4	2	nm				nm				nm				0.7	0.2	19.5	1.0	0.1	0.0	20.7	1.0	nm			
EX-4(7)	nm(1)				nm				nm				0.2	0.2	22.2	2	nm				nm				nm				1.1	0.2	19.3	1.0	0.1	0.0	20.8	1.0	nm			
EX-5	nm(1)				nm				nm				**17.5**	2.9	14.4	2	nm				nm				nm				**22.9**	2.9	12.3	1.0	**63.0**	11.1	2.6	1.0	nm			
EX-6	nm(1)				nm				nm				**12.1**	8.6	0.2	2	nm				nm				nm				**16.1**	2.1	11.1	1.0	**45.5**	6.4	1.9	1.0	nm			
EX-7	nm(1)				nm				nm				**5.4**	7.4	0.2	2	nm				nm				nm				1.1	1.0	16.2	1.0	**13.0**	8.0	0.4	1.0	nm			
EX-8(7)	nm(1)				nm				nm				0.0	0.1	22.5	2	nm				nm				nm				0.6	0.6	18.3	1.0	0.1	0.0	20.7	1.0	nm			
EX-9	nm(1)				nm				nm				**6.2**	10.7	2.0	2	nm				nm				nm				0.9	0.5	18.9	1.0	**14.7**	11.7	5.9	1.0	nm			
EX-10(7)	nm(1)				nm				nm				0.0	0.1	22.8	2	nm				nm				nm				0.6	0.0	20.0	1.0	0.1	0.0	20.7	1.0	nm			
EX-11	nm(1)				nm				nm				0.6	0.2	22.3	2	nm				nm				nm				0.2	0.1	19.8	1.0	0.2	5.9	11.6	1.0	nm			
EX-12	nm(1)				nm				nm				**11.0**	3.5	14.1	2	nm				nm				nm				**27.8**	2.0	11.8	1.0	**80.7**	8.6	1.3	2.0	nm			
EX-13	nm(1)				nm				nm				0.6	8.5	0.0	2	nm				nm				nm				**1.5**	5.4	5.9	1.0	**2.8**	10.0	0.4	1.0	nm			
EX-14	nm(1)				nm				nm				**3.3**	4.9	8.8	2	nm				nm				nm				1.1	0.2	18.8	1.0	**9.3**	4.7	7.5	2.0	nm			
EX-15	nm(1)				nm				nm				**10.3**	8.7	0.0	2	nm				nm				nm				**2.8**	0.3	18.4	1.0	**20.9**	7.8	5.3	2.0	nm			
EX-16(7)	nm(1)				nm				nm				0.5	0.5	21.4	2	nm				nm				nm				**4.0**	0.5	18.5	1.0	0.1	0.0	20.6	1.0	nm			
EX-17	nm(1)				nm				nm				**6.2**	1.2	19.8	2	nm				nm				nm				**6.1**	0.2	18.6	1.0	**24.1**	2.2	14.0	1.0	nm			
EX-18(7)	nm(1)				nm				nm				0.0	0.1	22.4	2	nm				nm				nm				**6.1**	0.1	18.7	1.0	0.1	0.0	20.7	1.0	nm			
EX-19	nm(1)				nm				nm				0.0	9.8	5.9	2	nm				nm				nm				0.2	2.1	16.4	1.0	0.1	9.4	8.1	1.0	nm			
EX-20	nm(1)				nm				nm				**5.6**	5.4	6.0	2	nm				nm				nm				**4.6**	1.0	15.5	1.0	**24.1**	7.6	0.3	1.0	nm			
EX-21(7)	nm(1)				nm				nm				0.1	0.1	22.1	2	nm				nm				nm				**3.4**	0.4	18.5	1.0	0.1	0.0	20.6	1.0	nm			
EX-22	nm(1)				nm				nm				**2.7**	2.5	17.9	2	nm				nm				nm				**3.8**	0.2	19.0	1.0	**16.3**	4.7	11.4	1.0	nm			
EX-23	nm(1)				nm				nm				**5.7**	0.8	20.2	2	nm				nm				nm				0.2	0.0	20.1	1.0	**15.3**	0.3	18.4	1.0	nm			
EX-24(7)	nm(1)				nm				nm				0.5	0.1	22.2	2	nm				nm				nm				0.2	0.0	20.1	1.0	0.1	0.0	20.7	1.0	nm			
EX-25	nm(1)				nm				nm				0.0	1.7	20.6	2	nm				nm				nm				0.2	0.0	19.9	1.0	0.1	1.7	18.4	1.0	nm			
EX-26	nm(1)				nm				nm				**11.5**	10.5	0.2	2	nm				nm				nm				**14.8**	4.1	8.7	1.0	**30.5**	10.7	1.1	1.0	nm			
EX-27	nm(1)				nm				nm				**3.6**	11.4	1.6	2	nm				nm				nm				**17.6**	2.2	14.3	1.0	**41.8**	10.8	4.4	1.0	nm			
EX-28(7)	nm(1)				nm				nm				1.1	0.3	21.6	2	nm				nm				nm				**1.3**	0.1	19.6	1.0	0.1	0.0	20.5	1.0	nm			
EX-29	nm(1)				nm				nm				0.2	6.1	9.2	2	nm				nm				nm				0.9	0.4	19.0	1.0	**16.4**	10.7	3.3	2.0	nm			
EX-30(7)	nm(1)				nm				nm				0.0	0.1	21.5	2	nm				nm				nm				0.2	0.0	20.2	1.0	0.1	0.0	20.7	1.0	nm			
EX-31(7)	nm(1)				nm				nm				0.0	0.1	21.6	2	nm				nm				nm				0.2	0.0	20.1	1.0	0.1	0.0	20.6	1.0	nm			
EX-32(7)	nm(1)				nm				nm				0.0	0.1	21.4	2	nm				nm				nm				0.8	0.1	19.8	1.0	0.1	0.0	20.6	1.0	nm			
EX-33(7)	nm(1)				nm				nm				0.1	0.2	21.0	2	nm				nm				nm				0.7	0.1	20.0	1.0	0.1	0.0	20.5	1.0	nm			
EX-34(7)	nm(1)				nm				nm				0.0	0.1	21.1	1	nm				nm				nm				0.2	0.0	20.2	1.0	0.1	0.0	20.7	1.0	nm			
EX-35 (6)(7)	nm(1)				nm				nm				0.0	0.0	20.1	1	nm				nm				nm				0.2	0.0	20.2	1.0	nm(10)				nm			
EX-36(7)	nm(1)				nm				nm				0.0	0.1	21.1	2	nm				nm				nm				0.2	0.0	20.2	1.0	0.1	0.0	20.7	1.0	nm			
MW1-08	**11.0**	1.2	13.7	2	**16.3**	1.8	3.7	2	**27.4**	4.2	4.1	3	**15.5**	2.5	13.5	2	0.0	0.1	21.8	2	0.0	0.2	22.0	2	0.0	0.1	20.7	2	0.0	0.0	20.2	1	**39.1**	4.2	6.8	4.0	**17.4**	2.0	6.8	2.0
MW2-08	0.0	3.7	13.6	2	0.0	4.9	4.5	2	0.0	5.5	9.9	1	0.0	11.6	5.3	2	0.0	0.4	21.2	2	0.0	0.5	21.5	2	0.0	0.1	20.5	1	0.0	0.5	19.4	1	0.0	15.1	6.2	1.0	0.1	5.6	13.4	1.0
MW3R-08(7)	0.0	0.0	20.8	2	0.0	0.0	20.8	2	0.0	0.0	21.1	2	0.1	0.1	20.8	2	0.0	0.4	21.6	2	0.0	0.1	22.3	1	0.0	0.1	20.7	1	0.8	0.1	19.3	1	0.1	0.0	20.7	1.0	0.1	0.1	22.4	1.0
MW4-08	0.0	0.1	21.1	2	0.0	1.6	19.4	2	0.3	1.2	19.2	2	0.0	3.8	19.4	2	0.0	0.1	21.0	2	0.0	0.1	21.9	1	0.0	0.0	20.3	1	0.1	0.0	20.2	1	0.1	6.0	20.8	2.0	0.2	3.0	16.6	1.0
MW5-08	0.0	0.0	20.9	2	0.0	0.4	20.6	2	0.0	2.8	17.1	2	0.0	2.2	20.3	2	0.0	0.8	20.2	2	0.0	0.7	21.4	1	0.0	0.1	21.1	2	0.0	1.6	18.5	2	0.0	2.8	18.3	2.0	0.2	0.3	19.2	1.0
MW6-10(7)	0.0	0.0	20.3	2	0.0	0.0	20.4	2	0.1	0.0	20.8	1	0.0	0.1	22.7	2	0.0	0.1	20.2	2	nm				0.0	0.1	20.7	1	0.3	0.0	20.0	1	0.2	0.0	20.7	2.0	0.1	0.1	22.6	1.0
MW7-10(7)	0.0	0.0	20.5	2	0.0	0.0	20.9	2	0.1	0.8	20.9	2	0.4	0.1	22.3	2	0.0	0.1	21.8	2	0.0	0.1	22.2	1	0.1	0.1	20.6	1	0.8	0.0	20.0	1	0.2	0.0	20.7	1.0	0.3	0.1	22.6	1.0
MW8-10	0.0	0.0	20.7	2	0.0	0.0	20.8	2	0.0	0.0	20.9	2	0.0	0.3	21.5	2	0.0	0.1	21.9	2	0.0	0.1	22.2	1	0.0	0.1	20.6	1	0.2	0.0	20.2	1	0.5	0.2	19.8	1.0	0.1	0.1	22.8	1.0
MW9-10	0.0	0.0	20.8	2	0.0	0.0	20.8	2	0.0	0.0	21.0	2	0.0	0.9	19.3	2	0.0	0.1	21.9	2	0.0	0.1	22.3	1	0.0	0.1	20.6	1	0.3	0.0	20.1	1	0.2	0.9	17.8	1.0	**2.0**	1.5	18.1	1.0
MW10-10	0.0	0.0	20.7	2	0.0	0.0	20.9	2	0.0	0.0	21.0	2	**63.1**	11.0	0.1	2	0.0	0.1	21.7	2	0.0	0.1	22.3	1	0.1	0.2	20.6	1	**5.6**	0.9	17.8	1	0.1	0.8	20.0	1.0	0.1	0.2	22.0	1.0
MW11-12	0.0	0.0	20.7	2	0.0	0.0	20.7	2	0.0	0.0	19.1	1	0.0	0.3	19.5	2	0.0	0.1	21.9	2	0.0	0.1	22.5	1	0.0	0.0	20.7	1	0.1	0.0	19.9	1	0.1	0.0	19.6	1.0	nm(3)			
MW13-12	0.0	0.6	17.2	2	0.0	0.5	2.8	2	0.0	0.5	19.6	2	0.0	5.5	12.5	2	0.0	0.1	21.4	2	0.0	0.1	22.5	1	0.0	0.0	20.6	1	**2.9**	4.7	0.5	1	**4.1**	5.9	0.1	2.0	0.2	0.1	21.6	1.5
MW14-12	0.1	0.3	19.6	2	0.0	1.2	12.2	2	0.6	3.9	3.4	2	**7.2**	7.8	0.4	2	0.0	0.1	21.7	2	0.0	0.1	22.3	1	0.0	0.1	20.3	1	**9.0**	4.6	3.2	1	**11.2**	4.9	5.7	2.0	nm(11)			
MW15-12	0.1	1.5	14.9	2	0.0	0.5	11.4	2	0.1	4.0	12.3	2	0.0	9.7	7.7	2	0.0	0.1	21.9	2	0.0	0.1	22.1	1	0.0	0.0	20.4	1	0.0	0.4	19.6	1	0.1	0.9	19.0	3.0	0.2	0.9	16.8	1.0
MW16-12	0.0	0.0	19.9	2	0.0	0.5	19.2	2	0.1	0.9	19.0	2	0.0	0.7	20.3	2	0.0	0.1	21.9	2	0.0	0.1	22.2	1	0.0	0.0	20.2	1	0.0	0.0	20.1	1	0.1	18.6	0.6	1.0	0.2	0.3	21.6	1.0
TW-1	0.0	0.0	20.7	2	0.0	0.0	20.5	2	0.0	0.0	20.9	1	0.1	0.3	22.1	2	0.0	0.1	21.8	2	0.0	0.1	22.2	1	0.0	0.1	20.6	1	0.3	0.0	20.0	1	0.1	0.1	20.4	2.0	0.2	0.1	22.5	1.0
TW-2	0.0	0.0	20.5	2	0.0	0.0	20.8	2	0.0	0.0	20.9	2	**4.6**	4.1	10.6	2	0.0	0.1	21.9	2	0.0	0.1	22.2	1	--	--	--	--	**24.2**	2.0	12.9	1.0	**49.7**	6.0	6.0	1.0	0.2	0.1	22.7	1.0
LNAPL AST	nm(1)				nm(1)				nm(1)				nm(1)				nm(1)				nm(1)				nm(1)				nm(1)				nm(1)				nm(1)			
GV1-15	0.0	0.0	20.9	2	0.0	0.0	20.7	2	0.0	0.4	20.2	2	0.0	0.1	22.4	1	0.0	0.0	22.2	2	0.0	0.2	21.8	2	0.0	0.1	21.1	1	0.0	0.0	20.3	1	0.0	0.0	20.5	1.0	0.2	0.1	21.9	1.0
GV2-15	0.0	0.0	20.9	2	0.0	0.0	20.7	2	0.0	0.3	20.2	2	0.0	0.5	21.8	2	0.0	0.2	22.0	2	0.0	0.2	21.7	1	0.0	0.1	21.0	1	0.0	0.6	19.0	1	0.0	0.4	20.1	1.0	0.2	0.1	21.8	1.0
GV3-15	0.0	0.0	20.9	2	0.0	0.0	20.6	2	0.0	0.1	20.8	2	0.0	0.1	22.6	2	0.0	0.0	22.2	2	0.0	0.2	21.9	1	0.0	0.1	21.0	1	0.0	0.0	20.2	1	0.0	0.0	20.5	1.0	0.2	0.1	22.1	1.0
GV4-15	0.0	0.0	20.9	2	0.0	0.0	21.1	2	0.0	0.0	21.0	2	0.0	1.4	20.6	2	0.0	0.1	20.8	2	0.0	0.3	21.9	1	0.0	0.1	20.9	1	0.0	0.0	20.3	2	0.0	0.0	20.5	2.0	0.2	0.2	21.7	1.0
GV5-17	nm				nm				nm				0.0	0.1	22.4	2	0.0	0.1	21.5	2	0.0	0.2	23.0	1	0.0	0.1	20.6	1	0.0	0.1	20.0	1	0.0	0.4	20.3	1.0	0.2	0.1	21.8	1.0
GV6-17	nm				nm				nm				0.0	0.2	22.7	2	0.0	0.1	21.6	2	0.0	0.1	22.1	1	0.0	0.1	20.7	1	0.0	0.1	19.1	1	0.0	0.5	20.1	1.0	0.2	0.1	21.8	1.0
GV7-17	nm				nm				nm				0.0	0.1	22.7	2	0.0	0.1	21.8	2	0.0	0.1	22.1	1	0.0	0.1	20.8	1	0.0	0.0	20.0	1	0.0	0.6	19.9	1.0	0.1	0.1	21.8	1.0
GV8-17	nm				nm				nm				0.0	0.3	22.4	2	0.0	0.1	21.8	2	0.0	0.1	22.1	1	0.0	0.1	20.7	1	0.0	0.0	19.8	1	0.1	0.4	20.1	1.0	0.1	0.1	21.8	1.0
GV9-17	nm				nm				nm				0.0	0.2	22.7	2	0.0	0.1	21.9	2	0.0	0.2	21.2	1	0.0	0.1	20.7	1	0.0	0.0	19.6	1	0.0	0.0	20.6	1.0	0.1	0.1	21.8	1.0
GV10-17	nm				nm				nm				0.0	0.4	22.4	2	0.0	0.1	21.9	2	0.0	0.2	22.2	1	0.0	0.1	20.7	1	0.0	0.0	19.7	2	0.0	0.0	20.7	1.0	0.1	0.1	21.8	1.0
GV11-17	nm				nm				nm				0.0	0.5	21.8	2	0.0	0.1	21.9	2	0.0	0.2	21.2	1	0.0	0.1	20.7	1	0.0	0.0	19.7	1	0.0	0.1	20.9	1.0	0.1	0.1	21.6	1.0

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

	3/21/2019				6/5/2019				9/6/2019				9/9/2019				9/26/2019				11/26/2019				6/4/2020				9/21/2020				9/23/2020			
Location ID	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time	CH_4	CO_2	O_2	Purge Time
	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)	(%vol)	(%vol)	(%vol)	(min)
GP1-12	0.0	2.1	14.7	1.0	0.0	4.7	5.2	1.0	0.1	9.5	4.7	1.5	0.0	10.3	4.0	1.0	nm				0.0	5.2	10.2	1.0	0.0	4.5	4.5	1.0	0.0	8.3	3.5	1.0	0.0	8.3	2.4	1.0
GP2-12	0.0	1.4	17.7	1.0	0.0	5.6	11.4	1.0	0.1	4.6	16.1	1.0	0.0	4.7	17.3	1.0	nm				0.0	2.4	17.0	1.0	0.0	4.2	7.0	1.0	0.0	6.6	12.9	1.0	0.0	7.0	8.4	1.0
GP3-12	nm(3)				nm(3)				0.1	7.0	14.0	1.0	0.0	7.1	14.6	1.0	0.0	7.5	12.7	1.5	0.0	0.0	20.7	1.0	0.0	5.4	12.6	1.0	0.0	2.5	17.1	0.3	nm(3)			
GP4-12	nm(3)				nm(3)				0.1	4.8	16.8	1.0	0.0	5.0	17.1	1.0	0.0	7.0	13.8	2.0	0.0	0.0	20.7	1.0	nm(3)				nm(3)				nm(3)			
GP5-12	0.0	4.7	4.3	1.0	0.0	5.8	5.5	1.0	0.0	10.2	0.6	1.0	0.0	10.6	1.6	1.0	nm				0.0	6.6	0.8	1.0	0.0	5.8	3.5	1.0	0.0	7.9	4.1	1.0	0.0	8.1	2.3	1.0
GP6-12	nm(3)				nm(13)				**58.7**	4.1	0.0	1.0	**54.5**	4.4	0.0	1.5	nm				**64.8**	2.8	0.9	1.5	**76.1**	2.6	0.2	1.5	**84.2**	3.5	0.1	1.0	**84.5**	3.5	0.0	1.0
GP7-12	nm(3)				nm(3)				**1.4**	2.0	14.2	1.0	0.0	9.2	11.6	1.0	nm				0.0	6.1	12.5	1.0	0.0	7.6	2.6	1.0	0.0	9.6	0.8	1.0	0.0	10.1	1.9	1.0
GP8-12	nm(3)				nm(3)				nm(14)				nm(14)				nm				0.1	0.0	20.1	1.0	0.0	5.7	9.7	0.5	0.0	7.6	11.0	0.5	0.0	6.6	13.6	0.5
MPE Exhaust	nm				nm				nm				nm				nm				nm				nm				nm				nm			
EX-1	nm				nm				0.0	0.1	21.0	1.0	0.0	1.5	18.9	1.0	nm				nm				nm				0.0	0.0	20.8	1.0	0.0	0.0	21.0	1.0
EX-2	nm				nm				0.3	0.5	19.8	1.0	**2.3**	6.0	8.3	1.0	nm				nm				nm				0.0	0.1	20.7	1.0	0.0	3.7	16.8	1.0
EX-3(7)	nm				nm				0.3	0.2	20.7	1.0	0.0	0.1	21.3	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	0.0	0.0	21.2	1.0
EX-4(7)	nm				nm				0.4	0.1	20.6	1.0	0.0	0.1	21.3	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	0.0	0.0	21.2	1.0
EX-5	nm				nm				**9.5**	1.0	17.8	1.0	**13.3**	6.0	8.0	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	**1.6**	0.1	20.6	1.0
EX-6	nm				nm				0.0	0.1	20.6	2.0	0.1	0.2	21.2	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	0.0	0.0	21.1	1.0
EX-7	nm				nm				**1.4**	2.0	14.2	1.0	**3.4**	7.4	0.5	1.0	nm				nm				nm				0.0	0.1	21.0	1.0	0.0	2.5	17.3	1.0
EX-8(7)	nm				nm				0.9	0.5	18.9	1.0	0.0	0.1	21.3	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	0.0	0.0	21.0	1.0
EX-9	nm				nm				0.4	0.6	18.9	1.0	**12.3**	11.4	0.5	1.0	nm				nm				nm				0.0	0.0	21.3	1.0	**1.8**	0.2	20.3	1.0
EX-10(7)	nm				nm				**2.2**	0.4	19.1	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.0	21.3	1.0	0.0	0.0	21.1	1.0
EX-11	nm				nm				0.0	0.1	20.1	1.0	0.4	0.2	21.3	1.0	nm				nm				nm				0.0	0.0	20.9	1.0	0.0	0.0	21.0	1.0
EX-12	nm				nm				0.1	0.1	20.2	2.0	**13.5**	1.6	16.1	1.0	0.5	0.1	21.2	2.0	nm				nm				0.0	0.0	21.0	1.0	**2.9**	0.1	20.3	1.0
EX-13	nm				nm				0.9	3.3	10.0	1.0	**1.4**	6.9	0.0	1.0	nm				nm				nm				0.0	0.1	21.0	1.0	0.0	2.3	16.8	1.0
EX-14	nm				nm				**1.6**	0.7	18.6	1.0	**8.2**	8.3	0.6	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	**1.7**	1.2	18.1	1.0
EX-15	nm				nm				**4.1**	0.9	18.1	1.0	**16.4**	6.4	4.7	1.0	nm				nm				nm				0.0	0.0	21.0	1.0	**45.6**	3.7	3.3	1.0
EX-16(7)	nm				nm				**3.7**	0.7	19.0	1.0	0.0	0.1	21.2	1.0	nm				nm				nm				0.0	0.0	21.2	1.0	0.0	0.0	21.1	1.0
EX-17	nm				nm				0.2	0.1	20.5	1.0	**6.7**	0.7	19.3	1.0	nm				nm				nm				0.0	0.0	21.1	1.0	0.4	0.1	20.8	1.0
EX-18(7)	nm				nm				**3.4**	0.4	19.3	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.0	20.7	1.0	0.0	0.0	21.0	1.0
EX-19	nm				nm				0.1	0.9	19.0	1.0	0.0	8.1	7.3	1.0	nm				nm				nm				0.0	0.1	21.1	1.0	0.0	0.8	20.0	1.0
EX-20	nm				nm				**4.5**	1.1	17.1	1.0	**11.3**	8.2	0.5	1.0	nm				nm				nm				0.0	0.0	20.6	1.0	0.0	1.2	19.3	1.0
EX-21(7)	nm				nm				1.0	0.5	19.8	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.0	20.7	1.0	0.0	0.0	20.8	1.0
EX-22	nm				nm				0.1	0.1	20.5	1.0	1.2	4.1	14.1	1.5	nm				nm				nm				0.0	0.0	20.7	1.0	0.0	1.0	19.1	1.0
EX-23	nm				nm				0.1	0.0	20.6	1.0	**10.8**	1.0	17.9	1.0	nm				nm				nm				0.0	0.0	20.8	1.0	**3.6**	0.2	19.7	1.0
EX-24(7)	nm				nm				0.1	0.0	20.8	1.0	0.0	0.0	21.4	1.0	nm				nm				nm				0.0	0.0	20.9	1.0	0.0	0.0	20.8	1.0
EX-25	nm				nm				0.1	0.1	20.9	1.0	0.1	1.9	18.5	1.0	nm				nm				nm				0.0	0.1	20.7	1.0	0.0	0.4	20.3	1.0
EX-26	nm				nm				**11.2**	3.2	12.9	1.5	**24.6**	10.1	0.0	1.0	nm				nm				nm				0.0	0.6	19.7	1.0	0.0	12.7	1.2	1.0
EX-27	nm				nm				**9.2**	1.4	17.4	1.0	**25.1**	10.6	0.1	1.0	nm				nm				nm				0.0	0.1	20.7	1.0	**5.6**	2.8	15.5	1.0
EX-28(7)	nm				nm				0.9	0.1	21.0	1.0	0.0	0.1	21.3	1.0	nm				nm				nm				0.0	0.0	20.9	1.0	0.0	0.0	21.1	1.0
EX-29	nm				nm				0.1	0.4	20.2	1.0	**6.4**	7.5	0.5	1.5	nm				nm				nm				0.0	0.0	20.9	1.0	0.0	0.0	21.1	1.0
EX-30(7)	nm				nm				0.1	0.2	21.2	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.1	20.8	1.0	0.0	0.1	21.1	1.0
EX-31(7)	nm				nm				0.1	0.1	21.3	1.0	0.0	0.2	21.3	1.0	nm				nm				nm				0.0	0.0	20.8	1.0	0.0	0.0	21.3	1.0
EX-32(7)	nm				nm				0.1	0.1	21.4	1.0	0.0	0.1	21.3	1.0	nm				nm				nm				0.0	0.0	20.8	1.0	0.0	0.0	21.3	1.0
EX-33(7)	nm				nm				0.1	0.2	21.2	1.0	0.0	0.1	21.2	1.0	nm				nm				nm				0.0	0.0	20.8	1.0	0.0	0.0	21.3	1.0
EX-34(7)	nm				nm				0.1	0.1	21.3	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.0	20.7	1.0	0.0	0.0	21.2	1.0
EX-35 (6)(7)	nm				nm				0.1	0.1	21.4	1.0	0.5	0.1	21.2	1.0	nm				nm				nm				0.0	0.0	20.9	1.0	0.0	0.1	21.0	1.0
EX-36(7)	nm				nm				0.1	0.1	21.4	1.0	0.0	0.1	21.4	1.0	nm				nm				nm				0.0	0.0	20.7	1.0	0.0	0.0	21.1	1.0
MW1-08	**19.5**	2.3	0.4	3.0	**18.5**	3.3	3.3	1.5	**43.7**	4.9	0.2	1	**41.8**	5.2	0.2	1.0	nm				0.0	0.0	20.6	1.0	**32.6**	3.1	0.2	1.5	**45.2**	4.3	0.1	1.0	**46.1**	4.2	0.1	1.0
MW2-08	0.0	5.4	3.2	1.0	0.0	5.1	12.0	1.0	0.1	9.6	5.7	1	**10.1**	6.1	0.0	1.5	0.0	11.6	2.5	2.0	0.0	0.3	20.2	1.0	0.0	4.8	0.7	1.0	0.0	4.6	16.4	2.0	0.0	5.9	11.7	2.0
MW3R-08(7)	0.0	0.0	21.7	1.0	0.0	0.1	20.5	1.0	0.0	0.1	21.4	1	0.1	0.1	21.4	1.0	nm				0.0	0.0	20.8	1.0	0.0	0.0	20.4	1.0	0.0	0.0	20.8	1.0	0.0	0.0	21.1	1.0
MW4-08	0.0	2.2	18.7	1.0	0.0	0.7	20.1	1.0	0.1	3.4	16.9	1	0.0	3.4	15.9	1.0	nm				0.0	0.0	20.7	1.0	0.0	1.0	18.8	1.0	0.0	1.0	19.9	1.0	0.7	1.0	17.8	1.0
MW5-08	0.0	0.0	21.1	1.0	0.0	0.2	20.7	1.0	0.1	5.0	15.6	1	0.0	3.4	18.4	1.0	nm				0.0	2.6	17.8	1.0	0.0	2.3	17.8	1.0	0.0	2.6	18.2	1.0	0.0	3.5	17.4	1.0
MW6-10(7)	nm(10)				0.0	0.2	20.6	1.0	0.1	0.1	20.0	1	0.0	0.1	21.4	1.0	nm				0.0	0.0	20.5	1.0	0.0	0.0	19.8	1.0	0.0	0.0	20.8	1.0	0.0	0.0	21.0	1.0
MW7-10(7)	0.0	0.0	21.7	1.0	0.0	0.1	20.6	1.0	0.0	0.1	20.7	1	0.1	0.1	21.4	1.0	nm				0.0	0.0	20.4	1.0	0.0	0.0	20.2	1.0	0.0	0.0	21.1	1.0	0.0	0.0	21.0	1.0
MW8-10	0.0	0.0	21.6	1.0	0.0	0.1	20.6	1.0	0.0	0.1	20.9	1	0.2	0.3	21.0	1.0	nm				0.0	0.0	20.5	1.0	0.0	0.0	20.0	1.0	0.0	0.0	21.0	1.0	0.0	0.0	20.9	1.0
MW9-10	0.7	1.0	18.9	1.0	0.0	0.1	20.6	1.0	0.1	0.1	21.4	1	0.0	0.7	19.7	1.0	nm				0.0	0.1	20.8	1.0	0.0	0.0	20.3	1.0	0.0	0.0	20.8	1.0	0.0	0.1	21.0	1.0
MW10-10	0.0	0.1	20.2	1.0	0.0	0.5	19.8	1.0	0.0	0.0	21.4	1	0.2	1.0	20.4	1.0	nm				0.0	0.2	19.5	1.0	0.0	0.2	19.9	1.0	0.0	0.6	19.3	1.0	0.0	2.5	7.9	1.0
MW11-12	0.0				nm(13)				0.1	0.0	20.6	1	0.0	0.1	19.7	1.0	nm				nm(3)				0.0	0.2	19.2	1.0	0.0	0.1	20.7	1.0	0.0	0.3	20.3	1.0
MW13-12	0.1	0.6	0.0	1.0	0.0	2.1	5.1	1.5	0.1	5.4	2.6	1	0.0	5.6	3.9	1.0	nm				nm(3)				**1.8**	2.9	0.1	1.0	1.0	1.1	17.4	1.0	**7.8**	6.2	0.0	1.0
MW14-12	0.0				0.0	0.8	6.9	1.0	**7.5**	3.8	1.3	1.5	0.0	3.6	8.8	1.0	nm				0.0	0.0	20.3	1.0	0.0	1.4	13.3	1.0	0.0	0.1	20.9	1.0	**16.8**	4.8	0.2	1.0
MW15-12	0.0	1.1	15.7	1.0	0.0	2.3	14.5	1.0	0.3	6.7	10.5	1	0.0	3.6	15.5	1.5	nm				0.0	0.1	19.2	1.0	1.0	1.7	10.8	1.0	0.0	0.2	21.8	1.0	0.0	1.6	16.9	1.0
MW16-12	0.0	0.0	21.6	1.0	0.0	0.1	20.7	1.0	0.1	0.0	20.7	1	0.0	0.1	20.9	1.0	nm				0.0	0.3	20.4	1.0	0.0	0.1	20.3	1.0	0.0	0.1	20.7	1.0	0.0	0.1	20.9	1.0
TW-1	nm(10)				0.0	0.1	20.7	1.0	0.0	0.1	20.0	1	0.2	0.2	21.1	1.0	nm				0.0	0.0	20.4	1.0	0.0	0.0	20.1	1.0	0.0	0.0	20.9	1.0	0.0	0.0	21.1	1.0
TW-2	0.0	0.0	21.6	1.0	0.0	0.1	20.6	1.0	**8.8**	1.1	17.8	1	**20.4**	5.4	8.6	1.0	nm				0.0	0.1	20.5	1.0	0.0	0.0	20.2	1.0	0.0	0.0	20.9	1.0	0.0	0.1	21.2	1.0
LNAPL AST	nm(1)				nm(1)				nm(1)				nm(1)				nm				nm(1)				nm(1)				nm(1)				nm(1)			
GV1-15	0.0	0.0	21.3	1.0	0.0	0.4	19.6	1.0	0.1	1.5	17.6	1	0.0	0.2	20.9	1.0	nm				0.0	0.0	20.3	1.0	0.0	0.9	17.8	1.0	0.0	0.1	20.5	1.0	0.0	0.1	20.8	1.0
GV2-15	0.0	0.0	21.6	1.0	0.0	0.5	19.7	1.0	0.1	1.1	18.7	1	0.0	0.1	21.4	1.0	nm				0.0	0.1	20.4	1.0	0.0	1.1	17.1	1.0	0.0	0.5	20.1	1.0	0.0	0.8	18.9	1.0
GV3-15	0.0	0.0	21.2	1.0	0.0	1.6	16.6	1.0	0.0	0.0	20.8	1	0.0	0.7	21.1	1.0	nm				0.0	0.0	20.5	1.0	0.0	0.5	18.2	1.0	0.0	0.3	20.3	1.0	0.0	0.2	20.0	1.0
GV4-15	0.0	0.2	21.3	1.0	0.0	0.2	20.5	1.0	0.1	0.0	20.7	1	0.0	0.6	20.6	1.0	nm				0.0	0.0	20.6	1.0	0.0	1.1	17.1	1.0	0.0	0.9	19.2	1.0	0.0	0.4	18.5	1.0
GV5-17	0.0	0.1	21.2	1.0	0.0	0.2	20.5	1.0	0.2	0.6	20.4	1	0.0	0.1	21.5	1.0	nm				0.0	0.1	20.8	1.0	0.0	0.5	19.3	1.0	0.0	0.4	20.2	1.0	0.0	0.6	20.3	1.0
GV6-17	0.0	0.0	21.7	1.0	0.0	0.1	20.5	1.0	0.0	0.0	21.4	1	0.0	0.2	21.3	1.0	nm				0.0	0.0	20.8	1.0	0.0	0.0	20.2	1.0	0.0	0.1	20.6	1.0	0.0	0.1	20.8	1.0
GV7-17	0.0	0.0	21.8	1.0	0.0	0.1	20.5	1.0	0.0	0.1	21.2	1	0.0	0.1	21.4	1.0	nm				0.0	0.0	20.8	1.0	0.0	0.0	20.1	1.0	0.0	0.2	20.4	1.0	0.0	0.0	21.0	1.0
GV8-17	0.0	0.0	21.8	1.0	0.0	0.2	20.4	1.0	0.0	0.5	20.7	1	0.0	0.2	21.1	1.0	nm				0.0	0.0	20.7	1.0	0.0	0.0	20.2	1.0	0.0	0.1	20.6	1.0	0.0	0.2	20.8	1.0
GV9-17	0.0	0.0	21.9	1.0	0.0	0.2	20.3	1.0	0.1	0.1	21.2	1	0.0	0.2	21.1	1.0	nm				0.0	0.0	20.8	1.0	0.0	0.0	20.2	1.0	0.0	0.1	20.6	1.0	0.0	0.1	20.9	1.0
GV10-17	0.0	0.0	21.8	1.0	0.0	0.2	20.3	1.0	0.0	0.2	20.9	1	0.0	0.2	21.2	1.0	nm				0.0	0.0	20.8	1.0	0.0	0.0	19.9	1.0	0.0	0.1	20.5	1.0	0.0	0.1	20.9	1.0
GV11-17	0.0	0.1	21.1	1.0	0.0	0.2	20.3	1.0	0.1	0.2	20.9	1	0.0	0.2	21.1	1.0	nm				0.0	0.1	20.7	1.0	0.0	0.0	19.9	1.0	0.0	0.1	20.5	1.0	0.0	0.1	20.7	1.0

Table 3.6

Methane Field Data
Standard of Care Plan
Former Dearborn Refining Site
Dearborn, Michigan

Notes:

(1) Cleaned, demobilized from Site in April 2015.
(2) To be monitored during third quarter monitoring event consistent with the Operation, Maintenance, and Monitoring (OMM) Plan.
(3) Could not be measured due to water present.
(4) Not included in the OMM Plan. Additional results were presented on Quarterly Progress Report figures.
(5) Not included in the OMM Plan. Initially monitored on June 10, 2015.
(6) Valve was closed on June 10, 2015.
(7) Wind turbines installed on 8/27/15.
(8) Pump stopped due to flow restriction/water present.
(9) Gas Vents associated with the Passive Ventilation Trench installed on 12/4/15.
(10) Broken fitting
(11) Unable to access due to obstructing object
(12) Under water
(13) Unable to access due to debris
(14) Line Obstructed.
(15) The January, February, and March 2020 quarterly operation, maintenance, and monitoring (OMM) activities scheduled for March 26, 2020 were postponed following receipt of the March 23, 2020 Office of the Governor's Executive Order 2020-21 (Covid-19) for Michigan and approval of the United States Environmental Protection Agency. Quarterly Progress Report #28 identified that the January, February, and March 2020 quarterly monitoring event and the April, May, and June 2020 quarterly monitoring event will be combined so that one monitoring event is completed in the second quarterly of 2020.

MPE system running in advance of and/or during methane monitoring on 4/26/13, 4/29/13 and 8/30/13
Extraction wells were converted to passive gas vents during the week of 9/8 to 9/12, 2014
nm - not measured on this date
CH_4 - Methane
CO_2 - Carbon dioxide
O_2 - Oxygen
%vol - percent volume
min - minute

Appendices

Appendix A
Declaration of Protective Covenant and Grant of Environmental Protection Easement

'17 JUL-19 PM 2:25

Bernard J. Youngblood
Wayne County Register of Deeds
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07/19/2017 02:25 PM RST Total Pages: 13

AMENDED AND RESTATED DECLARATION OF RESTRICTIVE COVENANT AND GRANT OF ENVIRONMENTAL PROTECTION EASEMENT

This transfer is exempt from County and State transfer taxes pursuant to MCL 207.505(a) and MCL 207.526(a), respectively.

Dearborn Refining Company Site, Wayne County, Michigan
U.S. EPA Site No. MID005510805

MDEQ Reference No. MID005510805

This Amended and Restated Declaration of Restrictive Covenant and Grant of Environmental Protection Easement ("Amended Restrictive Covenant and Easement") is made on 3/18/16 by the City of Dearborn, the Grantor, whose address is 16901 Michigan Ave., Dearborn, Michigan 48126 for the benefit of the Grantee, the Michigan Department of Environmental Quality ("MDEQ"), whose address is P.O. Box 30473, Lansing, Michigan 48909-7926.

RECITALS

i. The Grantor is the title holder of the real property located in Wayne County, Michigan and legally described in Exhibit 1 attached hereto ("Property").

ii. On February 5, 2013, Grantor executed a Declaration of Restrictive Covenant and Grant of Environmental Protection Easement, which has been recorded with the Wayne County Register of Deeds in Liber 50493, Page 1025 ("Original Restrictive Covenant and Easement"). At the time the Original Restrictive Covenant and Easement was executed, Grantor was the title holder to a portion, but not all, of the Property. On August 22, 2014, Grantor was granted title via Quit Claim Deed from the Charter County of Wayne to the southern portion of the Property as described in the Quit Claim Deed recorded with the Wayne County Register of Deed at Liber 51701, Page 54, such that it is now the title holder of the entire Property.

iii. Grant hereby amends and restates the Original Restrictive Covenant and Easement in its entirety to make clear that the covenants and easements set forth therein, and restated here, apply to the entire Property.

iv. The purpose of this Amended Restrictive Covenant and Easement is to create

restrictions that run with the land in the Grantor's real property rights; to protect the public health, safety, and welfare, and the environment; to prohibit or restrict activities that could result in unacceptable exposure to environmental contamination present at the Property; and to grant access to the Grantee, the United States Environmental Protection Agency ("U.S. EPA") as a Third Party Beneficiary and the agency's representative to monitor and conduct Response Activities, and to grant limited access to all parties designated as "NPOS Respondents" as required in the Administrative Settlement Agreement and Order on Consent dated August 27, 2007 ("AOC"), which are also declared to be third party beneficiaries hereunder ("Third Party Beneficiaries") to monitor and conduct Response Activities.

v. The Response Activities summarized below are more fully described in the AOC and are being implemented by a Removal Work Plan dated November 2010, and a Removal Action Work Plan Addendum 4 Results dated March 1, 2011 (collectively "Work Plans").

vi. The Property is associated with the Dearborn Refining Company Superfund Site (the "Site"), U.S. EPA Site No. MID005510805. Hazardous substances, including volatile organic compounds ("VOCs") and metals, have been released, disposed of, and/or have come to be located on the Property. The Site is a facility as that term is defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 *et seq.* ("CERCLA"); and Section 20101(1)(s) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.20101 *et seq.* ("NREPA").

vii. At the time of recording this Amended Restrictive Covenant and Easement, groundwater and/or soil contain hazardous substances present at the Property at levels that exceed applicable requirements ("Impacts"). The U.S. EPA has determined that the Impacts present a potential threat to human health through direct contact, inhalation, and ingestion, and that the land use and resource use restrictions set forth below are required to prevent unacceptable exposures.

viii. The restrictions contained in this Amended Restrictive Covenant and Easement are based upon information available to the U.S. EPA at the time the Work Plans were approved. Failure of the Response Activities to achieve and maintain the criteria, exposure controls, and requirements specified in the AOC or Work Plans; future changes in the environmental condition of the Property or changes in the applicable cleanup criteria; the discovery of environmental conditions at the Property that were not accounted for in the AOC or Work Plans, regardless of the date of the release of hazardous substances contributing to those environmental conditions; or the use of the Property in a manner inconsistent with the restrictions described herein, may result in this Amended Restrictive Covenant and Easement not being protective of public health, safety, and welfare, and the environment. Information pertaining to the environmental conditions at the Property and Response Activities undertaken at the Site is on file with the U.S. EPA.

ix. The MDEQ 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 applicable requirements of Section 20107a of the NREPA.

SUMMARY OF RESPONSE ACTIVITIES

Prior to the recording of this Amended Restrictive Covenant and Easement, the following response activities have been undertaken in accordance with the AOC and Work Plans, but Impacts remain present at levels that require controls to limit the direct contact of certain soils and perched groundwater on the Property and prevent unacceptable exposure to any associated vapors:

1. A one-foot thick exposure barrier, consisting of 6 inches of gravel, 6 inches of clean fill, flexible membrane liner and clean grading fill layer ("Cap"), the construction of which requires the decommissioning and demolition of structures on the Property.

2. A "prescribed" excavation of soils with polychlorinated biphenyl concentrations greater than 100 milligram per kilogram (mg/kg).

3. Multi-Phase Extraction System for light non-aqueous phase liquid removal within the central and southwestern portions of the Property and monitoring of groundwater conditions.

DEFINITIONS

"AOC" shall mean the Administrative Settlement Agreement and Order on Consent dated August 27, 2007;

"Grantee" shall mean the MDEQ, and its respective successor entities, and those persons or entities acting on its behalf;

"Grantor" shall mean the title holder of the Property at the time this Amended Restrictive Covenant and Easement is executed and any future title holder of the Property or some relevant sub-portion of the Property;

"MDEQ" shall mean the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf;

"Media" shall mean soil, water, air, biota (plants and animals), or any other parts of the environment that can contain contaminants;

"NREPA" shall mean the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.101 *et seq.*;

"NPOS Respondents" shall mean parties who are identified in the AOC and are not the present owners of the Property;

"Part 201" shall mean Part 201, Environmental Remediation, of the NREPA, MCL 324.20101 *et seq.*;

"Property" shall mean the real property legally described in Exhibit 1 and depicted in the survey in Exhibit 2;

"Response Activities" shall mean, consistent with Section 101(25) of CERCLA, 42 U.S.C. Section 9601(25), such actions as have been or may be necessary to conduct any

removal, remedy or remedial action, as those terms are defined in Sections 101(23) and 101(24) of CERCLA, 42 U.S.C. Sections 9601(23) and 9601(24), on the Property and/or at the Site, including enforcement activities related thereto;

"Site" shall mean the Dearborn Refining Company Superfund Site, encompassing approximately 6.5 acres, located at 3901 Wyoming in Dearborn, Michigan;

"Third Party Beneficiaries" shall mean the NPOS Respondents and the U.S. EPA;

"U.S. EPA" shall mean the United States Environmental Protection Agency, its successor entities, and those persons or entities acting on its behalf; and

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA; Part 201; or the Part 201 Administrative Rules ("Part 201 Rules"), 2002 Michigan Register 24, 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 Rules, as of the date of execution of this Amended Restrictive Covenant and Easement.

NOW THEREFORE,

For valuable consideration of less than $100.00, the receipt of which is hereby acknowledged, the Grantor, on behalf of itself, its successors and assigns hereby covenants and declares that the Property shall be subject to the restrictions set forth below, for the benefit of the Grantee, and grants and conveys to the Grantee, and its respective assigns and representatives, the right to enforce said restrictions. The Grantor further, on behalf of itself, its successors and assigns does grant and convey to the Grantee and their respective representatives an environmental protection easement of the nature, character, and purposes set forth below with respect to the Property, and the right to enforce said easement.

1. **Restrictions on Land Use:** The Grantor or its successor in interest shall:

Prohibit all residential and commercial uses on the Property, and limit any use of the property to only as a permitted or special use in an industrial classification in accordance with the Dearborn Zoning Ordinance.

2. **Restrictions on Activity:** The Grantor or its successors in interest shall:

(a) Prohibit activities that cause existing contamination to migrate beyond the boundaries of the Property, or otherwise exacerbate the existing contamination located on the Property. The term "exacerbation" is more specifically defined in Section 20101(1)(r) of the NREPA, MCL 324.20101(1)(r).

(b) Prohibit and prevent use of the Property in a manner that may interfere with Response Activities at the Property, including interim response, remedial action, operation and maintenance, monitoring, or other measures necessary to assure the effectiveness and integrity of the remedial action.

(c) Prohibit the construction of and use of wells or other devices on the Property to extract groundwater for consumption, irrigation, or any other use, except for wells and devices that are necessary for Response Activities or testing and monitoring groundwater contamination

levels in accordance with plans approved by the MDEQ or the U.S. EPA. 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 including, but not limited to, Part 201 of the NREPA.

(d) Prohibit all construction of new structures or any modification of existing structures, unless such construction is approved in advance by U.S. EPA and incorporates engineering controls designed to eliminate the potential for subsurface vapor phase hazardous substances at concentrations greater than the MDEQ acceptable soils gas screening concentrations that correspond with the generic assumptions used to develop the Part 201 groundwater and soil volatilization to indoor air inhalation criteria specified in R 299.14 and R 299.24, respectively, of the Michigan Administrative Code, to migrate into the new or modified structures. Prior to occupancy of any new or modified structures, the Grantor or its successors in interest must demonstrate to U.S. EPA and MDEQ, using then current MDEQ-approved methodologies, that subsurface vapor phase hazardous substances are not creating unacceptable exposures within the new or modified structures and make such documentation available upon request. If building new structures on the Property, Grantor or its successor in interest must build structures in accordance with current health and safety standards, document implementation of those standards, and comply with all other applicable local, state and federal regulations.

(e) Prohibit any activity that disturbs the Cap on the Property unless such activity is approved in advance by U.S. EPA and conducted in association with appropriate soil characterization and in compliance with applicable state and federal environmental, health, and safety laws and regulations including, but not necessarily limited to, the use of appropriate personal protective equipment. The Grantor or its successors in interest covenants to ensure that the Cap is maintained to protect human health and the environment.

(f) Prohibit any activity that would interfere with the function of or obstruct access to any monitoring wells and devices located on the Property. This includes, but is not limited to, removing, destroying, or altering any well or device in any way that renders it inoperable or incapable of functioning as intended.

(g) A fence has been constructed around the Property to limit access to the Property. The Grantor or its successors in interest covenants to ensure that the fence will be maintained and access will be restricted on the Property until such time as the U.S. EPA deems the fence unnecessary.

3. **Management of Contaminated Soil, Media, and Debris:** The Grantor or its successors in interest shall manage all soils, media and/or debris located on the Property in accordance with the applicable requirements of Section 20120c of Part 201, MCL 324.20120c and Part 111, Hazardous Waste Management, of the NREPA, MCL 324.11101 *et seq.*; 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 and regulations.

4. **Access**: The Grantor and its successors in interest grants to Grantee and the Third Party Beneficiaries, and their respective representatives the right to enter the Property at reasonable times for the purposes of performing the Response Activities, determining and

monitoring compliance with the AOC, the Work Plans and with this Amended Restrictive Covenant and Easement, 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 and the AOC and Work Plans. Once the Response Activities are completed, the Grantee or the Third Party Beneficiaries and their representatives may request (which request shall be promptly addressed and responded to by Grantor or its successors in interest) that Grantor, or its successors in interest, allow them to enter the Property at reasonable times based upon either a demonstrated legal or technical purpose for entering the Property in accordance with the AOC, which request shall not be unreasonably denied by Grantor or its successors in interest.

5. **Term:** This Amended Restrictive Covenant and Easement shall run with the land and shall be binding on the Grantor and any and all successors in interest , including persons as set forth in Paragraph 12(e), Successors.

6. **Third Party Beneficiary:** The Grantor, on behalf of itself and its successors, transferees, and assigns, hereby agrees that the Third Party Beneficiaries, and their respective successors and assigns, shall be granted all the benefits and rights set out in the restrictions, covenants, easements, exceptions, notifications, conditions, and agreements herein, and that the Third Party Beneficiaries shall have the right to enforce the restrictions described herein as if they were a party hereto. No other rights in third parties are intended by this Amended Restrictive Covenant and Easement, and no other person or entity shall have any rights or authorities hereunder to enforce these restrictions, terms, conditions, or obligations beyond the Grantor, the Grantee, the Third Party Beneficiaries, and their respective successors and assigns.

7. **Enforcement:** The Grantee and Third Party Beneficiaries may enforce the restrictions and grant of easement set forth in this Amended Restrictive Covenant and Easement by legal action in a court of competent jurisdiction.

8. **U.S.EPA Entry, Access, and Response Authority**: Nothing in this Amended Restrictive Covenant and Easement shall limit or otherwise affect the U.S. EPA's right of entry and access, or authority to undertake Response Activities as defined in this Restrictive Covenant, as well as in CERCLA, the National Contingency Plan, 40 Code of Federal Regulations Part 300, RCRA and any successor statutory provisions, or other state or federal law. The Grantor consents to officers, employees, contractors, and authorized representatives of the U.S. EPA entering and having continued access to this Property for the purposes described in Paragraph 4, above.

9. **Modification/Release/Rescission:** The Grantor may request in writing to the U.S. EPA and the Grantee, at the addresses provided in Paragraph 11, below, modifications to, or release or rescission of, this Amended Restrictive Covenant and Easement, and Grantor shall simultaneously provide the Third Party Beneficiaries with a copy of such a written request. This Amended Restrictive Covenant and Easement may be modified, released, or rescinded only with the written approval of the U.S. EPA and the Grantee. Any approved modification to, or release or rescission of, this Amended Restrictive Covenant and Easement shall be filed with the appropriate county Register of Deeds by the Grantor and a certified copy shall be returned to the Grantee and the Third Party Beneficiaries at the addresses provided in Paragraph 11, below.

10. **Transfer of Interest:** The Grantor shall provide notice at the addresses provided in this document to the Grantee and the Third Party Beneficiaries of the Grantor's intent to transfer any interest in the Property, or any portion thereof, 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 Grantor without adequate and complete provision for compliance with the terms and conditions of this Amended Restrictive Covenant and Easement and the applicable provisions of Section 20116 of the NREPA. The Grantor shall include in any instrument conveying any interest in any portion of the Property, including, but not limited to, deeds, leases, and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN AMENDED DECLARATION OF RESTRICTIVE COVENANT AND ENVIRONMENTAL PROTECTION EASEMENT, DATED _____, AND RECORDED WITH THE WAYNE COUNTY REGISTER OF DEEDS, LIBER _____, PAGE _____.

11. **Notices:** Any notice, demand, request, consent, approval, or communication that is required to be made or obtained under this Amended Restrictive Covenant and Easement shall be made in writing; include a statement that the notice is being made pursuant to the requirements of this Amended Restrictive Covenant and Easement; include the U.S. EPA Site ID number and reference number; and shall be served either personally, or sent via first class mail, postage prepaid, as follows:

For the Grantor::

City of Dearborn
Corporation Counsel
16901 Michigan Avenue, Suite 14
Dearborn, MI 48126

With a copy to:

City of Dearborn
Economic and Community Development
16901 Michigan Avenue, Suite 6
Dearborn, MI 48126

For the U.S. EPA:

Director Richard Karl
Superfund Division (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

with a copy to:

Brian Kelly
Emergency Response Branch (SE-GI)
U.S. Environmental Protection Agency

9311 Groh Road
Grosse Ile, MI 48138

Christopher Black
RCRA Corrective Action (LU-9J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

Richard Clarizio
Office of Regional Counsel (C-14J)
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

For the MDEQ:

Chief
Remediation Division
Michigan Department of Environmental Quality
P.O. Box 30426
Lansing, MI 48909-7926

For the NPOS Respondents:

Grant P. Gilezan, Esq.
Dykema Gossett, PLLC
400 Renaissance Center
Detroit, MI 48243

12. **Miscellaneous:**

(a) **Controlling Law.** The interpretation and performance of this Amended Restrictive Covenant and Easement shall be governed by the laws of the United States as to the obligations referred to in the AOC and Work Plans and by the laws and regulations of the State of Michigan for all other purposes hereunder (without reference to choice of laws and principles thereof). The right to enforce the conditions and restrictions in this Amended Restrictive Covenant and Easement are in addition to other rights and remedies that may be available, including, but not limited to, administrative and judicial remedies under RCRA, CERCLA or Part 201 of the NREPA.

(b) **Construction.** Any general rule of construction to the contrary notwithstanding, this Amended Restrictive Covenant and Easement shall be liberally construed to achieve the purpose of this Amended Restrictive Covenant and Easement and the policy and purpose of RCRA, CERCLA and the land use restrictions and prospective use limitations required by Part 201. If any provision of this Amended Restrictive Covenant and Easement is found to be ambiguous, an interpretation consistent with the purpose of this Amended Restrictive Covenant and Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) **Severability.** If any provision of this Amended Restrictive Covenant and Easement is held to be invalid by any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provision hereof, and all other provisions shall continue unimpaired and in full force and effect.

(d) **Entire Agreement.** This Amended Restrictive Covenant and Easement and its attachments and appendices supersedes all prior discussions, negotiations, understandings, or agreements between the undersigned relating to the matters addressed herein, all of which are merged herein.

(e) **Successors.** The covenants, terms, conditions, and restrictions of this Amended Restrictive Covenant and Easement shall be binding upon; and inure to the benefit of, the Grantor and Grantee and their agents, successors, lessees, and assigns and any subsequent title holders, occupants or other persons acquiring an interest in the Property or a relevant sub-portion of the Property, and their respective agents, successors and assigns. The rights, but not the obligations or authorities, of the U.S. EPA are freely assignable to any public entity, subject to the notice to the Grantor, its successors and assigns, as their interests appear in the public title records kept and maintained by the Wayne County Register of Deeds.

13. **Exhibits:** The following exhibits are incorporated into this Amended Restrictive Covenant and Easement:

Exhibit 1 – Legal Description of the Property

Exhibit 2 – Survey of the Property

14. **Authority to Execute Restrictive Covenant and Easement:** The undersigned person executing this Amended Restrictive Covenant and Easement represents and certifies that he or she is duly authorized and has been empowered to execute this Amended Restrictive Covenant and Easement.

IN WITNESS WHEREOF, the City of Dearborn, the Grantor, has caused this Amended Restrictive Covenant and Easement to be executed on this 18th day of March 2016.

Signature

Licia A. Yangouyian
Printed Name

Assistant Corporation Counsel
Title As authorized by CR 12-665-15

STATE OF Michigan)
)ss
COUNTY OF Wayne)

Acknowledged before me in Wayne County, Michigan, on March 18, 2016 by Licia A. Yangouyian, Assistant Corporation Counsel As Authorized by CR 12-665-15, for the City of Dearborn.

Rebecca D. Moscarello

REBECCA D. MOSCARELLO
NOTARY PUBLIC, STATE OF MI
COUNTY OF WAYNE
MY COMMISSION EXPIRES Nov 10, 2019
ACTING IN COUNTY OF Wayne

Notary Public, State of Michigan
County of Wayne
My commission expires: 11-10-19
Acting in the County of Wayne

DRAFTED BY AND AFTER RECORDING RETURN TO:

Todd C. Schebor, Esq.
Dykema Gossett PLLC
39577 Woodward Avenue Suite 300
Bloomfield Hills, Michigan 48304

EXHIBIT 1

Legal Description of the Property

Land in Private Claims 216 and 328, Town 2 South, Range 11 East, City of Dearborn, Wayne County Michigan described as:

Commencing at a point on the Westerly line of Wyoming Avenue (86' Wide) point being N. 31°00'00" W.(R&M), 1454.00(R&M) feet from the intersection of the Westerly line of Wyoming Avenue with the Northerly line of Clipperts Eagle Avenue Subdivision recorded in Liber 39, Page 76, Wayne County Records; thence S. 59°04'05"W.(R&M) 279.59(R&M) feet; thence S. 30°23'29"E.(R&M), 34.43(R&M) feet; thence S. 59°04'05W(R&M) 137.12(R&M) feet; thence N. 75°31'41" W.(R&M), 73.00(R) feet, 72.85(M) feet; thence 185.55(R) feet, 184.94(M) feet along a curve to the right passing through a central angle of 18° having a radius of 588.67(M) feet with a chord being N. 63°40'46"W.(M), 184.27(M) feet; thence N. 30°21'30"W.(R&M), 345.00(R&M) feet; thence N. 59°00'00"E.(R&M), 563.74(R&M) feet; thence S. 31°00'00" E.(R&M), 518.00(R&M) feet to the point of beginning.

Containing 6.65 acres

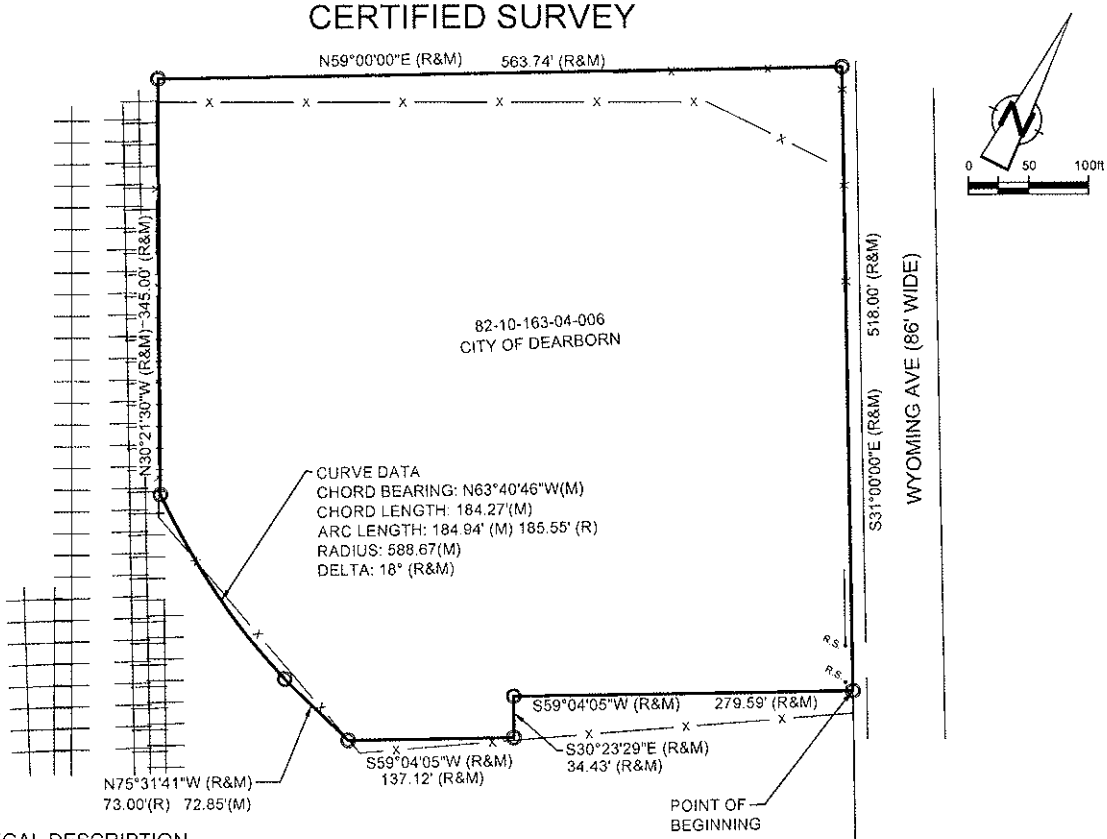
Tax Parcel Number 82-10-163-04-006 (prior to combination the property had Tax Parcel Numbers 82-101-6304-002 and 82-101-6304-004)

Commonly Known as: 3901 Wyoming, Dearborn, MI 48120

EXHIBIT 2

Survey of the Property

CERTIFIED SURVEY



LEGAL DESCRIPTION

LAND IN PRIVATE CLAIMS 216 AND 328, TOWN 2 SOUTH, RANGE 11 EAST, CITY OF DEARBORN, WAYNE COUNTY MICHIGAN DESCRIBE AS:

COMMENCING AT A POINT ON THE WESTERLY LINE OF WYOMING AVENUE(86' WIDE), POINT BEING N.31°00'00"W.(R&M), 1454.00(R&M) FEET FROM THE INTERSECTION OF THE WESTERLY LINE OF WYOMING AVENUE WITH THE NORTHERLY LINE OF CLIPPERTS EAGLE AVENUE SUBDIVISION RECORDED IN LIBER 39, PAGE 76, WAYNE COUNTY RECORDS; THENCE S.59°04'05"W.(R&M), 279.59(R&M) FEET; THENCE S.30°23'29"E.(R&M), 34.43(R&M) FEET; THENCE S.59°04'05"W.(R&M), 137.12(R&M) FEET; THENCE N.75°31'41"W.(R&M), 73.00(R) FEET, 72.85(M) FEET; THENCE 185.55(R) FEET, 184.94(M) FEET ALONG A CURVE TO THE RIGHT PASSING THROUGH A CENTRAL ANGLE OF 18° HAVING A RADIUS OF 588.67(M) FEET WITH A CHORD BEING N.63°40'46"W.(M), 184.27(M) FEET; THENCE N.30°21'30"W.(R&M), 345.00(R&M) FEET; THENCE N.59°00'00"E.(R&M), 563.74(R&M) FEET; THENCE S.31°00'00"E.(R&M), 518.00(R&M) FEET TO THE POINT OF BEGINNING.
CONTAINING 6.65 ACRES

N31°00'00"W (R&M) 1454.00' (R&M)

INTERSECTION OF WYOMING AVE WITH THE NORTHERLY LINE OF CLIPPERTS EAGLE AVE SUB

CERTIFICATION

AS A PROFESSIONAL SURVEYOR IN THE STATE OF MICHIGAN, I HEREBY STATE THAT I HAVE CAUSED TO BE SURVEYED THE PARCEL OF LAND DESCRIBED AND DELINEATED HEREON, THAT SAID PLAT IS A TRUE REPRESENTATION OF THE SURVEY AS DIRECTED BY ME, AND THAT THERE ARE NO ENCROACHMENTS OTHER THAN THAT AS SHOWN HEREON: THAT SAID SURVEY WAS PERFORMED WITH AN ERROR OF CLOSURE NO GREATER THAN 1 IN 5000 AND THAT I HAVE FULLY COMPLIED WITH THE REQUIREMENTS OF P.A. 132 PF 1970 AS AMENDED.

Michael Hoben 4-16-08

Michael S. Hoben 35994

STATE OF MICHIGAN
MICHAEL S. HOBEN
LAND SURVEYOR
No. 35994
LICENSED LAND SURVEYOR

NOTE:

BEARING SYSTEM IS TAKEN FROM PREVIOUS DESCRIPTION ON FILE AT THE CITY OF DEARBORN.

LEGEND

O 1/2" DIA x 18" SET IRON REBAR W/CAP

CERTIFIED SURVEY
DEARBORN REFINING SITE
Dearborn, Michigan

48041-00(PRES049)GN-WA001 JAN 22, 2016

Appendix B
Historic Groundwater Analytical Data

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		*Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[(1)]*					*MW1-08*	*MW1-08*	*MW1-08*	*MW1-08*	*MW1-08*	*MW3-08*	*MW3-08*
Sample Identification		Non-Residential Groundwater	Groundwater	Water	Flammability and	Acute	*GW-048041-031108-DD-026*	*GW-048041-062708-DD-001*	*GW-048041-062708-DD-002*	*GW-48041-092508-MC-001*	*GW-48041-122908-001*	*GW-048041-031008-DD-024*	*GW-048041-031008-DD-025*
Sample Date		Volatilization to	Contact	Solubility	Explosivity	Inhalation	*3/11/2008*	*6/27/2008*	*6/27/2008*	*9/25/2008*	*12/29/2008*	*3/10/2008*	*3/10/2008*
Sample Type		Indoor Air Inhalation			Screening Levels	Screening Levels			*Duplicate*				*Duplicate*
		a	b	c	d	e							
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/L	1300	1300	1330	ID	1300	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
1,1,2,2-Tetrachloroethane	mg/L	77	4.7	2970	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
1,1,2-Trichloroethane	mg/L	110	21	4420	NA	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)UJ	ND(0.0033)	ND(0.001)
1,1-Dichloroethane	mg/L	2300	2400	5060	380	ID	0.00026 J	0.00029 J	0.00032 J	0.00029 J	ND(0.004)	ND(0.0033)	ND(0.001)
1,1-Dichloroethene	mg/L	1.3	11	2250	97	140	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
1,2,4-Trichlorobenzene	mg/L	300	19	300	NA	300	ND(0.005)	ND(0.005)UJ	ND(0.005)UJ	ND(0.005)	ND(0.02)	ND(0.017)	ND(0.005)
1,2,4-Trimethylbenzene	mg/L	56	56	55.89	56	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.00078 J	0.00028 J
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	1.2	0.39	1.23	NA	ID	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
1,2-Dibromoethane (Ethylene dibromide	mg/L	15	0.025	4200	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
1,2-Dichlorobenzene	mg/L	160	160	156	NA	160	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.005 J	0.0015 J
1,2-Dichloroethane	mg/L	59	19	8520	2500	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
1,2-Dichloropropane	mg/L	36	16	2800	550	2800	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
1,3,5-Trimethylbenzene	mg/L	61	61	61.15	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.0027 J	0.00086 J
1,3-Dichlorobenzene	mg/L	41	2	111	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.00078 J	0.00025 J
1,4-Dichlorobenzene	mg/L	74	6.4	73.8	NA	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.0033 J	0.001 J
2-Butanone (Methyl ethyl ketone) (MEK	mg/L	240000	240000	240000	ID	240000	0.00094 J	0.00059 J	ND(0.025)	ND(0.025)	ND(0.1)	0.0027 J	0.001 J
2-Hexanone	mg/L	8700	5200	16000	NA	ID	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.2)	ND(0.17)	ND(0.05)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	mg/L	20000	13000	20000	ID	20000	ND(0.05)	ND(0.05)UJ	ND(0.05)UJ	ND(0.05)	ND(0.2)	ND(0.17)	ND(0.05)
Acetone	mg/L	1000000	31000	1000000	15000	1000000	ND(0.025)U	ND(0.025)	0.0016 J	ND(0.025)	ND(0.1)	ND(0.083)U	ND(0.025)U
Benzene	mg/L	35	11	1750	68	67	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.071 J	0.021 J
Bromodichloromethane	mg/L	37	14	6740	ID	ID	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Bromoform	mg/L	3100	140	3100	ID	ID	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Bromomethane (Methyl bromide	mg/L	9	70	14500	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
Carbon disulfide	mg/L	550	1200	1190	13	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.02)	ND(0.017)	ND(0.005)
Carbon tetrachloride	mg/L	2.4	4.6	793	ID	96	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Chlorobenzene	mg/L	470	86	472	160	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.016 J	0.0048 J
Chloroethane	mg/L	5700	440	5740	110	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)	0.0066 J	0.0011 J
Chloroform (Trichloromethane)	mg/L	180	150	7920	ID	ID	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
Chloromethane (Methyl chloride	mg/L	45	490	6340	36	210	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
cis-1,2-Dichloroethene	mg/L	210	200	3500	530	ID	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
cis-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.004)UJ	ND(0.0033)	ND(0.001)
Cyclohexane	mg/L	NA	NA	NA	NA	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.032 J	0.0097 J
Dibromochloromethane	mg/L	110	18	2600	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Dichlorodifluoromethane (CFC-12)	mg/L	300	300	300	ID	ID	ND(0.001)UJ	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)UJ	ND(0.0033)	ND(0.001)
Ethylbenzene	mg/L	170	170	169	43	170	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.004)	0.0015 J	0.00043 J
Isopropyl benzene	mg/L	56	56	56	29	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.02)	0.021 J	0.0061 J
Methyl acetate	mg/L	NA	NA	NA	NA	NA	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.04)	ND(0.033)	ND(0.01)
Methyl cyclohexane	mg/L	NA	NA	NA	NA	NA	ND(0.001)UJ	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.014 J	0.0042 J
Methyl tert butyl ether (MTBE	mg/L	47000	610	46800	ID	ID	0.00026 J	0.00023 J	0.0002 J	ND(0.005)	ND(0.02)	0.00066 J	0.0002 J
Methylene chloride	mg/L	1400	220	17000	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)UJ	ND(0.02)	ND(0.017)	ND(0.005)
Styrene	mg/L	310	9.7	310	140	310	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
Tetrachloroethene	mg/L	170	12	200	ID	200	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.004)UJ	ND(0.0033)	ND(0.001)
Toluene	mg/L	530	530	526	61	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	0.0042 J	0.0012 J
trans-1,2-Dichloroethene	mg/L	200	220	6300	230	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
trans-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)UJ	ND(0.0033)	ND(0.001)
Trichloroethene	mg/L	4.9	22	1100	ID	1100	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Trichlorofluoromethane (CFC-11)	mg/L	1100	1100	1100	ID	1100	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)	ND(0.0033)	ND(0.001)
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	170	ID	170	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.004)	ND(0.0033)	ND(0.001)
Vinyl chloride	mg/L	13	1	2760	33	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.004)UJ	ND(0.0033)	ND(0.001)
Xylenes (total)	mg/L	190	190	186	70	190	ND(0.002)UJ	ND(0.002)UJ	ND(0.002)UJ	ND(0.002)UJ	ND(0.008)	0.0088 J	0.0028 J
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	NA	NA	NA	NA	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2,4,5-Trichlorophenol	mg/L	NLV	170	1200	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2,4,6-Trichlorophenol	mg/L	NLV	10	800	ID	ID	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.01)	ND(0.016)	ND(0.02)	ND(0.02)
2,4-Dichlorophenol	mg/L	NLV	48	4500	ID	ID	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)	ND(0.05)	ND(0.05)
2,4-Dimethylphenol	mg/L	NLV	520	7870	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2,4-Dinitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
2,4-Dinitrotoluene	mg/L	NLV	8.6	270	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2,6-Dinitrotoluene	mg/L	NA	NA	NA	NA	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2-Chloronaphthalene	mg/L	ID	6.7	6.74	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2-Chlorophenol	mg/L	ID	94	22000	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2-Methylnaphthalene	mg/L	25	25	24.6	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	0.027	0.028
2-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
2-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
2-Nitrophenol	mg/L	NLV	79	2500	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
3,3'-Dichlorobenzidine	mg/L	NLV	0.18	3.11	ID	ID	R	ND(0.001)	ND(0.001)	R	R	ND(0.005)	ND(0.005)
3-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
4,6-Dinitro-2-methylphenol	mg/L	NLV	9.5	200	ID	ID	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
4-Bromophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
4-Chloro-3-methylphenol	mg/L	NLV	79	3900	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
4-Chloroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)	ND(0.05)	ND(0.05)
4-Chlorophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
4-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
4-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
4-Nitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.08)	ND(0.1)	ND(0.1)
Acenaphthene	mg/L	4.2	4.2	4.24	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Acenaphthylene	mg/L	3.9	3.9	3.93	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Acetophenone	mg/L	6100	6100	6100	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[(1)]***					***MW1-08***	***MW1-08***	***MW1-08***	***MW1-08***	***MW1-08***	***MW3-08***	***MW3-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-048041-031108-DD-026***	***GW-048041-062708-DD-001***	***GW-048041-062708-DD-002***	***GW-48041-092508-MC-001***	***GW-48041-122908-001***	***GW-048041-031008-DD-024***	***GW-048041-031008-DD-025***
Sample Date							***3/11/2008***	***6/27/2008***	***6/27/2008***	***9/25/2008***	***12/29/2008***	***3/10/2008***	***3/10/2008***
Sample Type									***Duplicate***				***Duplicate***
		a	b	c	d	e							
	Units												
Anthracene	mg/L	0.043	0.043	0.0434	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Atrazine	mg/L	NLV	5.4	70	ID	ID	ND(0.003)	ND(0.003)	ND(0.003)	ND(0.0075)	ND(0.012)	ND(0.015)	ND(0.015)
Benzaldehyde	mg/L	NA	NA	NA	NA	NA	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)	ND(0.05)	ND(0.05)
Benzo(a)anthracene	mg/L	NLV	0.0094	0.0094	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Benzo(a)pyrene	mg/L	NLV	0.001	0.00162	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Benzo(b)fluoranthene	mg/L	ID	0.0015	0.0015	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Benzo(g,h,i)perylene	mg/L	NLV	0.001	0.00026	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Benzo(k)fluoranthene	mg/L	NLV	0.001	0.0008	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Biphenyl (1,1-Biphenyl)	mg/L	NA	NA	NA	NA	NA	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)	ND(0.05)	ND(0.05)
bis(2-Chloroethoxy)methane	mg/L	NA	NA	NA	NA	NA	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
bis(2-Chloroethyl)ether	mg/L	210	5.7	17200	17000	17000	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	NLV	0.32	0.34	NA	0.34	0.0018 J	ND(0.005)U	ND(0.005)U	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Butyl benzylphthalate (BBP)	mg/L	NLV	2.7	2.69	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Caprolactam	mg/L	NLV	390000	5250000	NA	1000000	ND(0.01)UJ	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)UJ	ND(0.05)UJ	ND(0.05)UJ
Carbazole	mg/L	NLV	7.4	7.48	ID	ID	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.025)	ND(0.04)	ND(0.05)	ND(0.05)
Chrysene	mg/L	ID	0.0016	0.0016	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Dibenz(a,h)anthracene	mg/L	NLV	0.002	0.00249	ID	ID	ND(0.002)	ND(0.002)	ND(0.002)UJ	ND(0.005)	ND(0.008)	ND(0.01)	ND(0.01)
Dibenzofuran	mg/L	10	ID	10	ID	ID	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.01)	ND(0.016)	ND(0.02)	ND(0.02)
Diethyl phthalate	mg/L	NLV	1100	1080	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Dimethyl phthalate	mg/L	NLV	4200	4190	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Di-n-butylphthalate (DBP)	mg/L	NLV	11	11.2	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Di-n-octyl phthalate (DnOP)	mg/L	NLV	0.4	3	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)UJ	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Fluoranthene	mg/L	0.21	0.21	0.206	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Fluorene	mg/L	2	2	1.98	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	0.0044 J	0.0045 J
Hexachlorobenzene	mg/L	3	0.0046	6.2	ID	ID	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0005)	ND(0.0008)	ND(0.001)	ND(0.001)
Hexachlorobutadiene	mg/L	3.2	0.4	3.23	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.0025)	ND(0.004)	ND(0.005)	ND(0.005)
Hexachlorocyclopentadiene	mg/L	0.42	1.6	1.8	ID	ID	ND(0.005)	R	R	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Hexachloroethane	mg/L	50	1.9	50	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Indeno(1,2,3-cd)pyrene	mg/L	NLV	0.002	0.000022	ID	ID	ND(0.002)	ND(0.002)	ND(0.002)UJ	ND(0.005)	ND(0.008)	ND(0.01)	ND(0.01)
Isophorone	mg/L	NLV	990	12000	NA	12000	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Naphthalene	mg/L	31	31	31	NA	31	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Nitrobenzene	mg/L	550	11	2090	NA	ID	ND(0.003)	ND(0.003)	ND(0.003)	ND(0.0075)	ND(0.012)	ND(0.015)	ND(0.015)
N-Nitrosodi-n-propylamine	mg/L	NLV	0.36	9890	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
N-Nitrosodiphenylamine	mg/L	NLV	35	35.1	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Pentachlorophenol	mg/L	NLV	0.2	1850	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Phenanthrene	mg/L	1	1	1	ID	ID	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.005)	ND(0.008)	0.0019 J	0.0016 J
Phenol	mg/L	NLV	29000	82800	NA	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Pyrene	mg/L	0.14	0.14	0.135	ID	ID	ND(0.005)	ND(0.005)	0.00021 J	ND(0.012)	ND(0.02)	ND(0.025)	ND(0.025)
Metals													
Aluminum	mg/L	NLV	64000	NA	ID	ID	ND(0.2)	ND(0.2)	ND(0.2)	0.118 J	0.197 J	ND(0.2)	ND(0.2)
Antimony	mg/L	NLV	68	NA	ID	ID	0.00014 J	ND(0.002)	ND(0.002)	ND(0.002)	0.00027 J	0.00014 J	0.00015 J
Arsenic	mg/L	NLV	4.3	NA	ID	ID	ND(0.005)	0.0049 J	ND(0.005)	ND(0.005)	ND(0.005)	0.0037 J	0.0032 J
Barium	mg/L	NLV	14000	NA	ID	ID	0.374	0.355	0.359	0.235	0.59	0.618	0.62
Beryllium	mg/L	NLV	290	NA	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)U	ND(0.001)	ND(0.001)
Cadmium	mg/L	NLV	190	NA	ID	ID	ND(0.001)	ND(0.001)	0.00079 J	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Calcium	mg/L	NA	NA	NA	NA	NA	346	308	316	454	218	115	116
Chromium	mg/L	NLV	460	NA	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Chromium VI (hexavalent)	mg/L	NLV	460	NA	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	0.007	0.003 J	0.13 J	0.003 J
Cobalt	mg/L	NLV	2400	NA	ID	ID	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)
Copper	mg/L	NLV	7400	NA	ID	ID	ND(0.002)U	0.00075 J	0.00076 J	0.00035 J	ND(0.0048)U	ND(0.002)U	ND(0.002)U
Iron	mg/L	NLV	58000	NA	ID	ID	27.1	26.9	27.5	39	13.6	7.82	7.84
Lead	mg/L	NLV	ID	NA	ID	ID	ND(0.003)	0.0021 J	ND(0.003)	ND(0.003)	0.0219	0.0039	0.005
Magnesium	mg/L	NLV	1000000	NA	ID	ID	105	86.8	89.1	96.1	51.8	36.9	37.1
Manganese	mg/L	NLV	9100	NA	ID	ID	0.351	0.338	0.348	0.44	0.501	0.201	0.203
Mercury	mg/L	0.056	0.056	0.056	ID	ID	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)
Nickel	mg/L	NLV	74000	NA	ID	ID	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	0.0044 J
Potassium	mg/L	NA	NA	NA	NA	NA	60.5	61.6	63.4	57.6	25.7	25.6	25.5
Selenium	mg/L	NLV	970	NA	ID	ID	ND(0.005)	ND(0.005)	0.0047 J	ND(0.005)	ND(0.005)	0.0042 J	ND(0.005)
Silver	mg/L	NLV	1500	NA	ID	ID	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)
Sodium	mg/L	NLV	1000000	NA	ID	ID	182	210	217	203	127	65.2	64.7
Thallium	mg/L	NLV	13	NA	ID	ID	ND(0.001)U	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)U	ND(0.001)U
Vanadium	mg/L	NLV	970	NA	ID	ID	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.004)	ND(0.004)
Zinc	mg/L	NLV	110000	NA	ID	ID	ND(0.02)	ND(0.02)	ND(0.02)	ND(0.02)	0.0366	ND(0.02)U	ND(0.02)U
PCBs													

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW1-08***	***MW1-08***	***MW1-08***	***MW1-08***	***MW1-08***	***MW3-08***	***MW3-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-048041-031108-DD-026***	***GW-048041-062708-DD-001***	***GW-048041-062708-DD-002***	***GW-48041-092508-MC-001***	***GW-48041-122908-001***	***GW-048041-031008-DD-024***	***GW-048041-031008-DD-025***
Sample Date							***3/11/2008***	***6/27/2008***	***6/27/2008***	***9/25/2008***	***12/29/2008***	***3/10/2008***	***3/10/2008***
Sample Type									***Duplicate***				***Duplicate***
		a	b	c	d	e							
	Units												
Aroclor-1016 (PCB-1016)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)UJ	ND(0.0001)	ND(0.0001)
Aroclor-1221 (PCB-1221)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)UJ	ND(0.0001)	ND(0.0001)
Aroclor-1232 (PCB-1232)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)UJ	ND(0.0001)	ND(0.0001)
Aroclor-1242 (PCB-1242)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)UJ	0.000066 J	ND(0.0001)
Aroclor-1248 (PCB-1248)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	0.00013 J	ND(0.0001)	ND(0.0001)
Aroclor-1254 (PCB-1254)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)UJ	ND(0.0001)	ND(0.0001)
Aroclor-1260 (PCB-1260)	mg/L	NA	NA	NA	NA	NA	0.000058 J	ND(0.0001)	ND(0.0001)	ND(0.0001)	0.00016 J	ND(0.0001)	ND(0.0001)
Total PCBs	mg/L	0.045	0.0033	0.0447	ID	ID	0.000058 J	ND	ND	ND	0.00029 J	0.000066 J	ND

Notes:

(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 9/28/2012, pursuant to 1994 PA 451 as amended.
MDEQ - Michigan Department of Environmental Quality
-- - Not Analyzed
NA- Not Available
mg/L - milligrams per liter
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[(1)]***					***MW3-08***	***MW3R-08***	***MW3R-08***	***MW4-08***	***MW4-08***	***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-048041-063008-DD-004***	***GW-48041-092608-MC-005***	***GW-48041-122908-MC-004***	***GW-048041-032608-DD-028***	***GW-048041-063008-DD-003***	***GW-48041-092508-EV-002***	***GW-48041-092508-EV-003***
Sample Date							***6/30/2008***	***9/26/2008***	***12/29/2008***	***3/26/2008***	***6/30/2008***	***9/25/2008***	***9/25/2008***
Sample Type													***Duplicate***
		a	b	c	d	e							
	Units												
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	mg/L	1300	1300	1330	ID	1300	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1,2,2-Tetrachloroethane	mg/L	77	4.7	2970	ID	ID	ND(0.0017)	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ
1,1,2-Trichloroethane	mg/L	110	21	4420	NA	ID	ND(0.0017)	ND(0.0033)UJ	ND(0.002)UJ	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,1-Dichloroethane	mg/L	2300	2400	5060	380	ID	ND(0.0017)UJ	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)UJ	ND(0.001)	ND(0.001)
1,1-Dichloroethene	mg/L	1.3	11	2250	97	140	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,2,4-Trichlorobenzene	mg/L	300	19	300	NA	300	0.00038 J	ND(0.017)	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
1,2,4-Trimethylbenzene	mg/L	56	56	55.89	56	ID	ND(0.0017)U	0.00085 J	0.00072 J	0.00096 J	ND(0.001)	ND(0.001)	ND(0.001)
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	1.2	0.39	1.23	NA	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,2-Dibromoethane (Ethylene dibromide	mg/L	15	0.025	4200	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,2-Dichlorobenzene	mg/L	160	160	156	NA	160	0.0055	0.0017 J	0.0017 J	0.0002 J	ND(0.001)	ND(0.001)	ND(0.001)
1,2-Dichloroethane	mg/L	59	19	8520	2500	ID	ND(0.0017)	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,2-Dichloropropane	mg/L	36	16	2800	550	2800	ND(0.0017)	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,3,5-Trimethylbenzene	mg/L	61	61	61.15	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,3-Dichlorobenzene	mg/L	41	2	111	ID	ID	0.00075 J	ND(0.0033)	0.00059 J	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
1,4-Dichlorobenzene	mg/L	74	6.4	73.8	NA	ID	0.003	0.0021 J	0.0022	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
2-Butanone (Methyl ethyl ketone) (MEK	mg/L	240000	240000	240000	ID	240000	ND(0.042)U	ND(0.083)	0.0022 J	0.000076 J	ND(0.025)	ND(0.025)	ND(0.025)
2-Hexanone	mg/L	8700	5200	16000	NA	ID	ND(0.084)	ND(0.17)	ND(0.1)	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	mg/L	20000	13000	20000	ID	20000	ND(0.084)	ND(0.17)	ND(0.1)	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Acetone	mg/L	1000000	31000	1000000	15000	1000000	ND(0.042)U	ND(0.083)	0.0041 J	0.003 J	ND(0.025)	ND(0.025)	ND(0.025)
Benzene	mg/L	35	11	1750	68	67	0.065	0.041	0.022	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Bromodichloromethane	mg/L	37	14	6740	ID	ID	ND(0.0017)	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Bromoform	mg/L	3100	140	3100	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Bromomethane (Methyl bromide	mg/L	9	70	14500	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ
Carbon disulfide	mg/L	550	1200	1190	13	ID	ND(0.0084)	ND(0.017)	ND(0.01)	ND(0.005)U	ND(0.005)	ND(0.005)	ND(0.005)
Carbon tetrachloride	mg/L	2.4	4.6	793	ID	96	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Chlorobenzene	mg/L	470	86	472	160	ID	0.013	0.014	0.0088	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Chloroethane	mg/L	5700	440	5740	110	ID	0.004	ND(0.0033)	0.00073 J	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ
Chloroform (Trichloromethane)	mg/L	180	150	7920	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Chloromethane (Methyl chloride	mg/L	45	490	6340	36	210	ND(0.0039)U	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,2-Dichloroethene	mg/L	210	200	3500	530	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
cis-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.0017)UJ	ND(0.0033)UJ	ND(0.002)	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)	ND(0.001)
Cyclohexane	mg/L	NA	NA	NA	NA	NA	ND(0.0017)	0.016	0.024	0.00035 J	0.00065 J	0.00016 J	0.00014 J
Dibromochloromethane	mg/L	110	18	2600	ID	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Dichlorodifluoromethane (CFC-12)	mg/L	300	300	300	ID	ID	ND(0.0017)UJ	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)UJ	ND(0.001)	ND(0.001)
Ethylbenzene	mg/L	170	170	169	43	170	0.0011 J	0.00082 J	0.00056 J	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Isopropyl benzene	mg/L	56	56	56	29	ID	0.012	0.023	0.022	0.0013 J	0.0015 J	0.00068 J	0.00063 J
Methyl acetate	mg/L	NA	NA	NA	NA	NA	ND(0.017)	ND(0.033)	ND(0.02)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Methyl cyclohexane	mg/L	NA	NA	NA	NA	NA	0.0032	0.013	0.018	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Methyl tert butyl ether (MTBE)	mg/L	47000	610	46800	ID	ID	0.00048 J	0.0008 J	0.00062 J	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Methylene chloride	mg/L	1400	220	17000	ID	ID	ND(0.0084)	ND(0.017)U	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Styrene	mg/L	310	9.7	310	140	310	ND(0.0017)UJ	ND(0.0033)UJ	ND(0.002)	ND(0.001)	ND(0.001)UJ	ND(0.001)	ND(0.001)
Tetrachloroethene	mg/L	170	12	200	ID	200	ND(0.0017)UJ	ND(0.0033)UJ	ND(0.002)UJ	ND(0.001)	ND(0.001)UJ	ND(0.001)	ND(0.001)
Toluene	mg/L	530	530	526	61	ID	ND(0.0036)U	0.0027 J	0.0018 J	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
trans-1,2-Dichloroethene	mg/L	200	220	6300	230	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
trans-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.0017)UJ	ND(0.0033)UJ	ND(0.002)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ	ND(0.001)UJ
Trichloroethene	mg/L	4.9	22	1100	ID	1100	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Trichlorofluoromethane (CFC-11)	mg/L	1100	1100	1100	ID	1100	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)UJ	ND(0.001)UJ
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	170	ID	170	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Vinyl chloride	mg/L	13	1	2760	33	ID	ND(0.0017)	ND(0.0033)	ND(0.002)	ND(0.001)	ND(0.001)UJ	ND(0.001)	ND(0.001)
Xylenes (total)	mg/L	190	190	186	70	190	0.0083 J	0.0069 J	0.006	ND(0.002)	ND(0.002)UJ	ND(0.002)	ND(0.002)
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2,4,5-Trichlorophenol	mg/L	NLV	170	1200	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2,4,6-Trichlorophenol	mg/L	NLV	10	800	ID	ID	ND(0.016)	ND(0.02)	ND(0.02)	ND(0.004)UJ	ND(0.008)	ND(0.01)	ND(0.004)
2,4-Dichlorophenol	mg/L	NLV	48	4500	ID	ID	ND(0.04)	ND(0.05)	ND(0.05)	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
2,4-Dimethylphenol	mg/L	NLV	520	7870	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2,4-Dinitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)	ND(0.05)	ND(0.02)
2,4-Dinitrotoluene	mg/L	NLV	8.6	270	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2,6-Dinitrotoluene	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2-Chloronaphthalene	mg/L	ID	6.7	6.74	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2-Chlorophenol	mg/L	ID	94	22000	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2-Methylnaphthalene	mg/L	25	25	24.6	ID	ID	0.015 J	0.031	0.034	0.00034 J	ND(0.01)	ND(0.012)	ND(0.005)
2-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
2-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)	ND(0.05)	ND(0.02)
2-Nitrophenol	mg/L	NLV	79	2500	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
3,3'-Dichlorobenzidine	mg/L	NLV	0.18	3.11	ID	ID	ND(0.004)UJ	ND(0.005)	ND(0.005)	ND(0.001)UJ	R	ND(0.0025)	ND(0.001)
3-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)	ND(0.05)	ND(0.02)
4,6-Dinitro-2-methylphenol	mg/L	NLV	9.5	200	ID	ID	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)UJ	ND(0.05)	ND(0.02)
4-Bromophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
4-Chloro-3-methylphenol	mg/L	NLV	79	3900	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
4-Chloroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.05)	ND(0.05)	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
4-Chlorophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
4-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
4-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)	ND(0.05)	ND(0.02)
4-Nitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.1)	ND(0.1)	ND(0.02)UJ	ND(0.04)	ND(0.05)	ND(0.02)
Acenaphthene	mg/L	4.2	4.2	4.24	ID	ID	ND(0.02)	0.0011 J	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	0.0002 J
Acenaphthylene	mg/L	3.9	3.9	3.93	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Acetophenone	mg/L	6100	6100	6100	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW3-08***	***MW3R-08***	***MW3R-08***	***MW4-08***	***MW4-08***	***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-048041-063008-DD-004***	***GW-48041-092608-MC-005***	***GW-48041-122908-MC-004***	***GW-048041-032608-DD-028***	***GW-048041-063008-DD-003***	***GW-48041-092508-EV-002***	***GW-48041-092508-EV-003***
Sample Date							***6/30/2008***	***9/26/2008***	***12/29/2008***	***3/26/2008***	***6/30/2008***	***9/25/2008***	***9/25/2008***
Sample Type													***Duplicate***
		a	b	c	d	e							
	Units												
Anthracene	mg/L	0.043	0.043	0.0434	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Atrazine	mg/L	NLV	5.4	70	ID	ID	ND(0.012)	ND(0.015)	ND(0.015)	ND(0.003)UJ	ND(0.006)	ND(0.0075)	ND(0.003)
Benzaldehyde	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.05)	ND(0.05)	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
Benzo(a)anthracene	mg/L	NLV	0.0094	0.0094	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Benzo(a)pyrene	mg/L	NLV	0.001	0.00162	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Benzo(b)fluoranthene	mg/L	ID	0.0015	0.0015	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Benzo(g,h,i)perylene	mg/L	NLV	0.001	0.00026	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Benzo(k)fluoranthene	mg/L	NLV	0.001	0.0008	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Biphenyl (1,1-Biphenyl)	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.05)	ND(0.05)	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
bis(2-Chloroethoxy)methane	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
bis(2-Chloroethyl)ether	mg/L	210	5.7	17200	17000	17000	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	NLV	0.32	0.34	NA	0.34	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	0.0026 J	ND(0.012)U	ND(0.005)
Butyl benzylphthalate (BBP)	mg/L	NLV	2.7	2.69	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Caprolactam	mg/L	NLV	390000	5250000	NA	1000000	ND(0.04)	ND(0.05)	ND(0.05)UJ	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
Carbazole	mg/L	NLV	7.4	7.48	ID	ID	ND(0.04)	ND(0.05)	ND(0.05)	ND(0.01)UJ	ND(0.02)	ND(0.025)	ND(0.01)
Chrysene	mg/L	ID	0.0016	0.0016	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Dibenz(a,h)anthracene	mg/L	NLV	0.002	0.00249	ID	ID	ND(0.008)	ND(0.01)	ND(0.01)	ND(0.002)UJ	ND(0.004)	ND(0.005)	ND(0.002)
Dibenzofuran	mg/L	10	ID	10	ID	ID	ND(0.016)	ND(0.02)	ND(0.02)	ND(0.004)UJ	ND(0.008)	ND(0.01)	ND(0.004)
Diethyl phthalate	mg/L	NLV	1100	1080	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Dimethyl phthalate	mg/L	NLV	4200	4190	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Di-n-butylphthalate (DBP)	mg/L	NLV	11	11.2	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Di-n-octyl phthalate (DnOP)	mg/L	NLV	0.4	3	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Fluoranthene	mg/L	0.21	0.21	0.206	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Fluorene	mg/L	2	2	1.98	ID	ID	0.0047 J	0.0027 J	0.0034 J	0.00041 J	0.00082 J	ND(0.012)	0.00031 J
Hexachlorobenzene	mg/L	3	0.0046	6.2	ID	ID	ND(0.0008)	ND(0.001)	ND(0.001)	ND(0.0002)UJ	ND(0.0004)	ND(0.0005)	ND(0.0002)
Hexachlorobutadiene	mg/L	3.2	0.4	3.23	ID	ID	ND(0.004)	ND(0.005)	ND(0.005)	ND(0.001)UJ	ND(0.002)	ND(0.0025)	ND(0.001)
Hexachlorocyclopentadiene	mg/L	0.42	1.6	1.8	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	R	ND(0.012)	ND(0.005)
Hexachloroethane	mg/L	50	1.9	50	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Indeno(1,2,3-cd)pyrene	mg/L	NLV	0.002	0.000022	ID	ID	ND(0.008)	ND(0.01)	ND(0.01)	ND(0.002)UJ	ND(0.004)	ND(0.005)	ND(0.002)
Isophorone	mg/L	NLV	990	12000	NA	12000	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Naphthalene	mg/L	31	31	31	NA	31	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Nitrobenzene	mg/L	550	11	2090	NA	ID	ND(0.012)	ND(0.015)	ND(0.015)	ND(0.003)UJ	ND(0.006)	ND(0.0075)	ND(0.003)
N-Nitrosodi-n-propylamine	mg/L	NLV	0.36	9890	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
N-Nitrosodiphenylamine	mg/L	NLV	35	35.1	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	0.0011 J	ND(0.012)	ND(0.005)
Pentachlorophenol	mg/L	NLV	0.2	1850	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Phenanthrene	mg/L	1	1	1	ID	ID	0.0017 J	0.0011 J	0.0012 J	ND(0.002)UJ	ND(0.004)	ND(0.005)	ND(0.002)
Phenol	mg/L	NLV	29000	82800	NA	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Pyrene	mg/L	0.14	0.14	0.135	ID	ID	ND(0.02)	ND(0.025)	ND(0.025)	ND(0.005)UJ	ND(0.01)	ND(0.012)	ND(0.005)
Metals													
Aluminum	mg/L	NLV	64000	NA	ID	ID	ND(0.2)	0.179 J	ND(0.2)	ND(0.2)	ND(0.2)	0.267 J	0.475 J
Antimony	mg/L	NLV	68	NA	ID	ID	0.00027 J	ND(0.002)	0.00024 J	ND(0.002)	ND(0.002)	0.0002 J	0.00031 J
Arsenic	mg/L	NLV	4.3	NA	ID	ID	0.004 J	0.0076	0.0065	ND(0.005)	ND(0.005)	0.0047 J	0.0038 J
Barium	mg/L	NLV	14000	NA	ID	ID	0.539	0.717	0.679	0.462	0.458	0.352	0.375
Beryllium	mg/L	NLV	290	NA	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	NLV	190	NA	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Calcium	mg/L	NA	NA	NA	NA	NA	104	93.8	118	222	214	213	213
Chromium	mg/L	NLV	460	NA	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Chromium VI (hexavalent)	mg/L	NLV	460	NA	ID	ID	ND(0.005)UJ	0.01	ND(0.01)U	0.002 J	ND(0.005)UJ	0.009	0.01
Cobalt	mg/L	NLV	2400	NA	ID	ID	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)	ND(0.007)
Copper	mg/L	NLV	7400	NA	ID	ID	0.00056 J	0.00094 J	ND(0.002)U	ND(0.002)	0.00044 J	0.00094 J	0.003 J
Iron	mg/L	NLV	58000	NA	ID	ID	10.4	9.45	9.5	10.7	8.6	27.4	27.1
Lead	mg/L	NLV	ID	NA	ID	ID	ND(0.003)	0.0062	0.0047	0.0021 J	ND(0.003)	0.0079 J	0.0249 J
Magnesium	mg/L	NLV	1000000	NA	ID	ID	29	43.5	49.9	62.4	60.7	63.9	63.7
Manganese	mg/L	NLV	9100	NA	ID	ID	0.207	0.161	0.231	0.881	0.72	0.817	0.808
Mercury	mg/L	0.056	0.056	0.056	ID	ID	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)
Nickel	mg/L	NLV	74000	NA	ID	ID	0.0039 J	0.0042 J	0.0041 J	ND(0.02)	ND(0.02)	ND(0.02)	0.0038 J
Potassium	mg/L	NA	NA	NA	NA	NA	22.1	36.6	37.4	26.7	24.3	26.4	26.8
Selenium	mg/L	NLV	970	NA	ID	ID	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Silver	mg/L	NLV	1500	NA	ID	ID	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)	ND(0.0002)
Sodium	mg/L	NLV	1000000	NA	ID	ID	54.4	89.5	89.9	87.5	82.2	82.9	84
Thallium	mg/L	NLV	13	NA	ID	ID	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	0.00015 J	ND(0.001)
Vanadium	mg/L	NLV	970	NA	ID	ID	ND(0.004)U	0.0011 J	ND(0.004)	ND(0.004)	ND(0.004)	0.0012 J	0.00099 J
Zinc	mg/L	NLV	110000	NA	ID	ID	0.0078 J	0.0151 J	0.0159 J	ND(0.02)	ND(0.02)	0.0077 J	0.0215
PCBs													

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW3-08***	***MW3R-08***	***MW3R-08***	***MW4-08***	***MW4-08***	***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-048041-063008-DD-004***	***GW-48041-092608-MC-005***	***GW-48041-122908-MC-004***	***GW-048041-032608-DD-028***	***GW-048041-063008-DD-003***	***GW-48041-092508-EV-002***	***GW-48041-092508-EV-003***
Sample Date							***6/30/2008***	***9/26/2008***	***12/29/2008***	***3/26/2008***	***6/30/2008***	***9/25/2008***	***9/25/2008***
Sample Type													***Duplicate***
		a	b	c	d	e							
	Units												
Aroclor-1016 (PCB-1016)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
Aroclor-1221 (PCB-1221)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
Aroclor-1232 (PCB-1232)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
Aroclor-1242 (PCB-1242)	mg/L	NA	NA	NA	NA	NA	0.000065 J	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
Aroclor-1248 (PCB-1248)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	0.00029	0.00014	ND(0.0001)	0.000085 J	ND(0.0001)	ND(0.0001)
Aroclor-1254 (PCB-1254)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
Aroclor-1260 (PCB-1260)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)	0.00012	ND(0.0001)	ND(0.0001)	0.000097 J	ND(0.0001)	ND(0.0001)
Total PCBs	mg/L	0.045	0.0033	0.0447	ID	ID	0.000065 J	0.00041	0.00014	ND	0.000182 J	ND	ND

Notes:

(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 9/28/2012, pursuant to 1994 PA 451 as amended.
MDEQ - Michigan Department of Environmental Quality
-- - Not Analyzed
NA- Not Available
mg/L - milligrams per liter
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater	Groundwater	Water	Flammability and	Acute	***GW-48041-122908-MC-002***	***GW-48041-122908-MC-003***
Sample Date		Volatilization to	Contact	Solubility	Explosivity	Inhalation	***12/29/2008***	***12/29/2008***
Sample Type		Indoor Air Inhalation			Screening Levels	Screening Levels		***Duplicate***
		a	b	c	d	e		
	Units							
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane	mg/L	1300	1300	1330	ID	1300	ND(0.002)	ND(0.002)
1,1,2,2-Tetrachloroethane	mg/L	77	4.7	2970	ID	ID	ND(0.002)	ND(0.002)
1,1,2-Trichloroethane	mg/L	110	21	4420	NA	ID	ND(0.002)UJ	ND(0.002)UJ
1,1-Dichloroethane	mg/L	2300	2400	5060	380	ID	ND(0.002)	ND(0.002)
1,1-Dichloroethene	mg/L	1.3	11	2250	97	140	ND(0.002)	ND(0.002)
1,2,4-Trichlorobenzene	mg/L	300	19	300	NA	300	ND(0.01)	ND(0.01)
1,2,4-Trimethylbenzene	mg/L	56	56	55.89	56	ID	ND(0.002)	ND(0.002)
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	1.2	0.39	1.23	NA	ID	ND(0.002)	ND(0.002)
1,2-Dibromoethane (Ethylene dibromide	mg/L	15	0.025	4200	ID	ID	ND(0.002)	ND(0.002)
1,2-Dichlorobenzene	mg/L	160	160	156	NA	160	ND(0.002)	ND(0.002)
1,2-Dichloroethane	mg/L	59	19	8520	2500	ID	ND(0.002)	ND(0.002)
1,2-Dichloropropane	mg/L	36	16	2800	550	2800	ND(0.002)	ND(0.002)
1,3,5-Trimethylbenzene	mg/L	61	61	61.15	ID	ID	ND(0.002)	ND(0.002)
1,3-Dichlorobenzene	mg/L	41	2	111	ID	ID	ND(0.002)	ND(0.002)
1,4-Dichlorobenzene	mg/L	74	6.4	73.8	NA	ID	ND(0.002)	ND(0.002)
2-Butanone (Methyl ethyl ketone) (MEK	mg/L	240000	240000	240000	ID	240000	ND(0.05)	ND(0.05)
2-Hexanone	mg/L	8700	5200	16000	NA	ID	ND(0.1)	ND(0.1)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK	mg/L	20000	13000	20000	ID	20000	ND(0.1)	ND(0.1)
Acetone	mg/L	1000000	31000	1000000	15000	1000000	ND(0.05)	ND(0.05)
Benzene	mg/L	35	11	1750	68	67	ND(0.002)	ND(0.002)
Bromodichloromethane	mg/L	37	14	6740	ID	ID	ND(0.002)	ND(0.002)
Bromoform	mg/L	3100	140	3100	ID	ID	ND(0.002)	ND(0.002)
Bromomethane (Methyl bromide	mg/L	9	70	14500	ID	ID	ND(0.002)	ND(0.002)
Carbon disulfide	mg/L	550	1200	1190	13	ID	ND(0.01)	ND(0.01)
Carbon tetrachloride	mg/L	2.4	4.6	793	ID	96	ND(0.002)	ND(0.002)
Chlorobenzene	mg/L	470	86	472	160	ID	ND(0.002)	ND(0.002)
Chloroethane	mg/L	5700	440	5740	110	ID	ND(0.002)	ND(0.002)
Chloroform (Trichloromethane)	mg/L	180	150	7920	ID	ID	ND(0.002)	ND(0.002)
Chloromethane (Methyl chloride	mg/L	45	490	6340	36	210	ND(0.002)	ND(0.002)
cis-1,2-Dichloroethene	mg/L	210	200	3500	530	ID	ND(0.002)	ND(0.002)
cis-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.002)	ND(0.002)
Cyclohexane	mg/L	NA	NA	NA	NA	NA	ND(0.002)	ND(0.002)
Dibromochloromethane	mg/L	110	18	2600	ID	ID	ND(0.002)	ND(0.002)
Dichlorodifluoromethane (CFC-12)	mg/L	300	300	300	ID	ID	ND(0.002)	ND(0.002)
Ethylbenzene	mg/L	170	170	169	43	170	ND(0.002)	ND(0.002)
Isopropyl benzene	mg/L	56	56	56	29	ID	0.00052 J	0.00058 J
Methyl acetate	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.02)
Methyl cyclohexane	mg/L	NA	NA	NA	NA	NA	ND(0.002)	ND(0.002)
Methyl tert butyl ether (MTBE	mg/L	47000	610	46800	ID	ID	ND(0.01)	ND(0.01)
Methylene chloride	mg/L	1400	220	17000	ID	ID	ND(0.01)	ND(0.01)
Styrene	mg/L	310	9.7	310	140	310	ND(0.002)	ND(0.002)
Tetrachloroethene	mg/L	170	12	200	ID	200	ND(0.002)UJ	ND(0.002)UJ
Toluene	mg/L	530	530	526	61	ID	ND(0.002)	ND(0.002)
trans-1,2-Dichloroethene	mg/L	200	220	6300	230	ID	ND(0.002)	ND(0.002)
trans-1,3-Dichloropropene	mg/L	NA	NA	NA	NA	NA	ND(0.002)UJ	ND(0.002)UJ
Trichloroethene	mg/L	4.9	22	1100	ID	1100	ND(0.002)	ND(0.002)
Trichlorofluoromethane (CFC-11)	mg/L	1100	1100	1100	ID	1100	ND(0.002)	ND(0.002)
Trifluorotrichloroethane (Freon 113)	mg/L	170	170	170	ID	170	ND(0.002)	ND(0.002)
Vinyl chloride	mg/L	13	1	2760	33	ID	ND(0.002)	ND(0.002)
Xylenes (total)	mg/L	190	190	186	70	190	ND(0.004)	ND(0.004)
Semi-Volatile Organic Compounds (SVOCs)								
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.005)
2,4,5-Trichlorophenol	mg/L	NLV	170	1200	ID	ID	ND(0.02)	ND(0.005)
2,4,6-Trichlorophenol	mg/L	NLV	10	800	ID	ID	ND(0.016)	ND(0.004)
2,4-Dichlorophenol	mg/L	NLV	48	4500	ID	ID	ND(0.04)	ND(0.01)
2,4-Dimethylphenol	mg/L	NLV	520	7870	ID	ID	ND(0.02)	ND(0.005)
2,4-Dinitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.02)
2,4-Dinitrotoluene	mg/L	NLV	8.6	270	ID	ID	ND(0.02)	ND(0.005)
2,6-Dinitrotoluene	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.005)
2-Chloronaphthalene	mg/L	ID	6.7	6.74	ID	ID	ND(0.02)	ND(0.005)
2-Chlorophenol	mg/L	ID	94	22000	ID	ID	ND(0.02)	ND(0.005)
2-Methylnaphthalene	mg/L	25	25	24.6	ID	ID	ND(0.02)	ND(0.005)
2-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.02)	ND(0.005)
2-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.02)
2-Nitrophenol	mg/L	NLV	79	2500	ID	ID	ND(0.02)	ND(0.005)
3,3'-Dichlorobenzidine	mg/L	NLV	0.18	3.11	ID	ID	ND(0.004)	ND(0.001)
3-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.02)
4,6-Dinitro-2-methylphenol	mg/L	NLV	9.5	200	ID	ID	ND(0.08)	ND(0.02)
4-Bromophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.005)
4-Chloro-3-methylphenol	mg/L	NLV	79	3900	ID	ID	ND(0.02)	ND(0.005)
4-Chloroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.01)
4-Chlorophenyl phenyl ether	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.005)
4-Methylphenol	mg/L	NLV	810	28000	NA	ID	ND(0.02)	ND(0.005)
4-Nitroaniline	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.02)
4-Nitrophenol	mg/L	NA	NA	NA	NA	NA	ND(0.08)	ND(0.02)
Acenaphthene	mg/L	4.2	4.2	4.24	ID	ID	ND(0.02)	ND(0.005)
Acenaphthylene	mg/L	3.9	3.9	3.93	ID	ID	ND(0.02)	ND(0.005)
Acetophenone	mg/L	6100	6100	6100	ID	ID	ND(0.02)	ND(0.005)

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Levels	Acute Inhalation Screening Levels	***GW-48041-122908-MC-002***	***GW-48041-122908-MC-003***
Sample Date							***12/29/2008***	***12/29/2008***
Sample Type								***Duplicate***
		a	b	c	d	e		
	Units							
Anthracene	mg/L	0.043	0.043	0.0434	ID	ID	ND(0.02)	ND(0.005)
Atrazine	mg/L	NLV	5.4	70	ID	ID	ND(0.012)	ND(0.003)
Benzaldehyde	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.01)
Benzo(a)anthracene	mg/L	NLV	0.0094	0.0094	ID	ID	ND(0.004)	ND(0.001)
Benzo(a)pyrene	mg/L	NLV	0.001	0.00162	ID	ID	ND(0.004)	ND(0.001)
Benzo(b)fluoranthene	mg/L	ID	0.0015	0.0015	ID	ID	ND(0.004)	ND(0.001)
Benzo(g,h,i)perylene	mg/L	NLV	0.001	0.00026	ID	ID	ND(0.004)	ND(0.001)
Benzo(k)fluoranthene	mg/L	NLV	0.001	0.0008	ID	ID	ND(0.004)	ND(0.001)
Biphenyl (1,1-Biphenyl)	mg/L	NA	NA	NA	NA	NA	ND(0.04)	ND(0.01)
bis(2-Chloroethoxy)methane	mg/L	NA	NA	NA	NA	NA	ND(0.02)	ND(0.005)
bis(2-Chloroethyl)ether	mg/L	210	5.7	17200	17000	17000	ND(0.004)	ND(0.001)
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	NLV	0.32	0.34	NA	0.34	ND(0.02)	ND(0.005)
Butyl benzylphthalate (BBP)	mg/L	NLV	2.7	2.69	ID	ID	ND(0.02)	ND(0.005)
Caprolactam	mg/L	NLV	390000	5250000	NA	1000000	ND(0.04)UJ	ND(0.01)UJ
Carbazole	mg/L	NLV	7.4	7.48	ID	ID	ND(0.04)	ND(0.01)
Chrysene	mg/L	ID	0.0016	0.0016	ID	ID	ND(0.004)	ND(0.001)
Dibenz(a,h)anthracene	mg/L	NLV	0.002	0.00249	ID	ID	ND(0.008)	ND(0.002)
Dibenzofuran	mg/L	10	ID	10	ID	ID	ND(0.016)	ND(0.004)
Diethyl phthalate	mg/L	NLV	1100	1080	NA	ID	ND(0.02)	ND(0.005)
Dimethyl phthalate	mg/L	NLV	4200	4190	NA	ID	ND(0.02)	ND(0.005)
Di-n-butylphthalate (DBP)	mg/L	NLV	11	11.2	NA	ID	ND(0.02)	ND(0.005)
Di-n-octyl phthalate (DnOP)	mg/L	NLV	0.4	3	ID	ID	ND(0.02)	ND(0.005)
Fluoranthene	mg/L	0.21	0.21	0.206	ID	ID	ND(0.004)	ND(0.001)
Fluorene	mg/L	2	2	1.98	ID	ID	ND(0.02)	0.00045 J
Hexachlorobenzene	mg/L	3	0.0046	6.2	ID	ID	ND(0.0008)	ND(0.0002)
Hexachlorobutadiene	mg/L	3.2	0.4	3.23	ID	ID	ND(0.004)	ND(0.001)
Hexachlorocyclopentadiene	mg/L	0.42	1.6	1.8	ID	ID	ND(0.02)	ND(0.005)
Hexachloroethane	mg/L	50	1.9	50	ID	ID	ND(0.02)	ND(0.005)
Indeno(1,2,3-cd)pyrene	mg/L	NLV	0.002	0.000022	ID	ID	ND(0.008)	ND(0.002)
Isophorone	mg/L	NLV	990	12000	NA	12000	ND(0.02)	ND(0.005)
Naphthalene	mg/L	31	31	31	NA	31	ND(0.02)	ND(0.005)
Nitrobenzene	mg/L	550	11	2090	NA	ID	ND(0.012)	ND(0.003)
N-Nitrosodi-n-propylamine	mg/L	NLV	0.36	9890	ID	ID	ND(0.02)	ND(0.005)
N-Nitrosodiphenylamine	mg/L	NLV	35	35.1	ID	ID	ND(0.02)	ND(0.005)
Pentachlorophenol	mg/L	NLV	0.2	1850	ID	ID	ND(0.02)	ND(0.005)
Phenanthrene	mg/L	1	1	1	ID	ID	ND(0.008)	ND(0.002)
Phenol	mg/L	NLV	29000	82800	NA	ID	ND(0.02)	ND(0.005)
Pyrene	mg/L	0.14	0.14	0.135	ID	ID	ND(0.02)	ND(0.005)
Metals								
Aluminum	mg/L	NLV	64000	NA	ID	ID	ND(0.2)	ND(0.2)
Antimony	mg/L	NLV	68	NA	ID	ID	0.00017 J	ND(0.002)
Arsenic	mg/L	NLV	4.3	NA	ID	ID	0.0037 J	ND(0.005)
Barium	mg/L	NLV	14000	NA	ID	ID	0.251	0.247
Beryllium	mg/L	NLV	290	NA	ID	ID	ND(0.001)	ND(0.001)
Cadmium	mg/L	NLV	190	NA	ID	ID	ND(0.001)	ND(0.001)
Calcium	mg/L	NA	NA	NA	NA	NA	261	260
Chromium	mg/L	NLV	460	NA	ID	ID	ND(0.005)	ND(0.005)
Chromium VI (hexavalent)	mg/L	NLV	460	NA	ID	ID	ND(0.02)U	ND(0.02)U
Cobalt	mg/L	NLV	2400	NA	ID	ID	ND(0.007)	ND(0.007)
Copper	mg/L	NLV	7400	NA	ID	ID	ND(0.002)U	ND(0.002)U
Iron	mg/L	NLV	58000	NA	ID	ID	36.8	36.8
Lead	mg/L	NLV	ID	NA	ID	ID	0.0102 J	0.0059 J
Magnesium	mg/L	NLV	1000000	NA	ID	ID	70.8	70.6
Manganese	mg/L	NLV	9100	NA	ID	ID	1.43	1.42
Mercury	mg/L	0.056	0.056	0.056	ID	ID	ND(0.0002)	ND(0.0002)
Nickel	mg/L	NLV	74000	NA	ID	ID	ND(0.02)	ND(0.02)
Potassium	mg/L	NA	NA	NA	NA	NA	20.9	20.9
Selenium	mg/L	NLV	970	NA	ID	ID	ND(0.005)	ND(0.005)
Silver	mg/L	NLV	1500	NA	ID	ID	ND(0.0002)	ND(0.0002)
Sodium	mg/L	NLV	1000000	NA	ID	ID	73.9	74.1
Thallium	mg/L	NLV	13	NA	ID	ID	0.0002 J	0.00014 J
Vanadium	mg/L	NLV	970	NA	ID	ID	ND(0.004)	ND(0.004)
Zinc	mg/L	NLV	110000	NA	ID	ID	0.0092 J	0.0071 J
PCBs								

Appendix B

Table 3.4
Groundwater Analytical Data
Standard of Care Plan
Dearborn Refining Site
Dearborn, Michigan

Sample Location		***Michigan Act 451, Part 201 Cleanup Criteria and Part 213 Risk-based Screening Levels: Non-Residential Generic Cleanup Criteria[1]***					***MW4-08***	***MW4-08***
Sample Identification		Non-Residential Groundwater	Groundwater	Water	Flammability and	Acute	***GW-48041-122908-MC-002***	***GW-48041-122908-MC-003***
Sample Date		Volatilization to	Contact	Solubility	Explosivity	Inhalation	***12/29/2008***	***12/29/2008***
Sample Type		Indoor Air Inhalation			Screening Levels	Screening Levels		***Duplicate***
		a	b	c	d	e		
	Units							
Aroclor-1016 (PCB-1016)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1221 (PCB-1221)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1232 (PCB-1232)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1242 (PCB-1242)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1248 (PCB-1248)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1254 (PCB-1254)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Aroclor-1260 (PCB-1260)	mg/L	NA	NA	NA	NA	NA	ND(0.0001)UJ	ND(0.0001)UJ
Total PCBs	mg/L	0.045	0.0033	0.0447	ID	ID	ND	ND

Notes:

(1) Cleanup criteria identified by MDEQ RRD Op Memo No. 1, updated 9/28/2012, pursuant to 1994 PA 451 as amended.
MDEQ - Michigan Department of Environmental Quality
-- - Not Analyzed
NA- Not Available
mg/L - milligrams per liter
ID - insufficient data to develop criterion.
NLL - hazardous substance is not likely to leach under most soil conditions.
NLV - hazardous substance is not likely to volatilize under most conditions.
ND ( ) - Not detected at the associated reporting limit.
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration.
R - Rejected

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