#### ENVIRONMENTAL CONSTRUCTION PLAN – DUE CARE APPROXIMATE 16.165-ACRE PARCEL FORMER GOLF DRIVING RANGE 61400 VAN DYKE ROAD WASHINGTON TOWNSHIP, MACOMB COUNTY, MICHIGAN

#### 61400 VAN DYKE, LLC

#### C/O

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#### **1.0 INTRODUCTION**

The subject property consists of an irregular-shaped parcel containing approximately 16.165 acres of land at 61400 Van Dyke Avenue in Washington Township, Macomb County, Michigan. A Site Location Map, which shows the approximate location of the subject property, accompanies this report as Attachment I.

This Environmental Construction Plan – Due Care is intended to address owner and occupant responsibilities during site development and construction: to prevent exacerbation of existing contamination; exercise due care to mitigate unacceptable exposures to workers and future occupants of the property; take reasonable precautions against foreseeable acts or omissions of third parties; provide reasonable cooperation, assistance, and access to persons authorized to conduct response activities; and to comply with and not impede any land use and resource use restrictions in connection with the facility.

#### 2.0 DETAILED PROPERTY INFORMATION

#### 2.1 PROPERTY DESCRIPTION

The subject property is approximately 16.165 acres of land at 61400 Van Dyke Avenue in Washington Township, Macomb County, Michigan (Parcel Number 24-04-22-400-008). A legal description for the subject property and Site Map are appended to this report as Attachment II.

#### 2.2 PROPERTY FEATURES AND CURRENT PROPERTY USE

The subject property is currently vacant land and is located within a commercial area.

A Site Sketch, which depicts the existing property, is included as Attachment III.

There are no known land use restrictions recorded at the subject property.

#### 2.3 PROPOSED DEVELOPMENT

The subject property is proposed for construction of two multi-tenant buildings, parking lot, retention ponds, and gravel covered storage yard.

A Proposed Site Plan, which shows proposed development features, is included as Attachment IV.

## 3.0 IDENTIFICATION OF COMPLETE EXPOSURE PATHWAYS

A complete exposure pathway requires a contamination source and a receptor, where the receptor concentration can be expected to be above the applicable criteria.

The following table summarizes complete or potentially complete exposure pathways that would be relevant during site development and construction activities at the subject property:

| Potential Pathway                               | Relevant Property Conditions/<br>Discussion  | Relevant (yes or no) |
|---|--|----------------------|
| Drinking Water/<br>Drinking Water<br>Protection | There are no drinking water wells on the property.   | No                   |
| Direct contact                                  | A person could come in contact with soil<br>on the property during site development<br>and construction activities.  | Yes                  |
| Particulate Soil Inhalation                     | A person could inhale ambient air<br>particulate from substances present in soil<br>via wind erosion during site development<br>and construction activities. | Yes                  |
| Volatile Soil Inhalation –<br>Infinite Source   | A person could inhale ambient air<br>particulate from substances present in soil<br>via wind erosion during site development<br>and construction activities. | Yes                  |
| Soil Volatilization to<br>Indoor Air            | There are no buildings on the subject property.  | No                   |
| Groundwater<br>Volatilization to Indoor<br>Air  | There are no buildings on the subject property.  | No                   |
| Groundwater-surface<br>water interface          | There are no surface water bodies on the subject property.   | No                   |

## 4.0 HISTORICAL PROPERTY USE

The table below presents a consolidated summary of historic use information pertaining to the subject property from available standard historical sources reviewed during the Phase I ESA.

| Year | Source            | Information  |
|------|-------------------|--|
| 1908 | Topographic Map   | The subject property is depicted as vacant and adjacent to Romeo Branch Railroad.  |
| 1937 | Aerial Photograph | The subject property appears as vacant land with dense vegetation.   |
| 1940 | Aerial Photograph | The subject property appears as vacant land with dense vegetation.   |
| 1946 | Topographic Map   | The subject property is depicted as "wooded marsh or<br>swamp." Surface elevations are shown at approximately 720<br>to 740 feet above the National Geodetic Vertical Datum of<br>1929. Symbols depict a power transmission line and tower on<br>the west portion of the property. |

| Year | Source            | Information  |
|------|-------------------|--|
| 1949 | Aerial Photograph | The subject property appears as vacant land with dense vegetation.   |
| 1952 | Topographic Map   | The subject property is depicted as "wooded marsh or<br>swamp." Surface elevations are shown at approximately 720<br>to 740 feet above the National Geodetic Vertical Datum of<br>1929.  |
| 1956 | Aerial Photograph | The subject property appears as vacant land with dense vegetation.   |
| 1961 | Aerial Photograph | The subject property appears as vacant land with dense vegetation.   |
| 1962 | City Directory    | 61400 Van Dyke Avenue is not listed.   |
| 1967 | Aerial Photograph | The previous dense vegetation appears to be cleared on the<br>west portion of the subject property. The dense vegetation<br>remains apparent on the east portion of the property. Apparent<br>soil disturbances and stockpiles are visible on the west portion<br>of the property. |
| 1967 | City Directory    | 61400 Van Dyke Avenue is not listed.   |
| 1968 | Topographic Map   | The subject property is depicted as "marsh or swamp" on the<br>west portion and "wooded marsh or swamp" on the east<br>portion. Surface elevations are shown at approximately 720 to<br>740 feet above the National Geodetic Vertical Datum of 1929.                               |
| 1972 | Aerial Photograph | The previous dense vegetation is no longer visible. The subject property appears as disturbed land with soil stockpiles. s t.  |
| 1972 | City Directory    | 61400 Van Dyke Avenue is not listed.   |
| 1973 | Aerial Photograph | The subject property appears as vacant, cleared land with an apparent stockpile near the west-central portion. Soil disturbances are visible along the south and west property boundaries.   |
| 1973 | Topographic Map   | The subject property is depicted as "marsh or swamp" on the west portion and "wooded marsh or swamp" on the east portion. Surface elevations are shown at approximately 720 to 740 feet above the National Geodetic Vertical Datum of 1929.  |
| 1977 | City Directory    | 61400 Van Dyke Avenue is not listed.   |
| 1980 | Topographic Map   | The subject property is depicted as "marsh or swamp" on the west portion and "wooded marsh or swamp" on the east portion. Surface elevations are shown at approximately 720 to 740 feet above the National Geodetic Vertical Datum of 1929.  |
| 1980 | Aerial Photograph | The subject property appears as vacant, idle land. Soil disturbances are visible on the west portion of the property.  |
| 1982 | City Directory    | 61400 Van Dyke Avenue is not listed.   |
| 1983 | Aerial Photograph | The subject property appears as vacant land. Apparent soil disturbances are visible on the west portion of the property.   |

| Year | Source               | Information   |
|------|----------------------|---|
| 1983 | Topographic Map      | The subject property is depicted as "marsh or swamp" on the west portion and "wooded marsh or swamp" on the east portion. Surface elevations are shown at approximately 720 to 740 feet above the National Geodetic Vertical Datum of 1929. |
| 1987 | Aerial Photograph    | The subject property appears as vacant, idle land. Apparent<br>soil disturbances are visible on the west portion of the<br>property. Apparent wooded areas are present on the south and<br>east portions of the subject property.           |
| 1987 | City Directory       | 61400 Van Dyke Avenue is not listed in city directories.  |
| 1990 | Aerial Photograph    | The subject property appears as vacant land. Apparent soil disturbances are visible on the property.  |
| 1992 | Assessing Department | Building at 61400 Van Dyke Avenue constructed.  |
| 1992 | City Directory       | 61400 Van Dyke Avenue is not listed.  |
| 1995 | City Directory       | 61400 Van Dyke Avenue is listed as "Royal Tee Golf & Range".  |
| 1997 | Aerial Photograph    | The subject property appears developed in what is now known as a golf driving range.  |
| 1999 | Aerial Photograph    | The subject property appears developed in what is now known as a golf driving range.  |
| 2000 | City Directory       | 61400 Van Dyke Avenue is not listed.  |
| 2005 | City Directory       | 61400 Van Dyke Avenue is not listed.  |
| 2006 | Aerial Photograph    | The subject property appears developed in what is now known<br>as a golf driving range. The majority of the subject property<br>appears as grass-covered land.  |
| 2009 | Aerial Photograph    | The subject property appears developed in what is now known<br>as a golf driving range. The majority of the subject property<br>appears as grass-covered land.  |
| 2010 | City Directory       | 61400 Van Dyke Avenue is not listed.  |
| 2012 | Aerial Photograph    | The subject property appears developed in what is now known as a golf driving range.  |
| 2014 | Topographic Map      | Contour lines shift and depict the property as approximately 730 to 740 feet above the National Geodetic Vertical Datum of 1929. The symbol depicting a wooded area is present on the south portion of the subject property.                |
| 2014 | City Directory       | 61400 Van Dyke Avenue is not listed.  |
| 2016 | Aerial Photograph    | The subject property appears developed in what is now known as a golf driving range.  |
| 2017 | Topographic Map      | Symbols depicting woods are shown near the south, north, and east boundaries of the subject property.   |
| 2017 | City Directory       | 61400 Van Dyke Avenue is listed as "Royal Tee Golf & Range".  |
| 2019 | Topographic Map      | Symbols depicting woods are shown near the south, north, and east boundaries of the subject property.   |
| 2021 | Aerial Photograph    | The subject property appears developed in what is now known as a golf driving range.  |

| Year | Source              | Information   |
|------|---------------------|---|
| 2022 | Site Reconnaissance | The subject property was vacant land that was formerly a golf<br>driving range. The soil on the south, east, and north property<br>boundaries was disturbed revealing large amounts of scattered<br>debris. Mixed wooden and steel debris stockpiles were<br>observed near the south and east property boundaries. A<br>crushed, 55-gallon oil drum with leaking apparent petroleum<br>product was observed near the south property boundary.<br>Fragments of a concrete filled drum were observed on the<br>south property boundary. |

ASTM E 1527-21 indicates that the historic use objective for a property is to identify the uses of the property back to the property's first developed use, or 1940, whichever is earlier. Historic information for the subject property was available back to 1908. The property was vacant at that time and appeared as vacant, wooded land in the 1937 aerial photograph.

No data gaps were noted during the review of historical information.

Historic sources indicate the property was vacant land prior to apparent filling activity in the 1960's and developed use as golf driving range in 1992. No data failure was encountered during the historic review.

## 4.1 HISTORICAL HAZARDOUS SUBSTANCE USE

Based on review of the above-referenced reports, the subject property has been filled with soil and possible foundry sand.

No known hazardous substances use was identified in historical records.

Known contamination on the subject property is described in Section 8.0.

## 5.0 PROPERTY GEOLOGY/ HYDROGEOLOGY/ TOPOGRAPHY

|  | Approximately 720 to 740 feet above the National Geodetic Vertical Datum of 1929.  |
|--|--|
|  | Topography would appear to slope southeast.  |
| <b>USGS Topographic Map</b><br>Romeo Quadrangle<br>Photorevised 2017 | Surface water flow on the subject property would appear to be<br>diverted to storm water catch basins located on the west portion<br>of the subject property. While shallow groundwater flow tends to<br>follow surface topography, it should be noted that subsurface<br>geotechnical conditions, underground utilities, historical filling,<br>and increased development could influence the local direction of<br>groundwater flow. If an accurate determination of the direction of<br>groundwater flow is desired, a hydrogeological investigation<br>would be necessary. |

| <b>USDA Soil Survey</b><br>Macomb County | Lu – Lupton muck<br>Ta – Tawas muck<br>Gd – Gilford sandy loam |  |
|--|--|--|
| Farrand and Bell<br>Quaternary Geology   | Lacustrine sand and gravel                                     |  |
| Segall and Wilson<br>Bedrock Geology     | Coldwater shale  |  |

#### Soils Investigation Report

In August 2022, McDowell & Associates completed a Soils Investigation Report for the subject property. The results of that investigation were presented in an engineering report, McDowell & Associates Job No. 22-252 dated August 1, 2022. As that report was a Soils Investigation for site preparation and foundation purposes, no special attempt was made to evaluate subsoil conditions for chemical contamination and/or hazardous waste. Such evaluation requires special site assessment procedures that are performed only if specifically required.

A total of four soil borings were made on the subject property. The Log of Soil Boring sheets generally show fill soil with possible foundry sand and peat to depths between 5'6" and 8' below ground surface (bgs). A petroleum odor was noted in fill soil containing possible foundry sand at Soil Boring 4 at depths between 5'3" and 8' bgs. Fill was underlain by wet brown sand and peat followed by silty clay, silt, and sand. Groundwater was encountered in each of the soil borings at depths ranging between 5'3" and 7'8" bgs.

Copies of the Log of Soil Boring Sheets and Soil Boring Location Map from that investigation are appended.

#### 6.0 ASSESSMENT OF APPLICABILITY OF PART 201 GENERIC CRITERIA

Contaminants detected on the subject property were compared to the following:

- Statewide Default Background Levels for metals
- EGLE Generic Residential Direct Contact Criteria
- EGLE Generic Residential Ambient Air Inhalation Criteria- Particulate Soil
- EGLE Generic Residential Ambient Air Inhalation Criteria- Volatile Soil
- EGLE Residential Volatilization to Indoor Air Pathway (VIAP) Screening Level for Mercury

## 7.0 IDENTIFICATION OF CATEGORY

The subject property is vacant and planned for commercial use. Based on that information, the EGLE Generic Non-Residential Criteria have been used for comparative criteria.

## 8.0 CONTAMINANT INFORMATION

The accompanying Tables 1 through 4 summarize chemical test results in comparison to current EGLE Generic Residential Criteria (December 2013) and EGLE Residential VIAP Screening Levels (September 2020).

The following compounds were detected in soil and groundwater on the subject property above EGLE Generic Non-Residential Criteria and VIAP Screening Levels:

| Compound                | Matrix    | Samples                      | Maximum<br>Concentration | Criteria<br>Exceeded |  |  |  |  |
|-------------------------|-----------|------------------------------|--------------------------|----------------------|--|--|--|--|
| Metals                  |           |                              |                          |                      |  |  |  |  |
| Amonio                  | Soil      | 101b                         | 19.9 mg/kg               | GSI, DW              |  |  |  |  |
| Arsenic                 | 5011      | 106b                         | 38.6 mg/kg               | GSI, DW, DC          |  |  |  |  |
| Copper                  | Soil      | 101b, 105b-D, 160b           | 1,200 mg/kg              | GSI                  |  |  |  |  |
| Iron                    | Soil      | 102b, 105b-D                 | 22,200 mg/kg             | DW                   |  |  |  |  |
| Manganese               | Soil      | 102b, 105b, 105b-D,<br>S-108 | 920 mg/kg                | DW, GSI              |  |  |  |  |
| Selenium                | Soil      | 103c                         | 0.64 mg/kg               | GSI                  |  |  |  |  |
| Zinc                    | Soil      | 101b, 106b                   | 3,120 mg/kg              | GSI                  |  |  |  |  |
| Polynuclear Aromatic Hy | drocarboi | ıs (PNAs)                    | -                        |                      |  |  |  |  |
| Phenanthrene            | Soil      | 106b                         | 8,700 ug/kg              | GSI                  |  |  |  |  |
| Volatile Organic Compou | unds      |                              |                          |                      |  |  |  |  |
| 1,3-Dichlorobenzene     | Soil      | 106b                         | 400 ug/kg                | VIAP                 |  |  |  |  |
| 1,4-Dichlorobenzene     | Soil      | 106b                         | 400 ug/kg                | GSI                  |  |  |  |  |
| Ethylbenzene            | Soil      | 106b, 106c                   | 79,000 ug/kg             | DW, GSI, VIAP        |  |  |  |  |
| Isopropylbenzene        | Soil      | 106b                         | 2,200 ug/kg              | VIAP                 |  |  |  |  |
| Methane (dissolved)     | Water     | 101W, 103W                   | 18,000 ug/L              | VIAP, FESL           |  |  |  |  |
| 2-Methylnaphthalene     | Soil      | 106b                         | 5,000 ug/kg              | GSI                  |  |  |  |  |
| Naphthalene             | Soil      | 106b                         | 2,400 ug/kg              | GSI, VIAP            |  |  |  |  |
| Toluene                 | Soil      | 106b                         | 11,000 ug/kg             | GSI                  |  |  |  |  |
| 1,2,4-Trimethylbenzene  | Soil      | 106b, 106c                   | 13,000 ug/kg             | DW, GSI, VIAP        |  |  |  |  |
| 1,3,5-Trimethylbenzene  | Soil      | 106b                         | 4,000 ug/kg              | DW, GSI, VIAP        |  |  |  |  |
| Xylenes                 | Soil      | 106b, 106c                   | 310,000 ug/kg            | DW, GSI, VIAP        |  |  |  |  |

GSI- Groundwater Surface Water Interface

DW- Drinking Water

**DC-** Direct Contact

VIAP- Volatilization to Indoor Air Pathway Screening Level

FESL- Flammability and Explosivity Screening Level

An Exceedance Map is provided which shows chemical test results above applicable generic residential criteria and SSVIAC.

#### 9.0 COMPLETE EXPOSURE PATHWAYS AND RESPONSE ACTIVITIES OR CORRECTIVE ACTIONS THAT WILL BE COMPLETED TO MITIGATE UNACCEPTABLE EXPOSURES

The potential source of contamination on the subject property is soil. Following is a discussion of each pathway and potential transport mechanisms of concern considered relevant at the property given test results.

#### Soil Direct Contact

Arsenic was detected in one soil sample (106b) at a concentration above the EGLE Generic Non-Residential Direct Contact Criterion.

A person could come in contact with soil on the property during site development and construction activities.

Subsurface work at the property must be conducted in accordance with a Health and Safety Plan (HASP) that references this Environmental Construction Plan- Due Care.

Contractors and workers who may come in contact with on-site soil are to be notified of the potential contaminants. Workers must be provided and use Level D Personal Protective Equipment (PPE) during any activity where they may come into contact with fill soil in the Remedial Area. Level D PPE consists of long-sleeve coveralls, steel toe and shank boots, gloves, and hard hat.

All workers involved at the property are required to receive a briefing prior to beginning work that describes site environmental conditions, concerns related to known and potential other contamination, and methods to be used to prevent exposure to contaminants.

Public access to the property must be restricted with a security fence with access controlled by the contractor responsible for site activities. Site visitors must be cleared for access inside the property fence by said representative after receipt of an appropriate briefing. Any unauthorized visitors must be prevented from entering the property.

#### Soil Particulate Inhalation and Soil Volatilization to Ambient Air

A person could inhale ambient air particulate from substances present in soil via wind erosion during site development and construction activities.

Contaminants were not encountered in soil on the subject property at concentrations that exceed EGLE Generic Residential or Non-Residential Particulate Soil or Volatilization to Ambient Air Inhalation Criteria, nor is such contamination expected.

Dust control measures are to be implemented during construction to prevent dispersion by wind.

Workers should not be allowed to enter the remedial excavation once it is greater than 4' in depth, which could be considered to be a confined space, unless test results demonstrate contaminants of concern have been removed.

#### Flammability and Explosivity

Dissolved methane was detected in 101W and 103W at concentrations above the EGLE Flammability and Explosivity Screening Level.

As methane is lighter than air, it can become trapped below impervious structures or pavements, migrate to an undesirable location, and accumulate at explosive concentrations.

Current methane that is present below the ground surface at the subject property is expected to be venting freely to the atmosphere through existing soil cover. A due care measure planned to address methane is use of a permeable gravel surface to allow methane to continue to disperse readily to the atmosphere without creating an explosion hazard.

Use of a gravel surface at the property is intended to ensure that methane that might be generated at the property can vent to the ground surface rather than creating a potential explosion hazard at the subject property. This method will also minimize risk of methane on the property being forced to migrate offsite onto neighboring properties, while use of an impervious surface on the property would increase the likelihood that methane could migrate to neighboring properties.

A sub-slab soil gas mitigation system will be required below future structures built on the property within the influence of subsurface methane. That system will be addressed under separate cover once site development and construction plans have been developed.

#### **10.0 RESPONSE ACTIVITY PLAN**

No response activities are planned at this time.

#### 10.1 EXACERBATION

Soil removed from the property is to be properly characterized to ensure proper disposal.

A mud mat with inspection station will be constructed on the property to allow vehicles loaded with contaminated soil to address potential contaminated soil that has accumulated on vehicle tires or equipment.

Use of a gravel surface at the property is intended to ensure that methane that might be generated at the property can vent to the ground surface rather than creating a potential explosion hazard at the subject property. This method will also minimize risk of methane on the property being forced to migrate offsite onto neighboring properties, while use of an impervious surface on the property would increase the likelihood that methane could migrate to neighboring properties.

#### 10.2 DUE CARE

A sub-slab soil gas mitigation system will be required below future structures built on the property within the influence of subsurface methane. That system will be addressed under separate cover once site development and construction plans have been developed.

Subsurface work at the property must be conducted in accordance with a Health and Safety Plan (HASP) that references this Environmental Construction Plan- Due Care.

Contractors and workers who may come in contact with on-site soil are to be notified of the potential contaminants. Workers must be provided and use Level D Personal Protective Equipment (PPE) during any activity where they may come into contact with fill soil in the Remedial Area. Level D PPE consists of long-sleeve coveralls, steel toe and shank boots, gloves, and hard hat.

All workers involved at the property are required to receive a briefing prior to beginning work that describes site environmental conditions, concerns related to known and potential other contamination, and methods to be used to prevent exposure to contaminants.

Workers should not be allowed to enter the remedial excavation once it is greater than 4' in depth, which could be considered to be a confined space, unless test results demonstrate contaminants of concern have been removed.

#### 10.3 REASONABLE PRECAUTIONS

Dust control measures are to be implemented during construction to prevent dispersion by wind.

Public access to the property must be restricted with a security fence with access controlled by the contractor responsible for site activities. Site visitors must be cleared for access inside the property fence by said representative after receipt of an appropriate briefing. Any unauthorized visitors must be prevented from entering the property.

#### 10.4 REASONABLE COOPERATION, ASSISTANCE, AND ACCESS

61400 Van Dyke, LLC and its contractors will provide reasonable cooperation, assistance and access to persons who are authorized to conduct response activities at the facility, including the cooperation and access necessary for the installation, integrity, operation, and maintenance of any complete or partial response activity at the facility.

#### 10.5 LAND USE/RESOURCE USE RESTRICTIONS

There are no known land use restrictions recorded at the subject property.

61400 Van Dyke, LLC will not impede the effectiveness or integrity of any future land use or resource use restriction employed at the facility in connection with response activities.

#### 11.0 CONTACTS

This Environmental Construction Plan – Due Care is intended to address owner and occupant responsibilities during site development and construction: to prevent exacerbation of existing contamination; exercise due care to mitigate unacceptable exposures to workers and future occupants of the property; take reasonable precautions against foreseeable acts or omissions of third parties; provide reasonable cooperation, assistance, and access to persons authorized to conduct response activities; and to comply with and not impede any land use and resource use restrictions in connection with the facility.

This Environmental Construction Plan – Due Care was authored by Jennifer Lagerbohm, M.S., CHMM and reviewed by Douglas M. McDowell, M.S., P.E., on February 28, 2024. Jennifer Lagerbohm and Douglas M. McDowell meet the definition of Environmental Professionals as defined in 312.10 of 40 CFR 312.

The authors can be reached by phone at 248-399-2066 or by email at jennifer.lagerbohm@mcdowasc.com and doug.mcdowell@mcdowasc.com.

If you have any questions regarding the information contained within this Environmental Construction Plan – Due Care, please do not hesitate to call.

Very truly yours,

McDOWELL & ASSOCIATES

For Jennife Lagerbohm

Jennifer Lagerbohm, M.S. CHMM Environmental Manager

Douglas M. McDowell, M.S., P.E. President

JL/DM/jl

## **12.0 ATTACHMENTS**

Table 1- Summary of Metals Chemistry Results (Soil) Table 2- Summary of PNAs Chemistry Results (Soil) Table 3- Summary of Detected VOCs Chemistry Results (Soil) Table 4- Summary of Detected VOCs Chemistry Results (Water)

| Attachment I -   | Site Location Map  |
|------------------|--------------------|
| Attachment II -  | Legal Description  |
| Attachment II -  | Site Sketch        |
| Attachment III - | Proposed Site Plan |
| Attachment IV-   | Exceedance Map     |

Table 1

Summary of Metals Chemistry Results (Soil)

#### TABLE 1 - SUMMARY OF METALS CHEMISTRY RESULTS (Soil)

Antimony Beryllium 7440417 Aluminum Arsenic Barium Cadmium Sample Date Description 7429905 7440360 7440382 7440393 7440439 101b 10/26/2022 3'-4' NT NT 19.9 136 NT 0.83 <0.50 102b 10/26/2022 2'-3' 1,560 0.9 17.2 <0.20 <0.20 2'6"-3'6" NT 103c 10/26/2022 NT 4.98 85.7 NT 0.51 104b 10/26/2022 1'-2' 3'-4' 2,000 <0.50 1.22 26.2 <0.20 0.37 105b 10/26/2022 3,890 1,980 <0.50 <0.50 0.80 1.52 54.6 0.42 <0.20 <0.20 <0.20 105b-D 10/26/2022 Duplicate 32.1 106b 10/26/2022 3'-4' NT NT 38.6 24.2 NT 1.04 106c 10/26/2022 4'-5' NT NT 1.45 58.9 NT <0.20 S-107 10/26/2022 0'-1' 2,050 <0.50 1.71 29.4 <0.20 0.51 S-108 10/26/2022 0'-1' 3,250 <0.50 1.79 49.1 0.34 0.43 EGLE Statewide Default Background Levels EGLE Generic Residential 6,900 NA 5.8 75 NA 1.2 6.0/3.6(7) Groundwater Protection Criteria NA 4.3/94 4.6/4.6 1,300/440(7) 51/85(7) EGLE Generic Non-Residential **Groundwater Protection Criteria** NA 4.3/ 94 4.6/4.6 1,300/440(7) 51/85(7) 6.0/3.6(7) EGLE Generic Residential Particulate Soil Inhalation Criteria EGLE Generic Non-Residential ID 13,000 720 330,000 1,300 1,700 Particulate Soil Inhalation Criteria ID 5,900 910 150,000 590 2,200 EGLE Generic Residential Volatile Soil Inhalation Criteria (VSIC) EGLE Generic Residential NLV NLV NLV NLV NLV NLV Direct Contact Criteria 50,000 180 7.6 37,000 410 550 EGLE Generic Non-Residential Direct Contact Criteria 370,000 670 37 130,000 1,600 2,100

| Sample             | Date       | Description | Calcium<br>7440702 | Chromium III<br>16065831 | Cobalt<br>7440484 | Copper<br>7440508 | Iron<br>7439896 | Total Lead<br>7439921         |
|--------------------|------------|-------------|--------------------|--------------------------|-------------------|-------------------|-----------------|-------------------------------|
| 101b               | 10/26/2022 | 3'-4'       | NT                 | 207                      | NT                | 268               | NT              | 139 (325- fine, 84.4- coarse) |
| 102b               | 10/26/2022 | 2'-3'       | 2.010              | 26.3 (total)             | 4.32              | 33.7              | 16.800          | 9.71                          |
| 103c               | 10/26/2022 | 2'6"-3'6"   | NT                 | 20.4 (total)             | NT                | 20.7              | NT              | 39.4                          |
| 104b               | 10/26/2022 | 1'-2'       | 3.550              | 30.5 (total)             | 1.38              | 14.7              | 8.350           | 47.6                          |
| 105b               | 10/26/2022 | 3'-4'       | 10.200             | 10.3(total)              | 1.6               | 10.7              | 8.440           | 5.99                          |
| 105b-D             | 10/26/2022 | Duplicate   | 4.630              | 49.8 (total)             | 3.92              | 79.6              | 22.200          | 4.26                          |
| 106b               | 10/26/2022 | 3'-4'       | NT                 | 1,460                    | NT                | 1,200             | NT              | 427                           |
| 106c               | 10/26/2022 | 4'-5'       | NT                 | 8.9 (total)              | NT                | 8.79              | NT              | 24.9                          |
| S-107              | 10/26/2022 | 0'-1'       | 2,750              | 25.1 (total)             | 1.86              | 45.8              | 11,200          | 37.2                          |
| S-108              | 10/26/2022 | 0'-1'       | 8,300              | 12.4(total)              | 1.66              | 16.6              | 7,490           | 26.4                          |
| EGLE Statewide     |            |             |                    |                          |                   |                   |                 |                               |
| Default Background | Levels     |             | NC                 | 18                       | 6.8               | 32                | 12,000          | 21                            |

| Bolaut Buolgi ound Eoroio            |    | 10                     | 0.0     |             | .2,000  |              |
|--------------------------------------|----|------------------------|---------|-------------|---------|--------------|
| EGLE Generic Residential             |    |                        |         |             |         |              |
| Groundwater Protection Criteria      | NC | 1,000,000/2,880,000(7) | 0.8/2.0 | 5,800/75(7) | 6.0/NA  | 700/5,100(7) |
| EGLE Generic Non-Residential         |    |                        |         |             |         |              |
| Groundwater Protection Criteria      | NC | 1,000,000/2,880,000(7) | 2.0/2.0 | 5,800/75(7) | 6.0/NA  | 700/5,100(7) |
| EGLE Generic Residential             |    |                        |         |             |         |              |
| Particulate Soil Inhalation Criteria | NC | 330,000                | 13,000  | 130,000     | ID      | 100,000      |
| EGLE Generic Non-Residential         |    |                        |         |             |         |              |
| Particulate Soil Inhalation Criteria | NC | 330,000                | 5,900   | 59,000      | ID      | 44,000       |
| EGLE Generic Residential Volatile    |    |                        |         |             |         |              |
| Soil Inhalation Criteria (VSIC)      | NC | NLV                    | NLV     | NLV         | NLV     | NLV          |
| EGLE Generic Residential             |    |                        |         |             |         |              |
| Direct Contact Criteria              | NC | 790,000                | 2,600   | 20,000      | 160,000 | 400          |
| EGLE Generic Non-Residential         |    |                        |         |             |         |              |
| Direct Contact Criteria              | NC | 1,000,000              | 9,000   | 73,000      | 580,000 | 900          |

McDowell Job No. 22-16324 GM 11/11/22; JL 3/2/2024

#### TABLE 1 - SUMMARY OF METALS CHEMISTRY RESULTS (Soil)-Cont'd

| Sample   | Date                         | Description | Magnesium<br>7439954 | Manganese<br>7439965 | Mercury<br>7439976  | Nickel<br>7440020 | Potassium<br>7440097 | Selenium<br>7782492 |
|--|------------------------------|-------------|----------------------|----------------------|---------------------|-------------------|----------------------|---------------------|
| 4045   | 40/00/0000                   | 01.41       | NT                   | NT                   | 0.000               | NT                | NT                   | -0.40               |
| 1010   | 10/26/2022                   | 3-4         | 300                  | 588                  | <0.059              | 31.9              | NI<br>117            | <0.40               |
| 102b   | 10/26/2022                   | 2'6"-3'6"   | NT                   | NT                   | <0.050              | NT                | NT                   | 0.64                |
| 104b   | 10/26/2022                   | 1'-2'       | 1.110                | 245                  | <0.050              | 7.53              | 186                  | <0.40               |
| 105b   | 10/26/2022                   | 3'-4'       | 678                  | 920                  | <0.050              | 9.19              | 213                  | <0.40               |
| 105b-D   | 10/26/2022                   | Duplicate   | 393                  | 609                  | <0.050              | 23.5              | 161                  | <0.40               |
| 106b   | 10/26/2022                   | 3'-4'       | NT                   | NT                   | <0.050              | NT                | NT                   | <1.25               |
| 106c   | 10/26/2022                   | 4'-5'       | NT                   | NT                   | <0.050              | NT                | NT                   | <0.40               |
| S-107  | 10/26/2022                   | 0'-1'       | 544                  | 370                  | <0.050              | 16.6              | 326                  | <0.40               |
| S-108  | 10/26/2022                   | 0'-1'       | 1,190                | 777                  | <0.050              | 9.67              | 413                  | <0.40               |
| EGLE Statewide                                 | ovole                        |             | NA                   | 440                  | 0.12                | 20                | NC                   | 0.41                |
| EGLE Generic Reside                            | ential                       |             | NA                   | 440                  | 0.15                | 20                | NO                   | 0.41                |
| Groundwater Protect                            | ion Criteria                 |             | 8,000                | 1.0/56(7)            | 1.7/0.05            | 100/76(7)         | NC                   | 4.0/0.4             |
| Groundwater Protect                            | ion Criteria                 |             | 22,000               | 1.0/56(7)            | 1.7/0.05            | 100/76(7)         | NC                   | 4.0/0.4             |
| EGLE Generic Reside<br>Particulate Soil Inhala | ential<br>ation Criteria     |             | 6,700,000            | 3,300                | 52 (48-indoor)      | 13,000            | NC                   | 130,000             |
| EGLE Generic Non-R                             | esidential                   |             | 2 900 000            | 1 500                | 62 (89 indeer)      | 13 000            | NC                   | 59.000              |
| EGLE Generic Reside                            | ential Volatile              |             | 2,300,000            | 1,500                | 62 (65- IIId001)    | 13,000            | NO                   | 53,000              |
| Soil Inhalation Criteri                        | a (VSIC)                     |             | NLV                  | NLV                  | 0.52                | NLV               | NC                   | NLV                 |
| Direct Contact Criteri                         | a                            |             | 1,000,000            | 2,500                | 160                 | 40,000            | NC                   | 2,600               |
| EGLE Generic Non-R                             | esidential                   |             |                      |                      |                     |                   | 110                  |                     |
| Direct Contact Criteri                         | a                            |             | 1,000,000            | 90,000               | 580                 | 790,000           | NC                   | 9,600               |
|  |                              |             |                      |                      |                     |                   | _                    |                     |
| Sample   | Date                         | Description | Silver<br>7440224    | Sodium<br>7440235    | Thallium<br>7440280 | 7440622           | Zinc<br>7440666      |                     |
| 101b   | 10/26/2022                   | 3'-4'       | 0.55                 | NT                   | NT                  | NT                | 334                  |                     |
| 102b   | 10/26/2022                   | 2'-3'       | <0.20                | 26.1                 | <0.20               | 2.46              | 24.2                 |                     |
| 103c   | 10/26/2022                   | 2'6"-3'6"   | <0.20                | NT                   | NT                  | NT                | 82.3                 |                     |
| 104b   | 10/26/2022                   | 1'-2'       | <0.20                | 59.7                 | <0.20               | 2.5               | 76.7                 |                     |
| 105b   | 10/26/2022                   | 3'-4'       | <0.20                | 79.7                 | <0.20               | 1.72              | 27.6                 |                     |
| 105b-D   | 10/26/2022                   | Duplicate   | <0.20                | 39.6                 | <0.20               | 3.86              | 11.3                 |                     |
| 106b   | 10/26/2022                   | 3'-4'       | 0.70                 | NT                   | NT                  | NT                | 3,120                |                     |
| 106c   | 10/26/2022                   | 4'-5'       | <0.20                | NT                   | NT                  | NT                | 36.8                 |                     |
| S-107  | 10/26/2022                   | 0'-1'       | <0.20                | 27.4                 | <0.20               | 2.11              | 109                  |                     |
| S-108  | 10/26/2022                   | 0'-1'       | <0.20                | 72.8                 | <0.20               | 2.97              | 69.7                 |                     |
| EGLE Statewide                                 |                              |             |                      |                      |                     |                   |                      |                     |
| Default Background I                           | Levels                       |             | 1.0                  | NA                   | NA                  | NA                | 47                   |                     |
| EGLE Generic Reside                            | ential                       |             |                      |                      |                     |                   |                      |                     |
| EGLE Generic Non-R                             | ion Criteria<br>esidential   |             | 4.5/0.1              | NA                   | 2.3/4.2             | 72/430            | 2,400/169(7)         |                     |
| Groundwater Protect                            | ion Criteria                 |             | 13/0.1               | NA                   | 2.3/4.2             | 990,000/430       | 5,000/169(7)         |                     |
| Particulate Soil Inhal                         | ation Criteria               |             | 6,700                | ID                   | 13,000              | ID                | ID                   |                     |
| EGLE Generic Non-R<br>Particulate Soil Inhal   | esidential<br>ation Criteria |             | 2,900                | ID                   | 5,900               | ID                | ID                   |                     |
| EGLE Generic Reside                            | ential Volatile              |             | NI V                 | NLV                  | NI V                | NI V              | NI V                 |                     |
| EGLE Generic Reside                            | ential                       |             | NLV                  | NLV                  | NLV                 | NLV               |                      |                     |
| Direct Contact Criteri                         | a                            |             | 2,500                | 1,000,000            | 35                  | 750               | 170,000              |                     |

1,000,000

5,500

630,000

130

NOTES:

1. All values expressed in mg/kg

2. Michigan Department of Environment, Great Lakes, and Energy (EGLE) Generic Criteria from Table 2. Soil: Residential, and Table 3. Soil: Nonresidential. Part 201

Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels," dated December 30, 2013.

3. Most rigorous of Ambient Air Criteria presented.

EGLE Generic Non-Residential Direct Contact Criteria

4. Groundwater Protection Criteria presented as Drinking Water/Ground Water Surface Water Interface (GSI)

5. Chemical Abstract Service (CAS) Numbers are presented below chemicals as provided by EGLE.

6. "ID" = EGLE indicates inadequate data to develop criterion.

7. EGLE indicates that some chemical-specific GSI criteria are based upon the hardness of the receiving waters, and for the purpose of evaluating the potential need for remedial activities.

EGLE allows an estimated hardness value of 150 mg/L to be used. Final determination of compliance with criteria must be based on site specific hardness.

The estimated GSI value shown is not protective of surface water used as a drinking water source.

8. Boldface values exceed EGLE Statewide Default Background Levels or Facility-Specific Background Levels.

exceed Statewide Default and EGLE Generic Residential Groundwater Protection Criteria. 9. Values shown thus

exceed Statewide Default and EGLE Generic Residential Direct Contact Criteria. 10. Values shown thus 11. "NT" = not tested.

12. Distinctive testing would be required to determine the relative concentrations of chromium III and VI. Results of chromium IV testing on Samples 101b and 106b showed no chromium VI was detected. For the purposes of this table chromium III comparative criteria are used.

9,000

13. NC= No published EGLE criteria

Table 2

Summary of PNAs Chemistry Results (Soil)

#### TABLE 2 - SUMMARY OF PNAs CHEMISTRY RESULTS (Soil)

McDowell Job No. 22-16324 GM 11/11/22; JL 3/2/2024

| Sample                               | Date                         | Description    | Acenaphthene<br>83329 | Acenaphthylene<br>208968 | Anthracene<br>120127 | Benzo(a)anthracene<br>56553 | Benzo(a)pyrene<br>50328 | Benzo(b)fluoranthene<br>205992 |
|--------------------------------------|------------------------------|----------------|-----------------------|--------------------------|----------------------|-----------------------------|-------------------------|--------------------------------|
| 101b                                 | 10/26/2022                   | 3'-4'          | <600                  | <600                     | <600                 | <600                        | <600                    | <600                           |
| 102b                                 | 10/26/2022                   | 2'-3'          | 1 280                 | <330                     | <330                 | 3 830                       | 7 660                   | 5 640                          |
| 103c                                 | 10/26/2022                   | 2'6"-3'6"      | <300                  | <300                     | 400                  | 500                         | 400                     | 800                            |
| 104b                                 | 10/26/2022                   | 1'-2'          | <330                  | <330                     | <330                 | <330                        | <330                    | <330                           |
| 105b                                 | 10/26/2022                   | 3'-4'          | <300                  | <300                     | <300                 | <300                        | <300                    | <300                           |
| 105b-D                               | 10/26/2022                   | Duplicate      | <300                  | <300                     | <300                 | <300                        | <300                    | <300                           |
| 106b                                 | 10/26/2022                   | 3'-4'          | <2.900                | <2.900                   | <2.900               | <2.900                      | <2.900                  | <2.900                         |
| 106c                                 | 10/26/2022                   | 4'-5'          | <300                  | <300                     | <300                 | <300                        | <300                    | <300                           |
| S-107                                | 10/26/2022                   | 0'-1'          | <330                  | <330                     | <330                 | <330                        | <330                    | <330                           |
| S-108                                | 10/26/2022                   | 0'-1'          | <300                  | <300                     | <300                 | <300                        | <300                    | <300                           |
| EGLE Residential Volat               | tilization to Indoor         | Air            |                       |                          |                      |                             |                         |                                |
| Pathway (VIAP) Screen                | ing Levels                   |                | 200,000               | DATA                     | 13,000,000           | 160,000                     | NA                      | NA                             |
| EGLE Non-Residential                 | Volatilization to Inc        | loor Air       |                       |                          |                      |                             |                         |                                |
| Pathway (VIAP) Screen                | ing Levels                   |                | 3,600,000             | DATA                     | 220,000,000          | 11,000,000                  | NA                      | NA                             |
| EGLE Generic Residen                 | tial                         |                |                       |                          |                      |                             |                         |                                |
| Groundwater Protectio                | n Criteria                   |                | 300,000/8,700         | 5,900/ID                 | 41,000/ID            | NLL/NLL                     | NLL/NLL                 | NLL/NLL                        |
| EGLE Generic Non-Res                 | sidential                    |                | 000 000/0 700         | 17 000//D                | 44.000//D            |                             |                         |                                |
| Groundwater Protectio                | n Criteria                   |                | 880,000/8,700         | 17,000/ID                | 41,000/ID            | NLL/NLL                     | NLL/NLL                 | NLL/NLL                        |
| EGLE Generic Residen                 | tial                         |                | 100 000 000           | 1 600 000                | 1 000 000 000        | NI V                        | NI V                    | ID                             |
| EGLE Generic Non-Res                 | sidential                    |                | 190,000,000           | 1,000,000                | 1,000,000,000        | NEV                         | NEV                     | ID                             |
| Indoor Air Inhalation C              | riteria                      |                | 350,000,000           | 3,000,000                | 1,000,000,000        | NLV                         | NLV                     | ID                             |
| EGLE Generic Residen                 | tial                         |                |                       |                          |                      |                             |                         |                                |
| Volatile Soil Inhalation             | Criteria (VSIC)              |                | 81,000,000            | 2,200,000                | 1,400,000,000        | NLV (ID)                    | 1,500,000               | ID                             |
| EGLE Generic Non-Res                 | sidential<br>Criteria (VSIC) |                | 97 000 000            | 2 700 000                | 1 600 000 000        |                             | 1 900 000               | п                              |
| EGLE Generic Residen                 | tial                         |                | 51,000,000            | 2,700,000                | 1,000,000,000        |                             | 1,000,000               | 10                             |
| Particulate Soil Inhalation Criteria |                              | 14,000,000,000 | 2,300,000,000         | 67,000,000,000           | ID                   | 1,500,000                   | ID                      |                                |
| EGLE Generic Non-Res                 | sidential                    |                |                       |                          |                      |                             |                         |                                |
| Particulate Soil Inhalation Criteria |                              | 6,200,000,000  | 1,000,000,000         | 29,000,000,000           | ID                   | 1,900,000                   | ID                      |                                |
| EGLE Generic Residen                 | tial                         |                |                       |                          |                      |                             |                         |                                |
| Direct Contact Criteria              |                              |                | 41,000,000            | 1,600,000                | 230,000,000          | 20,000                      | 2,000                   | 20,000                         |
| EGLE Generic Non-Res                 | sidential                    |                |                       |                          |                      |                             |                         |                                |
| Direct Contact Criteria              |                              |                | 130,000,000           | 5,200,000                | 730,000,000          | 80,000                      | 8,000                   | 80,000                         |

| Sample                       | Date                  | Description      | Benzo(g,h,i)perylene<br>191242 | Benzo(k)fluoranthene<br>207089 | Chrysene<br>218019 | Dibenzo(a,h)anthracene<br>53703 | Fluoranthene<br>206440 | Fluorene<br>86737 |
|------------------------------|-----------------------|------------------|--------------------------------|--------------------------------|--------------------|---------------------------------|------------------------|-------------------|
| 1015                         | 40/06/0000            | 21.41            | -600                           | -600                           | 000                | -600                            | 700                    | -600              |
| 1010                         | 10/26/2022            | 3-4              | <600                           | <000                           | 900                | <000                            | 700                    | <000              |
| 1020                         | 10/26/2022            | 2-3              | 2,760                          | 4,710                          | 4,230              | 520<br><300                     | 3,600                  | <330              |
| 1030                         | 10/20/2022            | 20-30            | <300                           | <220                           | <220               | <300                            | <220                   | <300              |
| 1055                         | 10/20/2022            | 1-2              | <300                           | <330                           | <330               | <330                            | <330                   | <330              |
| 105b D                       | 10/20/2022            | 0-4<br>Duplicate | <300                           | <300                           | <300               | <300                            | <300                   | <300              |
| 1055-5                       | 10/20/2022            | 2' 4'            | <2.000                         | <3.000                         | <2.000             | <2.000                          | <2.000                 | <300              |
| 1065                         | 10/20/2022            | 3-4<br>1' E'     | <2,900                         | <2,900                         | ~2,900             | <2,900                          | <2,900                 | <2,900            |
| 5 107                        | 10/20/2022            | 4-5              | <330                           | <300                           | <330               | <330                            | <300                   | <300              |
| 5-107                        | 10/20/2022            | 0-1              | <300                           | <330                           | <330               | <330                            | <330                   | <330              |
| 5-106                        | 10/20/2022            | 0-1              | <300                           | <300                           | <300               | <300                            | <300                   | <300              |
| EGLE Residential Volat       | tilization to Indoor  | Air              |                                |                                |                    |                                 |                        |                   |
| Pathway (VIAP) Screen        | ing Levels            |                  | NA                             | NA                             | NA                 | NA                              | NA                     | 470,000           |
| EGLE Non-Residential         | Volatilization to Inc | door Air         |                                |                                |                    |                                 |                        |                   |
| Pathway (VIAP) Screen        | ing Levels            |                  | NA                             | NA                             | NA                 | NA                              | NA                     | 8,300,000         |
| EGLE Generic Residen         | itial                 |                  |                                |                                |                    |                                 |                        |                   |
| Groundwater Protectio        | n Criteria            |                  | NLL/NLL                        | NLL/NLL                        | NLL/NLL            | NLL/NLL                         | 730,000/5,500          | 390,000/5,300     |
| EGLE Generic Non-Res         | sidential             |                  |                                |                                |                    |                                 |                        |                   |
| Groundwater Protectio        | n Criteria            |                  | NLL/NLL                        | NLL/NLL                        | NLL/NLL            | NLL/NLL                         | 730,000/5,500          | 890,000/5,300     |
| EGLE Generic Residen         | itial                 |                  |                                |                                |                    |                                 |                        |                   |
| Indoor Air Inhalation C      | riteria               |                  | NLV                            | NLV                            | ID                 | NLV                             | 1,000,000,000          | 580,000,000       |
| EGLE Generic Non-Res         | sidential             |                  | NI W                           | NIL V                          | ID                 | NI V                            | 1 000 000 000          | 1 000 000 000     |
| EQLE Conorio Booidon         | tiol                  |                  | NLV                            | NLV                            | ID                 | NEV                             | 1,000,000,000          | 1,000,000,000     |
| Volatile Soil Inhalation     | Criteria (VSIC)       |                  | NLV                            | NLV                            | ID                 | NLV                             | 740.000.000            | 130.000.000       |
| EGLE Generic Non-Res         | sidential             |                  |                                |                                |                    |                                 | .,,                    |                   |
| Volatile Soil Inhalation     | Criteria (VSIC)       |                  | NLV                            | NLV                            | ID                 | NLV                             | 890,000,000            | 150,000,000       |
| EGLE Generic Residen         | itial                 |                  |                                |                                |                    |                                 |                        |                   |
| Particulate Soil Inhalat     | ion Criteria          |                  | 800,000,000                    | NLV (ID)                       | ID                 | NLV (ID)                        | 740,000,000            | 130,000,000       |
| EGLE Generic Non-Residential |                       |                  |                                |                                |                    |                                 |                        |                   |
| Particulate Soil Inhalat     | ion Criteria          |                  | 350,000,000                    | NLV (ID)                       | ID                 | NLV (ID)                        | 880,000,000            | 150,000,000       |
| EGLE Generic Residen         | tial                  |                  |                                |                                |                    |                                 |                        |                   |
| Direct Contact Criteria      |                       |                  | 2,500,000                      | 200,000                        | 2,000,000          | 2,000                           | 46,000,000             | 27,000,000        |
| EGLE Generic Non-Res         | sidential             |                  | 7 000 000                      | 800.000                        | 8 000 000          | 8 000                           | 120 000 000            | 87 000 000        |
| Direct Contact Criteria      |                       |                  | 1,000,000                      | 000,000                        | ٥,000,000          | 0,000                           | 130,000,000            | o7,000,000        |

#### TABLE 2 - SUMMARY OF PNAs CHEMISTRY RESULTS (Soil)- Cont'd

| Sample                               | Date                       | Description | Indeno(1,2,3-cd)pyrene<br>193395 | 2-Methylnaphthalene<br>91576 | Naphthalene<br>91203 | Phenanthrene<br>85018 | Pyrene<br>129000 |
|--------------------------------------|----------------------------|-------------|----------------------------------|------------------------------|----------------------|-----------------------|------------------|
| 101b                                 | 10/26/2022                 | 3'-4'       | <600                             | <600                         | 700                  | 1,800                 | 1,300            |
| 102b                                 | 10/26/2022                 | 2'-3'       | 2,790                            | <330                         | 390                  | 1,160                 | 3,210            |
| 103c                                 | 10/26/2022                 | 2'6"-3'6"   | <300                             | <300                         | <300                 | 1,100                 | 1,000            |
| 104b                                 | 10/26/2022                 | 1'-2'       | <330                             | <330                         | <330                 | <330                  | <330             |
| 105b                                 | 10/26/2022                 | 3'-4'       | <300                             | <300                         | <300                 | <300                  | <300             |
| 105b-D                               | 10/26/2022                 | Duplicate   | <300                             | <300                         | <300                 | <300                  | <300             |
| 106b                                 | 10/26/2022                 | 3'-4'       | <2,900                           | 3,200                        | <2,900               | 8,700                 | <2,900           |
| 106c                                 | 10/26/2022                 | 4'-5'       | <300                             | 600                          | 500                  | 1,500                 | 400              |
| S-107                                | 10/26/2022                 | 0'-1'       | <330                             | <330                         | <330                 | <330                  | <330             |
| S-108                                | 10/26/2022                 | 0'-1'       | <300                             | <300                         | <300                 | <300                  | <300             |
| EGLE Residential V                   | olatilization to Indoor    | Air         |                                  |                              |                      |                       |                  |
| Pathway (VIAP) Scr                   | eening Levels              |             | NA                               | 1,700                        | 67                   | 1,700                 | 25,000,000       |
| EGLE Non-Resident                    | tial Volatilization to Inc | loor Air    |                                  |                              |                      |                       |                  |
| Pathway (VIAP) Scr                   | eening Levels              |             | NA                               | 30,000                       | 1,900                | 29,000                | 440,000,000      |
| EGLE Generic Residential             |                            |             | NI 1 /NI 1                       | 57 000/4 200                 | 25 000/720           | 56 000/2 100          | 480 000//D       |
| EGLE Conoric Non-                    | Posidontial                |             | NEL/NEL                          | 57,000/4,200                 | 35,000/730           | 56,000/2,100          | 480,000/ID       |
| Groundwater Protect                  | ction Criteria             |             | NLL/NLL                          | 170,000/4,200                | 100,000/730          | 160,000/2,100         | 480,000/ID       |
| EGLE Generic Resid                   | dential                    |             |                                  |                              |                      |                       |                  |
| Indoor Air Inhalatio                 | n Criteria                 |             | NLV                              | 2,700,000                    | 250,000              | 2,800,000             | 1,000,000,000    |
| EGLE Generic Non-                    | Residential                |             |                                  |                              |                      |                       |                  |
| Indoor Air Inhalatio                 | n Criteria                 |             | NLV                              | 4,900,000                    | 470,000              | 5,100,000             | 1,000,000,000    |
| EGLE Generic Resid                   | dential                    |             |                                  |                              |                      |                       |                  |
| Volatile Soil Inhalat                | ion Criteria (VSIC)        |             | NLV (ID)                         | 1,500,000                    | 300,000              | 160,000               | 650,000,000      |
| Volatile Soil Inhalat                | ion Criteria (VSIC)        |             | NLV (ID)                         | 1 800 000                    | 350.000              | 190.000               | 780 000 000      |
| FGI E Generic Resi                   | dential                    |             |                                  | 1,000,000                    | 000,000              | 150,000               | 100,000,000      |
| Particulate Soil Inhalation Criteria |                            |             | ID                               | 670,000,000                  | 200,000,000          | 6,700,000             | 6,700,000,000    |
| EGLE Generic Non-                    | Residential                |             |                                  |                              |                      |                       |                  |
| Particulate Soil Inha                | alation Criteria           |             | ID                               | 290,000,000                  | 88,000,000           | 2,900,000             | 2,900,000,000    |
| EGLE Generic Resid                   | dential                    |             |                                  | • •                          | • •                  | · ·                   | · · · · -        |
| Direct Contact Crite                 | ria                        |             | 20,000                           | 8,100,000                    | 16,000,000           | 1,600,000             | 29,000,000       |
| EGLE Generic Non-                    | Residential                |             |                                  |                              |                      |                       |                  |
| Direct Contact Crite                 | ria                        |             | 80 000                           | 26 000 000                   | 52 000 000           | 5 200 000             | 84 000 000       |

NOTES:

1. All values expressed in µg/kg

2. Michigan Department of Environment, Great Lakes, and Energy (EGLE) Generic Criteria from Table 2. Soil: Residential, and Table 3. Soil: Nonresidential. Part 201

Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels," dated December 30, 2013. EGLE VIAP Screening Levels dated September 4, 2020.

3. Most rigorous of Ambient Air Criteria presented.

4. Groundwater Protection Criteria presented as Drinking Water/Ground Water Surface Water Interface (GSI)

7. "NLL" = EGLE indicates not likely to leach.

8. "NLV" = EGLE indicates not likely to volatilize.

9. Boldfaced values exceed EGLE Generic Residential Groundwater Protection Criteria. 10. Values shown thus exceed EGLE Generic Residential Indoor Air Inhalation Criteria.

exceed EGLE Generic Residential Direct Contact Criteria. 11. Values shown thus

12. Values shown thus exceed EGLE Generic Residential Ambient Air Inhalation Criteria.

13. "\*" = Value exceeds multiple EGLE Generic Residential Criteria.

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<sup>5.</sup> Chemical Abstract Service (CAS) Numbers are presented below chemicals as provided by EGLE. 6. "ID" = EGLE indicates inadequate data to develop criterion.

Table 3

Summary of Detected VOCs Chemistry Results (Soil)

#### TABLE 3 - SUMMARY OF DETECTED ORGANICS CHEMISTRY RESULTS (Soil)

| Sample                                   | Date                     | Description | n-Butylbenzene<br>104518 | sec-Butylbenzene<br>135988 | 1,3-Dichlorobenzene<br>541731 | 1,4-Dichlorobenzene<br>106467 | Ethylbenzene<br>100414 | Isopropylbenzene<br>98828 |  |
|--|--------------------------|-------------|--------------------------|----------------------------|-------------------------------|-------------------------------|------------------------|---------------------------|--|
| 1026                                     | 10/26/2022               | 21.21       | ~50                      | <50                        | <100                          | <100                          | <50                    | <200                      |  |
| 1020                                     | 10/20/2022               | 2-3         | <50                      | <50                        | <100                          | <100                          | <50                    | <300                      |  |
| 104b                                     | 10/20/2022               | 1-2         | < <u>50</u>              | ~50                        | <100                          | <100                          | 22,420                 | < 300                     |  |
| 100b Dealiante                           | 10/20/2022               | J-4         | 1000                     | 290                        | 400                           | 400                           | 32,420                 | 2,200                     |  |
| 106b Replicate                           | 10/26/2022               | Replicate   | <1,000                   | <1,000                     | <3,000                        | <3,000                        | 79,000                 | <7,000                    |  |
| 1060                                     | 10/26/2022               | 4'-5'       | 130                      | 90                         | <100                          | <100                          | 4,460                  | 400                       |  |
| EGLE Residential Volat                   | ilization to Indoor Air  | r           |                          |                            |                               |                               |                        |                           |  |
| Pathway (VIAP) Screeni                   | ng Levels                |             | 550                      | 3,800                      | 10                            | 23                            | 12                     | 3.8                       |  |
| EGLE Non-Residential                     | Volatilization to Indoo  | or Air      |                          |                            |                               |                               |                        |                           |  |
| Pathway (VIAP) Screeni                   | ng Levels                |             | 9,800                    | 66,000                     | 180                           | 660                           | 340                    | 110                       |  |
| EGLE Generic Resident                    | tial                     |             |                          |                            |                               |                               |                        |                           |  |
| Groundwater Protection                   | n Criteria               |             | 1,600/ID                 | 1,600/ID                   | 170/680                       | 1,700/360                     | 1,500/360              | 91,000/3,200              |  |
| EGLE Generic Non-Res                     | idential                 |             |                          |                            |                               |                               |                        |                           |  |
| Groundwater Protection                   | n Criteria               |             | 4,600/ID                 | 4,600/ID                   | 480/680                       | 1,700/360                     | 1,500/360              | 260,000/3,200             |  |
| EGLE Generic Resident                    | tial                     |             |                          |                            |                               |                               |                        |                           |  |
| Indoor Air Inhalation Cr                 | iteria                   |             | ID                       | ID                         | 26,000                        | 19,000                        | 87,000                 | 400,000                   |  |
| EGLE Generic Non-Res                     | idential                 |             | 10                       | ID                         | 49,000                        | 100.000                       | 400.000                | 730.000                   |  |
| ECLE Conoria Resident                    | iteria                   |             | ID                       | ID                         | 48,000                        | 100,000                       | 460,000                | 730,000                   |  |
| Volatile Soil Inhalation                 | Criteria (VSIC)          |             | 2 000 000 000            | 400 000 000                | 79.000                        | 77 000                        | 720 000                | 1 700 000                 |  |
| EGLE Generic Non-Res                     | idential                 |             | 2,000,000,000            | 100,000,000                | 10,000                        | 11,000                        | 120,000                | 1,100,000                 |  |
| Volatile Soil Inhalation Criteria (VSIC) |                          |             | 880,000,000              | 180,000,000                | 94,000                        | 260,000                       | 2,400,000              | 2,000,000                 |  |
| EGLE Generic Resident                    | EGLE Generic Residential |             |                          |                            |                               |                               |                        |                           |  |
| Direct Contact Criteria                  |                          |             | 880,000,000              | 180,000,000                | 88,000,000                    | 570,000,000                   | 13,000,000,000         | 2,600,000,000             |  |
| EGLE Generic Non-Residential             |                          |             |                          |                            |                               |                               |                        |                           |  |
| Particulate Soil Inhalati                | on Criteria              |             | 2,500,000                | 2,500,000                  | 200,000                       | 400,000                       | 22,000,000             | 390,000                   |  |
| EGLE Generic Resident                    | EGLE Generic Residential |             |                          |                            |                               |                               |                        |                           |  |
| Direct Contact Criteria                  |                          |             | 8,000,000                | 8,000,000                  | 660,000                       | 1,900,000                     | 71,000,000             | 80,000,000                |  |
|  |                          |             |                          |                            |                               |                               |                        |                           |  |

| Sample                               | Date                    | Description | p-Isopropyltoluene<br>99876 | 2-Methylnaphthalene<br>91576 | Naphthalene<br>91203 | n-Propylbenzene<br>103651 | Toluene<br>108883 | 1,2,3-Trimethylbenzene<br>526738 |
|--------------------------------------|-------------------------|-------------|-----------------------------|------------------------------|----------------------|---------------------------|-------------------|----------------------------------|
| 102b                                 | 10/26/2022              | 2' 3'       | <100                        | 100                          | <300                 | <50                       | 60                | <50                              |
| 102b                                 | 10/26/2022              | 1'-2'       | <100                        | <100                         | <300                 | <50                       | <60               | <50                              |
| 106b                                 | 10/26/2022              | 3'_4'       | 200                         | 3 100                        | 2 400                | 2 430                     | 9 300             | 3 420                            |
| 106b Replicate                       | 10/26/2022              | Penlicate   | <3.000                      | 5,000                        | <7.000               | 3,000                     | 11 000            | 4 000                            |
| 106c                                 | 10/26/2022              | 4'-5'       | <100                        | 100                          | <300                 | 700                       | 750               | 410                              |
| EGLE Residential Volat               | ilization to Indoor Air |             |                             |                              |                      |                           |                   |                                  |
| Pathway (VIAP) Screeni               | ing Levels              |             | NC                          | 1,700                        | 67                   | 1,800                     | 3,700             | 270                              |
| EGLE Non-Residential                 | Volatilization to Indoo | or Air      |                             |                              |                      |                           |                   |                                  |
| Pathway (VIAP) Screen                | ing Levels              |             | NC                          | 30,000                       | 1,900                | 21,000                    | 64,000            | 4,800                            |
| EGLE Generic Resident                |                         |             |                             | 57 000/1 000                 | 05 000 500           | 4 000/10                  | 10 000/5 100      |                                  |
| Groundwater Protection               | n Criteria              |             | NC                          | 57,000/4,200                 | 35,000/730           | 1,600/ID                  | 16,000/5,400      | NC                               |
| Groundwater Protection               | n Criteria              |             | NC                          | 170.000/4.200                | 100.000/730          | 4.600/ID                  | 16.000/5.400      | NC                               |
| EGLE Generic Resident                | tial                    |             |                             | ,====                        | ,                    | .,                        |                   |                                  |
| Indoor Air Inhalation Cr             | riteria                 |             | NC                          | 2,700,000                    | 250,000              | ID                        | 330,000           | NC                               |
| EGLE Generic Non-Res                 | idential                |             |                             |                              | •                    |                           | •                 |                                  |
| Indoor Air Inhalation Cr             | riteria                 |             | NC                          | 4,900,000                    | 470,000              | ID                        | 610,000           | NC                               |
| EGLE Generic Resident                | tial                    |             |                             |                              |                      |                           |                   |                                  |
| Volatile Soil Inhalation             | Criteria (VSIC)         |             | NC                          | 1,500,000                    | 300,000              | ID                        | 2,800,000         | NC                               |
| EGLE Generic Non-Res                 | idential                |             |                             |                              |                      |                           |                   |                                  |
| Volatile Soil Inhalation             | Criteria (VSIC)         |             | NC                          | 1,800,000                    | 350,000              | ID                        | 3,300,000         | NC                               |
| EGLE Generic Resident                | tial                    |             |                             |                              |                      |                           |                   |                                  |
| Particulate Soil Inhalation Criteria |                         |             | NC                          | 670,000,000                  | 200,000,000          | 1,300,000,000             | 27,000,000,000    | NC                               |
| EGLE Generic Non-Residential         |                         |             |                             |                              | ~~~~~                | 500 000 000               | 10 000 000 000    |                                  |
| Particulate Soil Inhalation Criteria |                         |             | NG                          | 290,000,000                  | 00,000,000           | ວອບ,ບ00,000               | 12,000,000,000    | NC                               |
| EGLE Generic Residential             |                         |             | NG                          | 8 100 000                    | 16 000 000           | 2 500 000                 | 50 000 000        | NC                               |
| EGLE Conorio Non Boo                 | idential                |             | INC                         | 0,100,000                    | 10,000,000           | 2,500,000                 | 50,000,000        | NC                               |
| Direct Contact Criteria              | luential                |             | NC                          | 26 000 000                   | 52 000 000           | 8 000 000                 | 160 000 000       | NC                               |
| Direct Contact Criteria              |                         |             | 110                         | 20,000,000                   | 52,000,000           | 0,000,000                 | 100,000,000       | NC                               |

#### TABLE 3 - SUMMARY OF DETECTED ORGANICS CHEMISTRY RESULTS (Soil)- Cont'd

1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Xylenes Sample Date Description 95636 108678 1330207 102b 10/26/2022 2'-3' <50 <50 <50 104b 10/26/2022 1'-2' <50 <50 <50 3'-4' 10,020 3,060 125,510 106b 10/26/2022 106b Replicate 10/26/2022 Replicate 13,000 4,000 310,000 106c 10/26/2022 4'-5' 2,460 15,080 390 EGLE Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels 150 100 280 EGLE Non-Residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels 2,600 1,800 5,000 EGLE Generic Residential **Groundwater Protection Criteria** 2,100/570 1,800/1,100 5,600/820 EGLE Generic Non-Residential Groundwater Protection Criteria EGLE Generic Residential 1,800/1,100 2,100/570 5,600/820 Indoor Air Inhalation Criteria 4,300,000 2,600,000 6,300,000 EGLE Generic Non-Residential Indoor Air Inhalation Criteria 8,000,000 4,800,000 12,000,000 EGLE Generic Residential Volatile Soil Inhalation Criteria (VSIC) 21,000,000 16,000,000 46,000,000 EGLE Generic Non-Residential 25,000,000 19,000,000 54,000,000 Volatile Soil Inhalation Criteria (VSIC) EGLE Generic Residential Particulate Soil Inhalation Criteria 82,000,000,000 82,000,000,000 290,000,000,000 EGLE Generic Non-Residential Particulate Soil Inhalation Criteria 36,000,000,000 36,000,000,000 130,000,000,000 EGLE Generic Residential Direct Contact Criteria 32,000,000 32,000,000 410,000,000 EGLE Generic Non-Residential 1,000,000,000 **Direct Contact Criteria** 100,000,000 100,000,000

NOTES

1. All values expressed in µg/kg

2. Michigan Department of Environment, Great Lakes, and Energy (EGLE) Generic Criteria from Table 2. Soil: Residential, and Table 3. Soil: Nonresidential. Part 201

Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels," dated December 30, 2013. EGLE VIAP Screening Levels dated September 4, 2020. 3. Most rigorous of Ambient Air Criteria presented.

4. Groundwater Protection Criteria presented as Drinking Water/Ground Water Surface Water Interface (GSI)

5. Chemical Abstract Service (CAS) Numbers are presented below chemicals as provided by EGLE.

6. "ID" = EGLE indicates inadequate data to develop criterion.

"NA" = EGLE indicates criterion not applicable.
Boldfaced values exceed EGLE Generic Residential Drinking Water and/or Groundwwater Surface Interface. (GSI)

10. Values shown thus exceed EGLE Generic Residential Direct Contact Criteria.

11. Values shown thus exceed EGLE Generic Residential Volatilization to Indoor Air Inhalation Screening Level. (VIAP)

12. "\*" = Value exceeds multiple EGLE Generic Residential Criteria.

13. NC= No published EGLE criteria

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Table 4

Summary of Detected VOCs Chemistry Results (Water)

| TABLE 4 - SUM            | GM 11/11/22; JL 3/2/2024 |                |                        |                  |                    |  |
|--------------------------|--------------------------|----------------|------------------------|------------------|--------------------|--|
| Sample                   | Date                     | Description    | Ethylbenzene<br>100414 | Methane<br>74828 | Xylenes<br>1330207 |  |
| 101W                     | 10/28/2022               | 4'6"-9'6"      | <1                     | 18,000           | <1                 |  |
| 103W                     | 10/28/2022               | 4'-9'          | <1                     | 11,000           | <1                 |  |
| 105W                     | 10/28/2022               | 4'-9'          | <1                     | 190              | <b>⊐</b> <1        |  |
| 106S-W                   | 10/28/2022               | 4'-9'          | 4                      | 6,600            | 15                 |  |
| 106D-W                   | 10/28/2022               | 9'-14'         | 3                      | 150              | 10                 |  |
| EGLE Residential         | Shallow Groundwater      | Volatilization |                        |                  |                    |  |
| to Indoor Air Path       | way (VIAP) Screening     | Levels         | 2.8                    | 10,000           | 75                 |  |
| EGLE NON-Reside          | ntial Shallow Ground     | water          | 28                     | 10 000           | 410                |  |
| EGLE Residential         | Groundwater Not in C     | Contact        | 20                     | 10,000           | 410                |  |
| VIAP Screening Le        | evels                    |                | 74                     | 10,000 2,000     |                    |  |
| EGLE Non-Reside          | ntial Groundwater No     | t in Contact   |                        |                  |                    |  |
| VIAP Screening Le        | evels                    |                | 170                    | 10,000           | 3,000              |  |
| EGLE Generic Res         | sidential                |                |                        |                  |                    |  |
| <b>Drinking Water Cr</b> | iteria                   |                | 74                     | ID               | 280                |  |
| EGLE Generic Nor         | n-Residential            |                |                        |                  |                    |  |
| Drinking Water Cr        | iteria                   |                | 74                     | ID               | 280                |  |
| EGLE Generic Gro         | oundwater                |                |                        |                  |                    |  |
| Surface Water Inte       | erface Criteria          |                | 18                     | NA               | 41                 |  |
| Flammability and         | Explosivity              |                |                        |                  |                    |  |
| Screening Level          |                          |                | 43,000                 | 10,000           | 70,000             |  |

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NOTES:

1. Michigan Department of Environment, Great Lakes, and Energy (EGLE) Generic Criteria from "Table 1. Groundwater: Residential and Non-Residential. Part 201

Generic Cleanup Criteria and Screening Levels/Part 213 Risk-Based Screening Levels," dated December 30, 2013. EGLE VIAP Screening Levels dated September 4, 2020. 2. All values expressed in µg/L.

3. Chemical Abstract Service (CAS) Numbers, as provided by EGLE, are presented below chemical name.

4. "ID" = EGLE indicates insufficient data to develop criterion.

5. "NA" = EGLE indicates criterion not applicable.

6. Boldfaced values exceed EGLE Generic Residential Drinking Water Criteria.

7. Values shown thus exceed EGLE Generic GSI Criteria.

8. Values shown thus exceed EGLE Generic Residential Volatilization to Indoor Air Inhalation Criteria.

## Attachment I

## Site Location Map



# Site Location Map



Data use subject to license. @ DeLorme. Topo North America™ 9. www.delorme.com MN (7.7 %V)

Scale 1 : 24,000 200 1000 1000 2000 200 1000 1000 2000 1° = 2,000.0 ft Data Zoom 13-0 Attachment II

Legal Description

#### LEGAL DESCRIPTION OF 61400 VAN DYKE, WASHINGTON TOWNSHIP, MICHIGAN

Commencing at the South 1/4 post of Section 22, Town 4 North, Range 12 East; thence North 02 degrees 24 minutes 17 seconds East 657.93 feet to the point of beginning; thence continuing North 02 degrees 24 minutes 17 seconds East 122.0 feet; thence North 32 degrees 33 minutes 15 seconds East 564.25 feet along the Southerly right of way line of Van Dyke Road; thence North 89 degrees 16 minutes 12 seconds East 993.7 feet; thence South 0 degrees 50 minutes 47 seconds West 606.20 feet; thence South 89 degrees 49 minutes 19 seconds West 1293.45 feet to the point of beginning.

Tax Parcel ID Number: 24-04-22-400-008 Commonly known as: 61400 Van Dyke, Washington Township, MI Attachment III

Site Sketch







<u>LEGEND</u>

- APPROXIMATE PROPERTY BOUNDARY

- <u>NOTES:</u>
- ALL LOCATIONS APPROXIMATE
- 2021 AERIAL PHOTOGRAPH



Attachment IV

Proposed Site Plan





Attachment V

Exceedance Map



# Exceedance Map

