



CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN FOR CONSTRUCTION ACTIVITIES

1000 General Drive, Plymouth Township, Michigan

PREPARED FOR Wolf Five, LLC
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PROJECT # 8231F-15-27

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CORRECTIVE MEASURES IMPLEMENTATION WORK PLAN FOR CONSTRUCTION ACTIVITIES

1000 General Drive, Plymouth Township, Michigan

AKT Peerless Project No. 8231F-15-27

1.0 Introduction

AKT Peerless prepared this Corrective Measures Implementation Work Plan For Construction Activities (CMI Work Plan) on behalf of Wolf Five, LLC, (the Owner) for the property located at 1000 General Drive, Plymouth Township, Wayne County, Michigan (the Subject Property). The Subject Property is comprised of two parcels previously identified as Parcel A and Parcel C that were part of the former Wycoff Steel site, which is regulated under Part 111, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA), as amended, and the administrative rules promulgated thereunder (Part 111). The Subject Property was previously part of a larger piece of property that was owned and operated by Wycoff Steel and later by Ampco Pittsburgh Corporation (AMPCO). Wolf Five has assembled that larger property (including the Subject Property and three other parcels) for development purposes. The purpose of this CMI Work Plan is to document the Owner's intentions for implementing compliance with its obligations relating to the known occurrence of soil and groundwater contamination during construction at the Subject Property.

Wolf Five entered into a Corrective Action Long-Term Agreement (Agreement) in 2015 with the Michigan Department of Environment, Great Lakes, and Energy (EGLE - formerly the Michigan Department of Environmental Quality [MDEQ] – and referred to as EGLE even when earlier documents were executed or issued by MDEQ), Office of Waste Management and Radiological Protection (agreement number 111-03-15). The Agreement provided in Section 3.9 that at least ninety days prior to conducting any Development Work¹ at the Subject Property, Wolf Five would submit to EGLE a draft CMI Work Plan to satisfy the requirements of Paragraph 3.3 and Michigan Administrative Code R 299.9629 for EGLE's prompt review and approval. A draft CMI Work Plan was submitted to EGLE on September 2, 2022. EGLE reviewed the draft CMI Work Plan in a letter dated January 18, 2023, and Owner, EGLE and AKT engaged in follow up dialogue. This is the required CMI Work Plan for Construction Activities. Upon approval, this CMI Work Plan will supersede and replace the August 12, 2015 Pre-Construction Plan, which was approved by EGLE on August 20, 2015.

As provided in Sections 3.3 and 3.9 of the 2015 Agreement, this CMI Work Plan is intended to describe actions that will be taken during construction to:

- prevent exacerbation of existing contamination;
- mitigate unacceptable exposure to hazardous substances;

¹ Development Work mean all aspects of invasive site work and construction and includes such things as grading, excavation of soils, installation of utilities, infrastructure construction, paving, installation of foundations and footings, rough carpentry, etc. It does not include work preparatory to site development and/or intended to gather information or prepare the site for development, such as staking, surveying, conducting environmental site assessments, clearing of surface debris and mowing of vegetation with a field or brush mower, placing signs, installation of test borings or test pits and fencing, etc. Nor does Development Work include work done primarily indoors such as finish carpentry electrical work, painting, etc.

- provide access to Ampco and Venture (the Responsible Parties) and persons they authorize to conduct corrective action at the Subject Property, including access necessary for the installation, integrity, operation and maintenance of any corrective action at the Subject Property;
- comply with land use and resource use restrictions relied upon;
- not impede the effectiveness or integrity of any land use or resource restriction employed at the Subject Property in connection with corrective measures;
- not interfere with the groundwater monitoring wells located at the Subject Property and the performance of annual groundwater monitoring or well maintenance pursuant to a prior Corrective Action Consent Order;
- comply with due care requirements including noninterference with the current groundwater conditions and in-place collection system;
- maintain and enforce restrictive covenants at the Subject Property; and
- quarterly reporting on the effectiveness of the CMI Work Plan;

all of which shall be conducted consistent with MAC R. 299.9629.

AKT Peerless' CMI Work Plan documents the proposed soil and groundwater management strategies that will be used at the Subject Property during construction. All actions undertaken will be pursuant to the Agreement and in accordance with the requirements of all applicable or relevant and appropriate state and federal laws, rules, and regulations, and laws relating to occupational safety and health.

2.0 Roles

For the purposes of this CMI Work Plan, the roles and responsibilities for construction and environmental management activities are as follows.

Owner and Developer

Wolf Five, LLC, the Developer, is the current Owner of the Subject Property. The Owner has the overall responsibility to assure compliance with its obligations with respect to site preparation and construction activities at the Subject Property and maintain documentation of its compliance. It is the Owner's responsibility to designate the other environmental management roles at the Subject Property as described in the following sections.

Construction Manager

The Construction Manager, to be retained, is the entity retained by the Owner/Developer to provide owner representation and overall coordination for construction of the proposed development.

Qualified Environmental Professional

AKT Peerless will act as the Qualified Environmental Professional to assist with the implementation of this management plan. As construction activities require, AKT Peerless will assign a "qualified individual" to the project that has (1) at least two years of experience in the implementation of environmental construction management plans and (2) has a bachelor's degree or higher in engineering, geology, or other science-related discipline, or has demonstrated sufficient ability through past performance.

Contractor(s)

The Contractors are those companies designated by the Owner that have responsibility for implementation of specific work activities as identified by the Owner, Construction Manager, and Qualified Environmental Professional.

3.0 Property Information

The Subject Property is located in the northwest ¼ of Section 36 in Plymouth Township (T1S/R8E), Wayne County, Michigan. The Subject Property is part of a larger development area located at the northwest corner of Ann Arbor Road and Gold Arbor Road which consists of portions of two parcels, totaling approximately 34.11 acres. The Subject Property is now a portion of Parcel 060-99-0002-707 and 060-99-0002-708. There is currently no legal addresses associated with these parcel numbers. The Subject Property formerly consisted of two parcels (historically referred to as Parcels A and C) at 1000 General Drive in Plymouth Township, Michigan, and totals 13.067 acres.

3.1 Site History

The Subject Property was previously owned and operated by AMPCO, and later Wyckoff Steel Inc., for the finishing of cold drawn steel and was regulated as a hazardous waste management facility subject to the permit requirements under the federal Resource Conservation and Recovery Act of 1976, as amended ("RCRA"), 42 U.S.C. Section 6901 et seq. and Part 111 of NREPA.

Previous investigations by EPA and their consultants identified a total of 42 Solid Waste Management Units (SWMUs) at the subject property designated under RCRA. AMPCO and their consultant conducted numerous investigations and remedial actions at the Subject Property, which included soil and groundwater sampling, building and foundation removal, and soil removal activities (excavation and off-site soil disposal).

As of August 29, 2003, EGLE closed 40 of the 42 SWMUs and approved Parcels A and C for residential use subject to a Limited Residential Use Covenant. The two SWMUs that remain open are only related to groundwater impacts. A Declaration of Restrictive Covenant for the Limited Residential Closure was filed in March 2006 with the Wayne County Register of Deeds.

Ampco and the EGLE entered into a Corrective Action Consent Order WMD 111-02-00 ("CACO"), effective May 1, 2000, which remains in effect and the Post-Closure Monitoring Plan, submitted July 26, 1996 by Ampco and approved September 21, 1996 by EGLE, addresses the residual groundwater contamination at the Subject Property.

3.2 Current Property Use

The Subject Property is currently vacant. The ground surface is predominantly grass and brush covered. No buildings or other structures are present on the Subject Property.

Refer to Figure 1 for a topographic site location map and to Figure 2 for a map depicting the CMI Work Plan parcel boundaries.

3.3 Proposed Construction Activities

Wolf Five, LLC intends to redevelop the Subject Property with a multi-level residential development.

The intended future use of the Subject Property includes the construction of eight residential apartment buildings (Buildings A through H), a club house with a community pool, and associated improvements (e.g., paved parking areas and driveways, subsurface utilities, and landscaped areas). Proposed subsurface activities associated with this development include installing foundations for the residential buildings, installation of the community pool, and installing subsurface utilities, including:

- Potable water lines.
- Storm sewer lines, including roof drain connections.
- Sanitary sewer lines.
- Electrical utilities.
- Natural gas lines.

Proposed above-grade activities include constructing the apartment buildings and club house building, paving the parking/drive areas, landscaping, etc.

Other than the development summarized above, no further construction activities are planned for the Subject Property at this time. Refer to Appendix A for the proposed site plan.

4.0 Hazardous Substance Information

An extensive amount of investigation and cleanup has been conducted on the Subject Property. The investigations focused on the investigation and closure of 40 of the 42 identified Solid Waste Management Units (SWMUs) for the former Wyckoff Steel operation on the Subject Property, as well as the post-closure monitoring and management.

The results of previous environmental investigations at the Subject Property have identified 42 SWMUs on former Parcels A and C. While SWMU-7 and SWMU-9 are open, the remaining 40 SWMUs are classified as “no further action” by EGLE, all of which received either unrestricted residential closure or restricted residential closure (including development limitations and a deed restriction) between 1998 and 2005.

Residual soil contamination associated with the remaining 40 SWMUs is present on the Subject Property with concentrations exceeding current EGLE Part 201 Residential Cleanup Criteria (RCC).

SWMU-7 (former waste lagoon/seepage pond) and SWMU-9 (former waste conveyance system), remain open due to residual groundwater contamination located on Parcels A and C. The identified contamination specifically includes concentrations of arsenic, iron, and sulfates above EGLE Part 201 Residential Cleanup Criteria (RCC). The identified groundwater contamination at the Subject Property resulted in the development of 2000 Corrective Action Consent Order (CACO) with the responsible party, deed restriction, and a program of continued groundwater monitoring of the Subject Property. There is the potential presence of listed waste below the ground surface at SWMU-7 due to the past remedial activity only being carried out from the surface down to the water table.

Ampco continues to conduct annual groundwater monitoring for 5 remaining Monitoring Wells in accordance with the EGLE-approved post-closure monitoring plan and appears to be in compliance with EGLE reporting requirements. EGLE has been receiving and reviewing the annual monitoring reports for groundwater conditions for more than 12 years, and over time has been reducing the required number and frequency of monitoring events as groundwater conditions have remained unchanged.

AMPCO's consultant, GZA GeoEnvironmental, Inc. (GZA), conducted routine groundwater monitoring activities at the site in December of each year. Activities included measurement of static water level and collection and analyses of groundwater samples from five monitoring wells (i.e., MW-1, MW-6, MW-201, MW-202, and/or MW-204) in accordance with the approved post-closure monitoring plan. The samples were analyzed for arsenic, iron and sulfate.

During these sampling events, it was verified that the groundwater interceptor trench/dewatering system adjacent to Ann Arbor Road was operational.

4.1 Known Contamination Above Cleanup Criteria

Based on the analytical results obtained during the previous subsurface investigations conducted at the Subject Property, the following compounds were detected above EGLE RCC in soil and/or groundwater samples collected at the Subject Property:

Summary of EGLE Exceedances – Soil

Parameter	Chemical Abstract Service (CAS) Number	Sample Identification with Criteria Exceedance (depth)	Part 201 Residential Criteria Exceeded / Established Criteria (ug/kg)	Maximum Concentration (ug/kg) / Sample Location
Arsenic	7440-38-2	SS-1, SS-2, SS-7, SS-11, SS-15, SS-16, Item 5/1, Item 1B/3-REX2, A18S-3, A18S-12, AKT-1 (11-12'), AKT-2 (2-4'), B-24 (1-2')	DWP / 4,600 GSIP / 4,600 DC / 7,600	34,000 / Item 1B/3-REX2
Chromium, total	7440-47-3	SS-2, SS-15, SS-16, A18S-1, A18S-12, Item 1A/2-REX2, Item 1B/3-REX1, Item 1B/3-REX2, Item 3/South, Item 4/West, Item 5/1, Item 7-2/SS-1	DWP / 30,000 GSIP / 3,300 PSI / 260,000	340,000 / Item 1B/3-REX2
Mercury	7439-97-6	Item 1B/3-REX2	GSIP / 50	120 / Item1B/3-REX2
Selenium	7782-49-2	AKT-2 (2-4'), B-24 (1-2')	GSIP / 400	1,400 / AKT-2
Benzo(a)-anthracene	56-55-3	AKT-14 (1-2)	DC / 20,000	23,000 / AKT-14
Benzo(a)pyrene	50-32-8	AKT-10 (1-2'), AKT-11 (1-2'), AKT-13 (1-2'), AKT-14 (1-2'), B-24 (1-2')	DC / 2,000	19,000 / AKT-14
Benzo(b)-fluoranthene	205-99-2	AKT-14 (1-2')	DC / 20,000	25,000 / AKT-14
Dibenzo(a,h)-anthracene	53-70-3	AKT-14 (1-2')	DC / 2,000	2,800 / KT-14

Parameter	Chemical Abstract Service (CAS) Number	Sample Identification with Criteria Exceedance (depth)	Part 201 Residential Criteria Exceeded / Established Criteria (ug/kg)	Maximum Concentration (ug/kg) / Sample Location
Fluoranthene	206-44-0	AKT-10 (1-2'), AKT-11 (1-2'), AKT-13 (1-2'), AKT-14 (1-2'), B-24 (1-2')	GSIP / 5,500	60,000 / AKT-14
Fluorene	86-73-7	AKT-14 (1-2')	GSIP / 5,300	7,100 / AKT-14
Naphthalene	91-20-3	SS-14, SS-19, AKT-13 (1-2'), AKT-14 (1-2'), B-24 (1-2')	GSIP / 1,300 VIAP / 67	1,300 / AKT-13 and AKT-14
Phenanthrene	85-01-8	SS-14, SS-19, AKT-10 (1-2'), AKT-11 (1-2'), AKT-13 (1-2'), AKT-14 (1-2'), B-24 (1-2')	GSIP / 2,100 VIAP / 1,700	52,000 / AKT-14

Table Notes:

ug/kg – microgram per kilogram

DWP – Drinking Water Protection Criteria

GSIP – Groundwater Surface Water Interface Protection Criteria

DC – Direct Contact Criteria

PSI – Particulate Soil Inhalation Criteria

VIAP - Volatilization to Indoor Air Pathway

Summary of EGLE Exceedances – Groundwater

Parameter	CAS Number	Sample Identification with Criteria Exceedance (depth)	Part 201 Residential Criteria Exceeded / Established Criteria (ug/L)	Maximum Concentration (ug/L) / Sample Location
Sulfates	14808-79-8	MW-6, MW-201, AKT-1 W (11-16')	DW / 250,000	1,500,000 / MW-201
Antimony	7440-36-0	A7GW-1	DW / 6.0	16 / A7GW-1
Cobalt	7440-48-4	A7GW-1	DW / 40 GSIP / 100	260 / A7GW-1
Iron	7439-89-6	MW-6, MW-201, MW-204, AKT-1 W (11-16'), AKT-2 W (10-15')	DW / 300	4,900 / AKT-1 W
Lead	7439-92-1	A7GW-1, AKT-1 W (11-16')	DW / 4.0	110 / AKT-1 W
Mercury	7439-97-6	A7GW-1	DW / 2.0 GSI / 0.0013	3 / A7GW-1
Selenium	7782-49-2	A7GW-1, AKT-2 W (10-15')	GSI / 5.0	8.6 / AKT-2 W
Silver	7440-22-4	A7GW-1	GSI / 0.2	1 / A7GW-1

Table Notes:

ug/L – microgram per liter

DW – Drinking Water Criteria

GSI – Groundwater Surface Water Interface Criteria

Also refer to the attached Tables 1 through 5 for a summary of compounds substances detected at the Subject Property and a comparison to RCC.

5.0 Compliance With Environmental Obligations

The policies, procedures and methods described in these sections, or the plans and documents referenced in these sections, will act as the performance criteria for the CMI Work Plan.

5.1 Exacerbation

One element of compliance is avoiding exacerbation of existing contamination. This obligation applies during construction and includes a prohibition against (a) spreading the existing contamination; and (b) increasing response activity costs for a liable party. The relevant criteria for handling, managing and/or removing contaminated soils or groundwater from the Subject Property are RCC, which are used as the benchmark for the soil excavation and groundwater management portions of the exacerbation analysis below.

Wolf Five, LLC intends to develop the Subject Property with an apartment complex (e.g., buildings, club house, landscaping, roads, paved parking areas and driveways, and utilities). Based on the analytical results obtained during previous subsurface investigations of the Subject Property, concentrations of various metals, semi-volatile organic compounds (SVOCs), and sulfates were detected in soil and/or groundwater above the EGLE Residential Cleanup Criteria (RCC) provided in Michigan Administrative Rules 299.1 through 299.50 and EGLE's Volatilization to Indoor Air Pathway (VIAP) Screening Levels found in the EGLE Guidance Document for the Vapor Intrusion Pathway. Therefore, to minimize the risks to public health and the environment and to avoid exacerbation, the following measures will be taken during redevelopment activities.

5.2 Soil Removal Activities

Several investigations have been conducted that identified concentrations of VOCs, SVOCs, and/or metals in soils at concentrations that exceed EGLE's Part 201 RCC for direct contact, and particulate soil inhalation and EGLE vapor intrusion screening levels.

Wolf Five intends to construct a residential development on the Subject Property and intends to remove soils on the Subject Property so that all known remaining concentrations are below EGLE's RCC for direct contact and particulate soil inhalation and vapor intrusion screening levels. Therefore, Wolf Five plans to remove four areas of contamination on the Subject Property. This will provide greater protection to workers at the site and future residents without requiring systems that would need long term monitoring and maintenance.

The table below provides approximate volumes of soil/fill to be removed from each of the areas which areas are shown on Figures 2 through 4.

Soil Removal Areas

Source Name	Excavation Footprint (square footage)	Average Excavation Depth (feet below grade)
Source Area A	16,200	5
Source Area B	45,000	3
Source Area C	15,700	7
Source Area D	15,000	5

These impacted soils/fill will be removed and disposed at an appropriate landfill in accordance with the procedures outlined below in Section 5.2.1. Following excavation, verification of soil remediation will be conducted in accordance with EGLE guidance Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria, dated 2002. Following review of laboratory results from the verification samples, the site excavation would be backfilled with either engineered fill or class II sand that meets EGLE RCC. Refer to Figures 5 and 7 for soil analytical results above RCC.

5.2.1 Soil Management

Should contaminated soil or previously undiscovered impacted soil (refer to Section 5.4) be encountered during subsurface activities (whether in the vicinity of documented contamination or elsewhere on the Subject Property), appropriate action will be taken to prevent an unacceptable risk to the public health and the environment and to avoid exacerbation. In the event that previously undiscovered impacted subsurface soil is encountered, an environmental consultant will be retained to ensure proper waste characterization, manifesting, and disposal protocols are being followed. If any soils are determined to be hazardous, the soils will be left in place until they can be properly handled. No stockpiling of listed or characteristically hazardous waste is allowed on the Subject Property.

Appropriate actions to avoid exacerbation may include: (1) promptly returning impacted soil to the excavation; (2) removing the impacted soil to a proper disposal facility and backfilling with clean fill material; (3) covering exposed soil with clean fill material; (4) properly managing soil through the use of erosion controls, etc. to prevent contaminated soil runoff; and/or (5) implementing precautionary measures to prevent track-off of soil to public rights-of-way and roadways.

Contaminated soil, that is determined to not be hazardous, can be reused on the Subject Property, assuming the soil is covered with clean topsoil or other cover, such as building footprint, parking or other improvements. Contaminated soil removed from the ground that cannot be reused in its original location (due to geotechnical, logistical or other reasons) will be properly characterized and disposed at an appropriate landfill.

If the Contractor requests to reuse excavated soil on the Subject Property to the extent that such reuse is geotechnically sound, the Contractor must confirm with the Qualified Environmental Professional prior to reuse. In addition, impacted soil must not be reused in the area of the storm water collection system or its piping runs.

Precautionary measures will be utilized to eliminate the risk of erosion and runoff during construction activities. Typical controls, such as site grading to control runoff, stormwater controls (diversions, filters, etc.), and erosion protection, will be installed. In the event contaminated soils are encountered, such precautionary measures will be necessary to prevent contaminant migration through sedimentation,

precipitation runoff and erosion. Such erosion controls (silt fencing or other barriers) will be utilized: (1) around the down-gradient perimeter of the property and (2) around any areas where excavated soil is stockpiled or mounded. Additionally, stockpiled and mounded soil will be minimized at the Subject Property.

5.2.1.1 Materials Reuse On-Site

Excavated soil may be re-used on site provided it does not exacerbate impact at the Subject Property and does not promote potential migration/runoff onto adjoining properties, or rights-of-ways and disposition of relocated soil is reasonably recorded. Excavated soil intended for re-use that cannot be immediately returned to excavation area of origin may be evaluated for use in low lying areas of the site for grading associated with development activities. Additionally, excavated (non-hazardous waste) soil intended for re-use that cannot be immediately returned to the excavation area of origin and cannot be utilized for site grade may be evaluated for use in on-site engineered berms, if deemed acceptable by the Owner. Materials used for site grading purposes or engineered berms would be constructed in a manner that does not exacerbate existing contamination (covered with a protective layer of topsoil, grass, or pavement) and prevents future exposure.

As previously indicated, the Contractor may reuse excavated soil on the Subject Property to the extent that such reuse is geotechnically sound and approved by Owner. The Contractor must reasonably document the origin and disposition of relocated soil on the Subject Property (i.e., area of origin, use, date, location material utilized, approximate volume relocated, etc.). Impacted soil must not be reused in any area used for storm water detention basins, none of which are planned for the Subject Property.

If impacted soil is reused on the Subject Property, a monitoring and maintenance plan will be prepared and implemented to ensure the integrity of the cover placed over those soils.

5.2.1.2 Materials Transport Off-Site

Impacted soil that cannot be reused on-site for any reason, shall only be transported and disposed at licensed off-site facilities in accordance with all Federal, State, and local regulations. Impacted soil that does not exhibit the characteristics of hazardous waste (i.e., ignitability, corrosivity, reactivity, or TCLP toxicity) shall be disposed at an approved, licensed Type II landfill. The Contractor will obtain landfill approval for disposal of impacted residual soil, including submittal to the landfill of any/all waste characterization samples/results requested by the landfill. Subsequent to landfill approval, the Contractor shall prepare all documentation required to document transportation of impacted residual soil from the Subject Property (i.e., bills of lading or load tickets for Type II disposal). The Subject Property Owner will be identified as the generator of the impacted soil. The Owner or an Owner's Representative shall sign characterization profiles, manifests, and bills of lading, as appropriate. The Contractor shall provide documentation to the Owner of disposal or treatment of all soils removed from the Subject Property. Documentation will include records of disposal or treatment facility, the quantity of materials transported, and the quantity of materials treated or disposed. Impacted soil that cannot be disposed at a licensed Type II landfill due to hazardous waste status shall be disposed of at facilities in accordance with all Federal, State, and local regulations and licensed to accept such hazardous waste.

All transport of materials will be performed by licensed haulers in accordance with appropriate Federal, State, and local regulations. Haulers will be appropriately licensed and trucks properly placarded. Material transported by trucks exiting the Subject Property will be secured with tarps or covers. If loads contain wet material capable of producing free liquid, truck liners will be used.

Loaded vehicles leaving the Subject Property to dispose impacted materials will be appropriately documented (i.e., manifested, bill of lading) in accordance with appropriate Federal, State, and local requirements.

5.2.1.3 Stockpile Methods

Stockpiling of impacted soil may be necessary as part of site preparation activities. If impacted soil stockpiling is necessary as a temporary soil management strategy, the Contractor will coordinate the stockpiling locations with the Construction Manager and/or Qualified Environmental Professional prior to conducting site preparation activities. Stockpiled impacted soil will not be co-mingled with other residual materials.

If material is determined to be hazardous waste, the material will need to be left in place until it can be properly handled. No stockpiling of listed or characteristically hazardous waste is allowed on the Subject Property. See Section 5.4 for guidance on encountering different textured, soils emitting odor, non-native, or visibly inconsistent with surrounding soils.

Precipitation shall not be permitted to accumulate within stockpiled impacted soil, as this accumulation could cause leaching of contaminants that may exist in the stockpiled soil into residual soil, thereby exacerbating environmental conditions on the Subject Property. All stockpiled impacted soil will be placed on and covered at all times with properly anchored plastic sheeting. The Contractor shall be responsible for maintenance of plastic sheeting as necessary to prevent contact of potentially contaminated materials with precipitation or surface run-off, which may require the use of a surrounding earthen berm beneath the lower plastic sheeting. Silt fence and other best management practices (BMPs) will be implemented at the perimeter of stockpiled materials, if necessary, to prevent erosion of stockpiled impacted soil.

Clean fill material and/or residual non-impacted soils will only be stockpiled at locations on the Subject Property approved in advance by the Construction Manager and kept separate and distinct from impacted soil stockpile locations.

5.2.1.4 Vehicle Track-Out Prevention Plan

The Contractor shall take measures to consistently prevent vehicular track-out of impacted soil from the Subject Property to the adjacent public thoroughfares. Such measures may include, but are not limited to:

- Limiting vehicle egress to only designated locations;
- Gravel ingress/egress points;
- Taking measures to remove residual materials from vehicles prior to egress (e.g., rumble strips); and
- Collecting track-out materials from paved roadways, as necessary, if the above measures fail.

Egress points for truck and equipment transport from the Subject Property will be kept clean of dirt and other materials during site preparation and construction activities. Track-out material recovered from designated egress locations and from street cleaning, if necessary, will be managed consistent with the impacted soil at the Subject Property. Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing is prohibited.

5.2.1.5 Backfill from Off-Site Sources

Any backfill materials proposed for import onto the Subject Property will be approved by the Owner and/or Qualified Environmental Professional in accordance with all Federal, State, and/or local regulations. Backfill sources are limited to engineered fill and/or class II sand that meets EGLE RCC.

5.2.1.6 Storm Water Pollution Prevention

It will be the Contractor's responsibility to prevent contaminant migration to storm water utilities through sedimentation, precipitation runoff, and erosion during site preparation and construction activities.

5.2.1.7 Dust Control Plan

It will be the Contractor's responsibility to suppress the generation of dust during site preparation and construction activities.

5.2.2 Groundwater Management

As part of the redevelopment on the Subject Property and larger development area, dewatering and potential treatment activities will be conducted. Ampco and EGLE will be notified one week prior to initiating planned dewatering activities at the Subject Property. Dewatering activities may include temporary installation of a network of extraction points around subsurface utilities that intercept the groundwater table. The extraction points will be manifolded at the surface and extracted groundwater will be pumped to frac tanks for either offsite disposal and/or discharge pending appropriate State, County, and local approvals.

Groundwater impact was identified at an elevation of 695 to 707 feet above mean sea level at the Subject Property at concentrations exceeding EGLE RCC (see Figure 5). Based on the variable nature of groundwater, all groundwater from the Subject Property should be treated as outlined below unless additional testing is done to confirm otherwise.

It is not permissible to pump groundwater to storm or sanitary sewers without proper permits and monitoring required by the local municipality. It is also not permissible to pump groundwater onto the ground surface of the Subject Property.

During redevelopment activities, it is anticipated that groundwater will be encountered during the installation of subsurface utilities, building footings, and associated site improvements, and that ground water management of subsurface development areas will be necessary. Generally, all groundwater encountered should be left in place, or containerized in frac tanks for settling suspended solids and facilitating a batch treatment approach to water filtration. Groundwater should be isolated from surface water by implementing pumping procedures which contain the groundwater and discharge only treated water. The Contractor should obtain permits from the local municipality to utilize the sanitary system for groundwater disposal, if deemed appropriate. Treatment, if necessary, of the produced water will depend on analytical results of water prior to discharge. Because there is no way to delineate between groundwater in excavations and precipitation runoff collected in excavations, all pumped water shall be handled in the same manner.

Encountered groundwater may also be left in place and excavations subsequently backfilled if there is no negative impact on construction methods.

When open excavations are unavoidable (when excavated soil cannot be returned to the excavation), those areas should be barricaded and filled as quickly as possible to ensure water does not collect within them.

If groundwater or rainwater collects in excavations on the Subject Property, a dewatering system may be utilized. The dewatering system will first containerize the groundwater and/or rainwater; characterization of the groundwater and/or rainwater will be conducted prior to disposal at a frequency dictated by the accumulated volume of water and the need to dispose of it in a timely manner to appropriately manage residuals, storage volume and workspace at the Subject Property. Care must be taken to remove groundwater from excavations at the minimum rate necessary to achieve the construction goals so as not to draw excessive impacted groundwater. Should characterization results indicate that off-site disposal is necessary, disposal will be conducted in accordance with applicable Federal, State, and local regulations.

5.2.2.1 Materials Containerization and Disposal

The volume of groundwater and/or rainwater derived from dewatering activities at the Subject Property will be managed through containerization. The containment vessels will be sited at a location approved by the Construction Manager. The containment vessels will be visually inspected upon arrival at the Subject Property by the Contractor to ensure that they are clean, and no residual materials are present in the vessels. Containment vessels containing residual materials upon arrival will not be accepted onto the Subject Property.

It is anticipated that containerized groundwater and/or rainwater will be treated and tested prior to discharge.

Groundwater and/or rainwater intended for discharge will be containerized into appropriate frac tanks and passed through a filtration unit that would likely consist of particulate filters and granular activated carbon (GAC) absorption units. Filtering operations along with appropriate operations and maintenance of the system will be conducted by a certified industrial wastewater operator in accordance with Part 31 of NREPA.

Should characterization results indicate that off-site disposal is necessary, disposal will be conducted in accordance with applicable Federal, State, and local regulations.

5.2.2.2 Alternative Management Methods for Impacted Groundwater

If the Contractor determines that management of impacted groundwater and/or rainwater derived from dewatering activities on the Subject Property as described above is impractical, the Contractor will notify the Construction Manager. Alternative management methods will be explored, and permits obtained as necessary to manage the groundwater and/or rainwater derived from dewatering activities on the Subject Property in accordance with all Federal, State and local regulations.

5.2.2.3 Engineering Controls

As discussed in Section 5.3, target parameters have been identified at the Subject Property at concentrations below the direct contact criteria and the vapor intrusion screening levels but allowing concentrations to remain above the GSIP/GSI Cleanup Criteria. The potential exists for GSI issues to develop in the future; therefore, storm water conveyances at the Subject Property shall employ seals, gaskets, and/or wraps to protect the infrastructure from infiltration of potentially contaminated

groundwater. Use of these environmentally proactive construction methods will assist with preventing exacerbating contamination conditions at the Subject Property.

All seals, gaskets, and/or wraps proposed for use at the Subject Property should be approved in advance by the Owner's architects and engineers to ensure material compatibilities.

5.2.2.4 Additional Groundwater Monitoring

Given the site conditions, it is anticipated that dewatering will be necessary to complete the development goals. Additional site sampling (i.e., the installation of permanent groundwater wells and associated groundwater sampling) may be necessary to (1) characterize and classify the subsurface groundwater conditions at the Subject Property in association with subsurface activities, (2) ensure that construction activities do not draw impacted groundwater to non-impacted areas of the Subject Property, and (3) evaluate the potential for off-site migration resulting from the subsurface disturbances associated with development activities. The Developer, with the aid of the Qualified Environmental Professional, will be responsible for determining the extent of additional investigation based on the effect that redevelopment activities will have on site groundwater (quantity of dewatering necessary, field evidence of impacted groundwater, etc.).

Appropriate notifications, groundwater handling practices (as described above), and construction practices will be implemented, as deemed necessary by the Developer and the Qualified Environmental Professional, in accordance with applicable Federal, State, and local regulations.

5.3 Other General Construction Considerations

The Subject Property Owner and its Contractors are solely responsible for safe execution of invasive and other work performed under this plan. The presence of utilities and easements on the Subject Property shall be investigated by the Contractor, who will then determine whether a risk or impediment to the planned work under this management plan is posed by utilities or easements on the Subject Property.

Given the nature and history of the Subject Property, the potential exists for abandoned underground storage tanks (USTs) and/or other buried objects/debris to be encountered during development activities. Handling of encountered USTs and objects/debris, if any, will be conducted by the Contractor in compliance with applicable Federal, State, and local rules and regulations.

In addition to impacted residuals, other materials/media, including, but not limited to, concrete, metal, masonry, vegetative material, and used silt fencing and related erosion control materials, may be generated during the course of construction. Containerization, transportation, and off-site disposal of these materials/media, as necessary, will be conducted by the Contractor in compliance with applicable Federal, State, and local rules and regulations.

5.4 Inspection of unusual materials

Owner will ensure that Contractors and their employees are trained on the possibility of encountering soil or other media exhibiting unusual characteristics and what to look for during such removal work. In the event that a Contractor encounters soil or other media exhibiting unusual characteristics (e.g., visual, textural, or olfactory evidence of impact, structures, unexpected materials etc.), the Construction Manager will contact the Qualified Environmental Consultant to determine necessary characterization, handling, and management procedures for these materials. Activities at the suspect location(s) will be suspended until the situation is evaluated and addressed. Sampling will be performed on product,

sediment, and surrounding soil, etc., as necessary to determine the nature of the material and identify the waste characteristics for disposal and/or environmental management method to be used in accordance with the Owner's obligations as well as in accordance with applicable rules and regulations.

If Contractor encounters soil or other media exhibiting unusual characteristics and the Qualified Environmental Consultant confirms these materials to be listed or characteristically hazardous waste, EGLE will be notified of the determination. If material is determined to be hazardous waste, the material will be left in place until it can be properly handled. No stockpiling of listed or characteristically hazardous waste is allowed on the Subject Property. EGLE considers soil that contains listed or characteristically hazardous waste as "generated hazardous waste" upon excavation, which will require appropriate management and may be unable to be re-used at the Subject Property. The Qualified Environmental Consultant will consult with EGLE during the removal process of the material required by this Plan and will determine when the construction activities can proceed and notify the Construction Manager when the all-clear to resume construction activities has been determined.

5.5 Reasonable Precautions

The Owner must take reasonable precautions against the reasonable foreseeable acts or omissions of a third party, and the consequences that could result from those acts or omissions.

During development of the Subject Property and the larger redevelopment area, access to the Subject Property will not be provided to the general public. Potential third parties at the Subject Property will primarily consist of staff, contractors, and utility workers. The measures discussed in Section 5.0 were established for the Subject Property owners to protect the public against unacceptable exposure.

5.6 Access

Wolf Five, LLC will provide reasonable cooperation, assistance, and access to representatives of EGLE, Ampco, AP Venture Corp. II (Venture) and parties (i.e., their consultants) authorized to conduct RCRA response activities including post-closure monitoring and maintenance activities at the Subject Property, as necessary. It is expected that all representatives listed above will conform to relevant health and safety requirements during all site operations.

5.7 Compliance with Use Restrictions

Wolf Five, LLC will comply with the recorded land use restrictions on the Subject Property. A 2006 Declaration of Restrictive Covenants from EGLE (deed restriction) prohibits the extraction and use of groundwater for consumptive purposes, irrigation, or any other use (except for use in the groundwater monitoring plan approved by the EGLE).

5.8 Effectiveness and Integrity of Use Restrictions

Wolf Five, LLC will not impede the effectiveness or integrity of any land use or resource restriction employed at the Subject Property.

6.0 Monitoring Well Management

Currently, five monitoring wells are present at the Subject Property. These wells will continue to be monitored by Ampco in accordance with the approved RCRA corrective actions Post-Closure Monitoring

Plan until the final closure of this issue is achieved. It is anticipated that the use of these monitoring wells will overlap with the redevelopment of the Subject Property.

Monitoring wells currently present and in use at the Subject Property include:

- MW-1;
- MW-6;
- MW-201;
- MW-202; and
- MW-204.

The locations of these wells are shown on Figure 2.

No other monitoring wells are reported as being present at the Subject Property, nor have others been identified during site inspections. Previous monitoring wells have been permanently abandoned by Ampco's consultants in accordance with approved plans.

The following monitoring well management plan will be implemented. The management program outlines a combination of well protection, abandonment and replacement based on the proposed site development and the anticipated construction activities to take place in the proximity of the individual wells.

6.1 Monitoring Well Protection During Construction

To the extent feasible, monitoring wells will remain in place and be protected to preserve their integrity during construction.

The monitoring wells will be protected by:

1. Surrounding the locations with steel fence posts. A minimum of three fence posts will be installed around each well. Each post will extend a minimum of 36 inches above ground.
2. Identifying the locations with highly visible markers (e.g., caution tape or survey flagging).
3. Inspecting and/or replacing high visibility markers weekly or more often as required during construction.
4. Any soil disturbance that needs to occur within five feet of the wellhead will be conducted by hand or conducted with a second person on the ground directing the equipment operator's efforts to avoid striking the well.
5. No more than the top five feet of the monitoring well may be exposed due to earth elevation changes. If greater vertical changes are required, the well should be abandoned and replaced as described in Section 6.2.
6. If the well casing is exposed by more than two feet, the casing must be temporarily supported to prevent flexing and bending. Acceptable supporting methods include installing a rigid support (e.g., steel fence post) adjacent to the well casing and securing the well to the support.
7. Supported wells are to be inspected daily to ensure that the support structures/well are stable and no movement of well casing is occurring.
8. At completion of construction, the monitoring well protectors will be converted to flush mounts consistent with the surrounding final landscaping and the new tops of casing elevations surveyed.

If it is determined at any time that construction activities may compromise a well's integrity, the well will be abandoned and replaced as described in Section 6.2.

6.2 Monitoring Well Abandonment and Replacement

Should wells become damaged during construction, or the location needs to be modified because of the proximity to new buildings or other footprints, the proposed replacement locations of the abandoned wells will be negotiated with Ampco representatives to comply with their requirements in accordance with the Ampco CACO and the Post-Closure Monitoring Plan, as well as their final closure plans. As soon as these locations are determined, a map will be prepared and submitted to EGLE for approval. At a minimum, the wells will be replaced in such a manner as to continue to be representative of groundwater potentiometric surface and quality. All reasonable attempts will be made to install replacement monitoring wells prior to the annual December sampling conducted by Ampco to similar screened elevations and materials as their predecessors to maintain consistency in groundwater monitoring.

6.2.1 Abandonment

Monitoring wells will be abandoned by the following method and in accordance with ASTM Practice D5299M-18 Standard Guide for Decommissioning of Groundwater Wells, Vadose Zone Monitoring Devices, Boreholes, and Other Devices for Environmental Activities, consistent with prior EGLE requirements and approved plans. Activities include but are not limited to:

- Remove the expandable well cap.
- Measure the total depth of the monitoring well and confirm depth against the well construction log to verify the total vertical extent of the well is open and free of obstructions.
- Use an overwork or drilling rig to abandon well.
- Knock out bottom cup of well with drilling rods.
- Grout annular space closed using a portland (5%)-bentonite slurry.
- If able, pull the well casing from the ground, placing the slurry as the casing is pulled.
- Continue to pump slurry until entire annular space is filled (i.e., to grade).
- If casing cannot be removed from ground, the casing must be removed a minimum of two feet below the anticipated new ground surface after construction. The well must be filled with grout slurry to this elevation.
- Dispose of all well materials at an appropriate solid waste operation.
- Complete a well abandonment record and submit copies to the EGLE.

6.2.2 Reinstallation

Replacement monitoring wells will be installed at locations agreed upon between the Owner, Ampco/Venture and EGLE, likely proximate to current locations (minimally, wells will be offset from their previous location to avoid grout contamination).

Well screens will be placed at the same elevations as the existing well screens to allow for continued monitoring of the contaminant plume at the Subject Property. Prior to reinstallation, EGLE will be notified to discuss planned well screen construction, elevation, and length. Replacement monitoring wells will be installed using methods consistent with ASTM Practice D5092M-16 Standard Practice for Design and Installation of Groundwater Monitoring Wells. Installation activities will include:

1. Drilling of new borehole using hollow stem auger drilling techniques.

- a. A 4½ -inch or larger hollow stem auger will be used.
- b. Drilling will follow industry standard equipment decontamination procedures prior to drilling, between borings, and at the completion of drilling activities.
- c. Continuous soil sampling commencing at least two feet above the expected depth to the top of screen extending down to the base of the aquifer or one foot below the base of the screen to assure that the screened interval of the replacement well is within the same portion of the aquifer as the well it replaces.
2. Prior to installation of the monitoring well, the groundwater table depth will be confirmed in the open borehole to confirm well screen placement. The depth to water will be measured using an electronic water level meter.
3. Construction of two-inch diameter monitoring well using:
 - a. Five-foot lengths of Schedule 40 PVC, 0.010-slot screen with a bottom plug.
 - b. Completed with Schedule 40 PVC blank casing to grade.
4. Filling of annular space with:
 - a. Coarse sand filter pack to a maximum of two feet above the top of the well screen.
 - b. Placement of a minimum one-foot thick bentonite pellet seal.
 - c. Remainder of annular space to one-foot below grade with a portland-bentonite grout.
5. Completion of well with a padlocked expandable plug and a cast iron flush mount well protector set in a concrete pad.
6. Survey the new tops of casing elevations.

At the completion of installation, each new monitoring well will be developed in accordance with ASTM Practice D5521M-18 Standard Guide for Development of Groundwater Monitoring Wells in Granular Aquifers. Development water will be containerized and disposed at an appropriate disposal facility.

Well construction logs will be prepared and provided to EGLE and Ampco representatives for their records within 30 days of the completion of installation activities.

7.0 CMI Work Plan Modifications

Wolf Five may request that EGLE consider a modification to the CMI Work Plan by submitting a written request for modification that provides sufficient detail as to the modification requested and provides justification for the modification to the EGLE for review and approval. Any such request for modification will be forwarded to the EGLE at least thirty (30) days prior to the date that the performance of any affected corrective action is due. Upon EGLE approval, Wolf Five shall perform the actions that are provided for in the modification in accordance with EGLE-approved implementation schedules.

8.0 Reporting

Wolf Five, LLC will provide quarterly reporting to EGLE on the effectiveness of the CMI Work Plan. This reporting will include a description of: (i) key steps in the process at the Subject Property; (ii) discovery of any previously unknown contamination; and (iii) actions taken to deal with such contamination.

In accordance with Section 3.10 of the Agreement, a Site Condition Report will be prepared within 15 days of the completion of Development Work for EGLE review and approval. The Site Condition Report will document the environmental condition of the Subject Property as determined during Development Work including any contamination caused or discovered during the Development Work. Following EGLE's review and approval, Wolf Five will either submit a request to approve the correct actions as complete

or submit an amended CMI Work Plan that will provide any necessary long-term monitoring and maintenance and that will satisfy the requirements of the Agreement and MCL R 299.9629 following completion of Development Work.

9.0 Schedule

The anticipated schedule of activities and major milestones is summarized in the following table.

Anticipated Project Schedule

Activity	Proposed Start Date	Anticipated Completion Date
CMI Work Plan EGLE Review and Approval	September 2022	March 2023
CMI Work Plan Revision (if any)	March 2023	March 2023 (15 days)
Site Construction and Development Work	TBD	TBD
Site Condition Report	TBD	15-days after completion of Development Work

10.0 Signatures of Environmental Professionals

The following individuals contributed to the completion of this report.



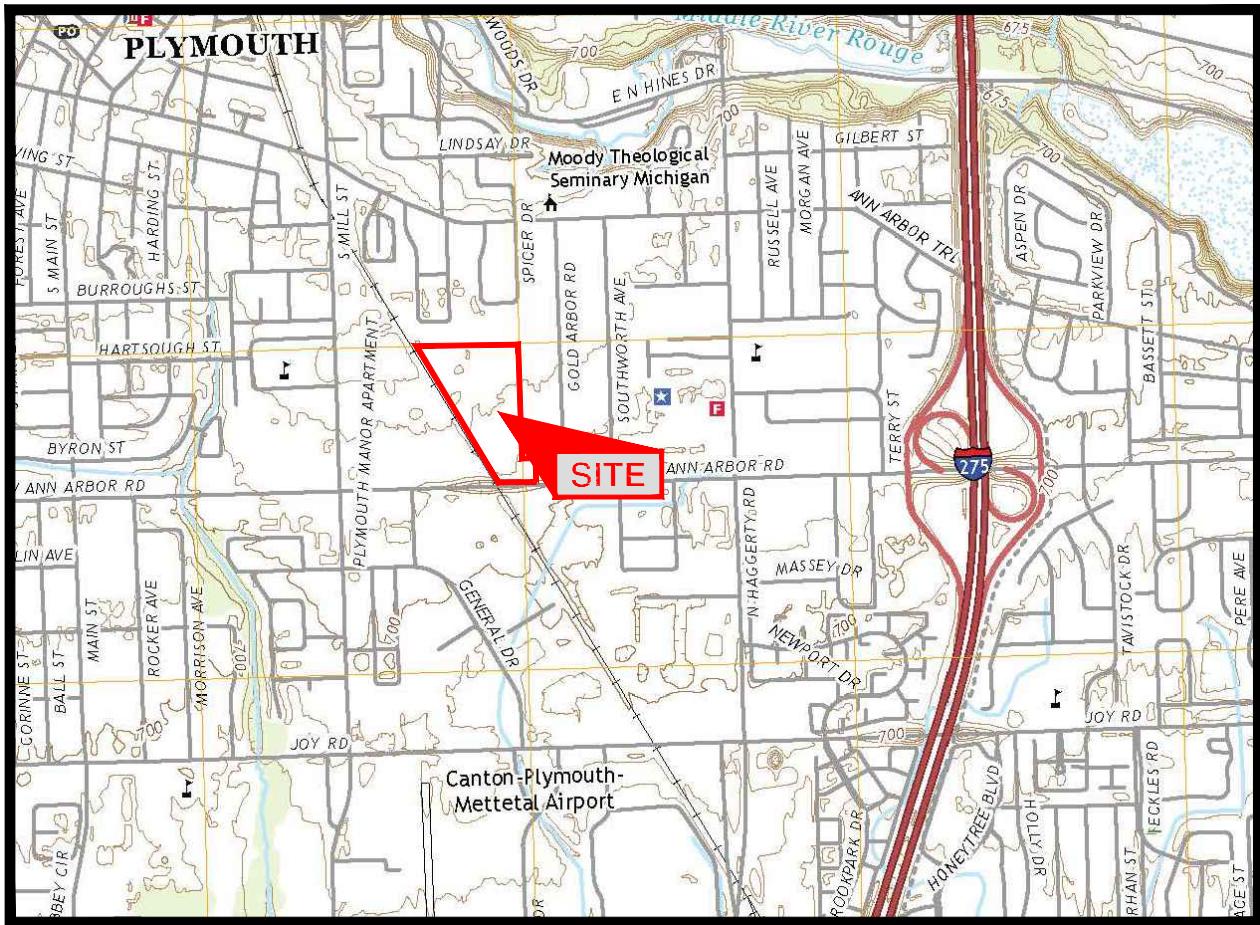
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FIGURES

WAYNE QUADRANGLE
MICHIGAN - WAYNE COUNTY
7.5 MINUTE SERIES (TOPOGRAPHIC)



T.1 S.-R.8 E.

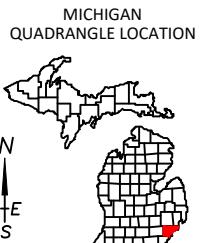


IMAGE TAKEN FROM 2016 U.S.G.S. TOPOGRAPHIC MAP
PHOTOREVISED 2019

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TOPOGRAPHIC LOCATION MAP

1000 GENERAL DRIVE AND
41700 ANN ARBOR ROAD
PLYMOUTH, MICHIGAN
PROJECT NUMBER: 8231F

DRAWN BY: MST
DATE: 06/28/2022

FIGURE 1



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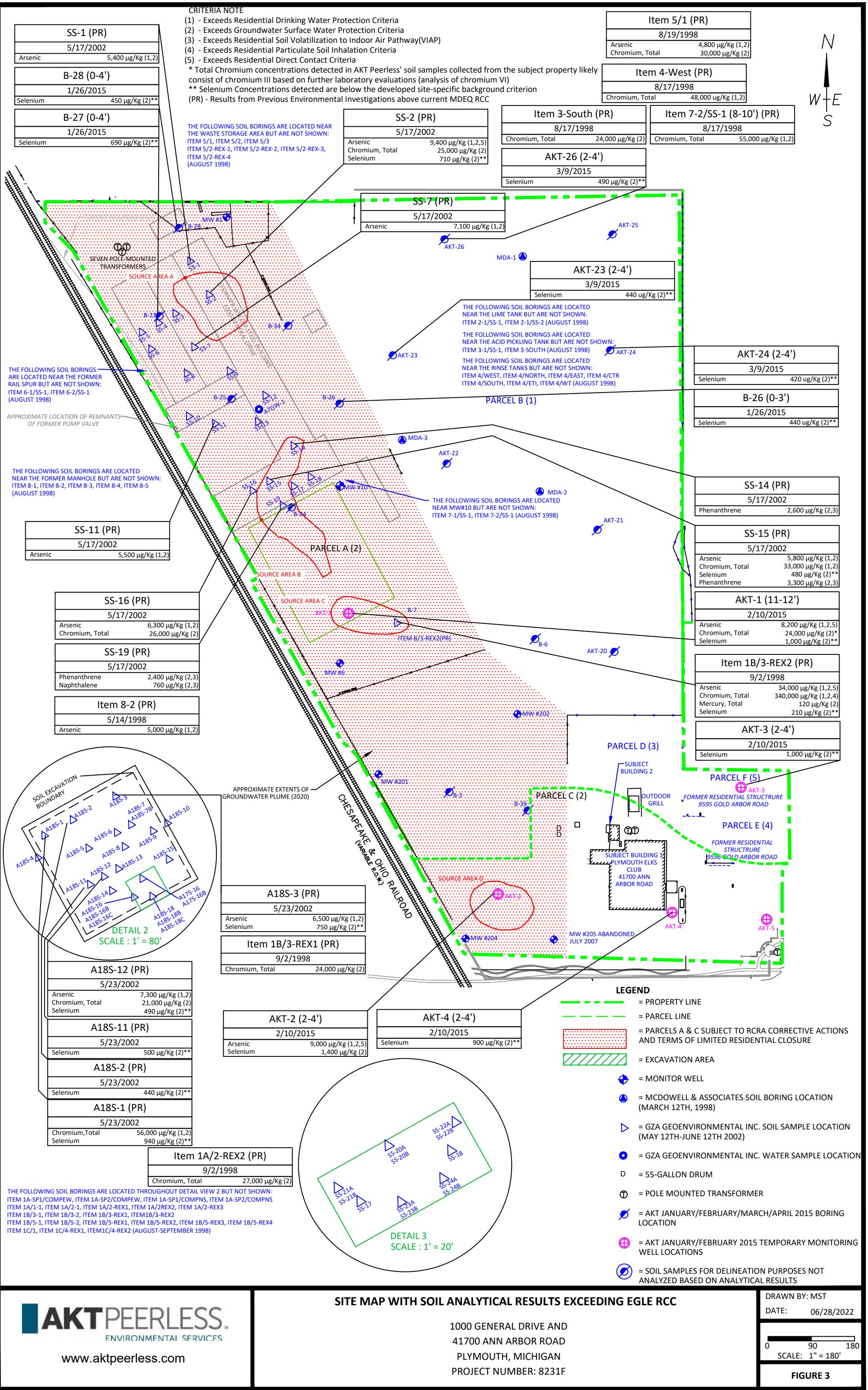
CONSTRUCTION SITE MAP WITH EXCAVATION AREAS

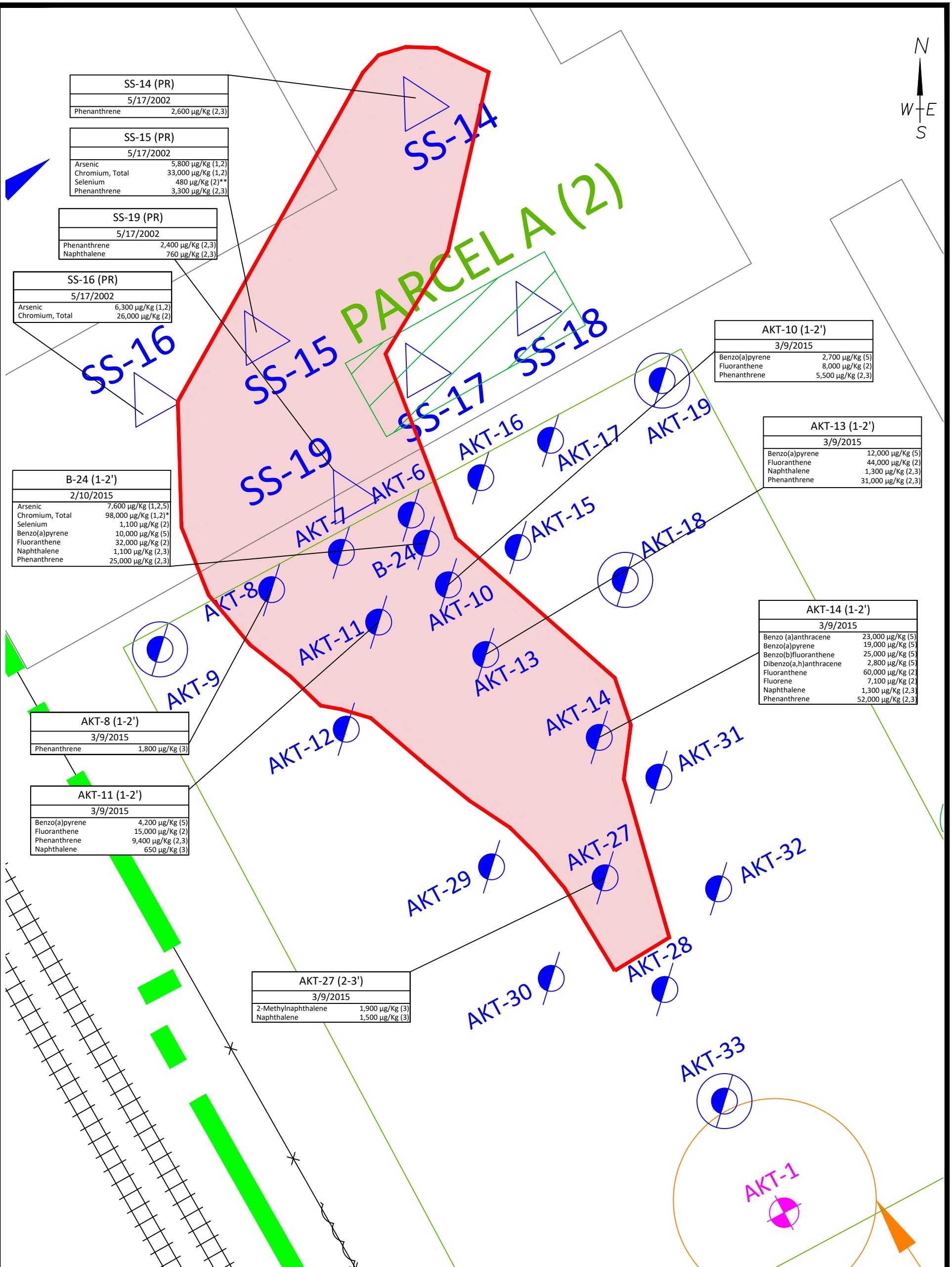
1000 GENERAL DRIVE AND
41700 ANN ARBOR ROAD
PLYMOUTH, MICHIGAN
PROJECT NUMBER: 8231F

DRAWN BY: MST
DATE: 06/28/2022

0 110 220
SCALE: 1" = 220'

FIGURE 2





CRITERIA NOTE
 (1) - Exceeds Residential Drinking Water Protection Criteria
 (2) - Exceeds Groundwater Surface Water Protection Criteria
 (3) - Exceeds Residential Soil Volatilization to Indoor Air Pathway (VIAP)
 (4) - Exceeds Residential Particulate Soil Inhalation Criteria
 (5) - Exceeds Residential Direct Contact Criteria

* Total Chromium concentrations detected in AKT Peerless' soil samples collected from the subject property likely consist of chromium III based on further laboratory evaluations (analysis of chromium VI)

** Selenium Concentrations detected are below the developed site-specific background criterion

(PR) - Results from Previous Environmental Investigations above current MDEQ RCC

SITE MAP WITH SOIL ANALYTICAL RESULTS EXCEEDING EGLE RRC SOURCE AREA B AND EXCAVATION AREAS

1000 GENERAL DRIVE AND
41700 ANN ARBOR ROAD
PLYMOUTH, MICHIGAN
PROJECT NUMBER: 8231F

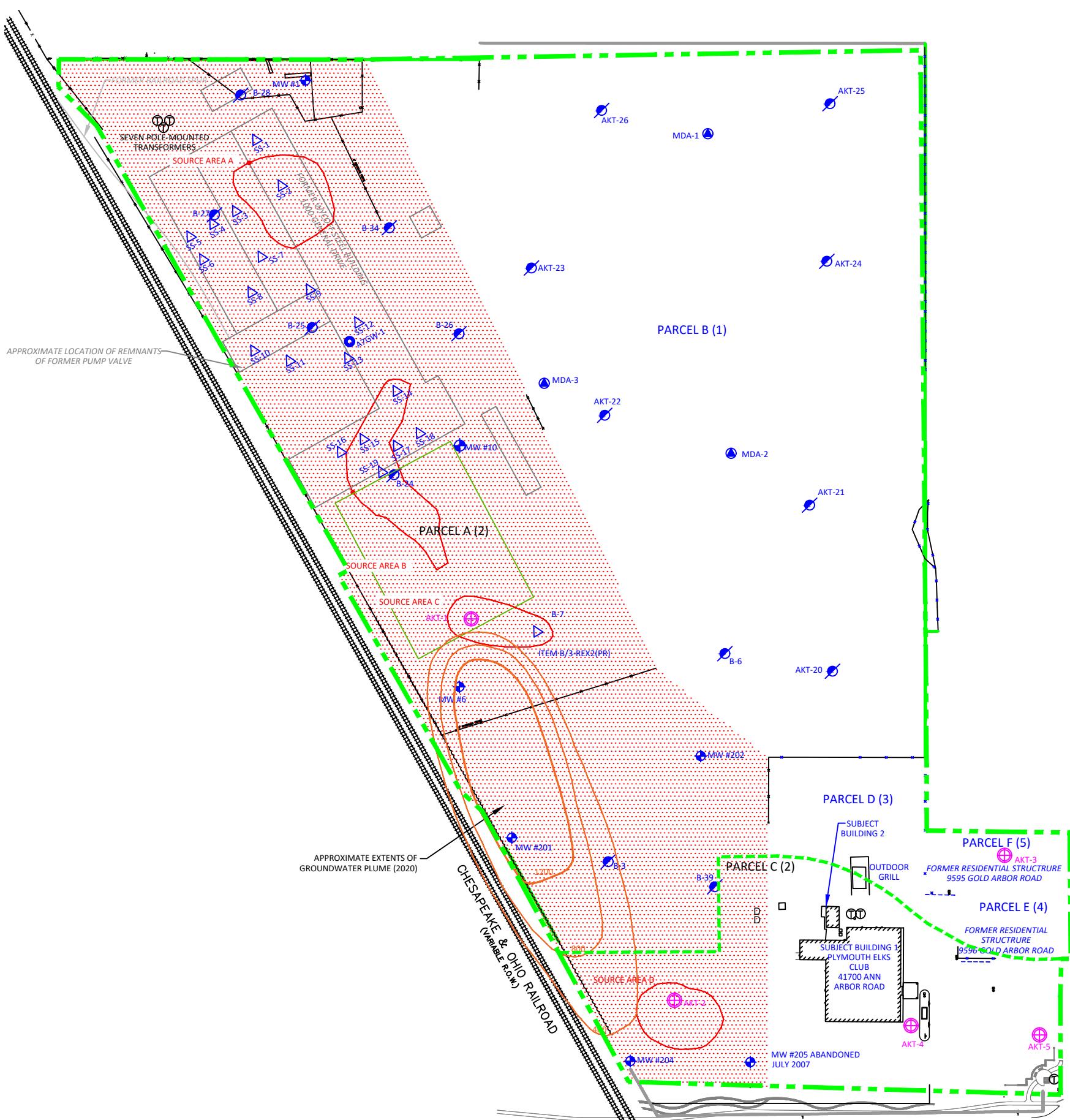
DRAWN BY: MST

DATE: 06/28/2022

0 15 30
SCALE: 1" = 30'

FIGURE 4

N
W E
S



LEGEND

- PROPERTY LINE
- PARCEL LINE
- PARCELS A & C SUBJECT TO RCRA CORRECTIVE ACTIONS AND TERMS OF LIMITED RESIDENTIAL CLOSURE
- EXCAVATION AREA
- ◆ MONITOR WELL
- McDOWELL & ASSOCIATES SOIL BORING LOCATION (MARCH 12TH, 1998)
- △ GZA GEOENVIRONMENTAL INC. SOIL SAMPLE LOCATION (MAY 12TH-JUNE 12TH 2002)
- GZA GEOENVIRONMENTAL INC. WATER SAMPLE LOCATION
- D = 55-GALLON DRUM
- ① = POLE MOUNTED TRANSFORMER
- AKT JANUARY/FEBRUARY/MARCH/APRIL 2015 BORING LOCATION
- ⊕ AKT JANUARY/FEBRUARY 2015 TEMPORARY MONITORING WELL LOCATIONS
- SULFATE ISOCONCENTRATIONS IN mg/L

CRITERIA NOTE

- (1) - Exceeds Residential Drinking Water Criteria
- (2) - Exceeds Non-Residential Drinking Water Criteria
- (3) - Exceeds Groundwater Surface Water Interface Criteria

* Results from Previous Environmental Investigations above current MDEQ RCC

TABLES

Table 1: Summary of Soil Analytical Results
Former Wycoff Steel Site
Plymouth Township, Michigan
AKT Peerless Project No.: 8231F-9-26

Guidesheet Number →		#10	#11	#12	#17	#18	#19								
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Residential Particulate Soil Inhalation Criteria and RBSLs	Residential Volitization to Indoor Air Pathway (VIAP)	Residential Direct Contact Criteria and RBSLs	Maximum Concentration Detected	Sample Location	B-25	B-26	B-27	B-28	B-34	B-39
									Collection Date	1/26/2015	1/26/2015	1/26/2015	1/26/2015	1/26/2015	1/26/2015
									Depth (feet bgs)	0-4'	0-3'	0-4'	0-4'	0-3'	0-4'
Metals ug/Kg															
Mercury, Total	7439-97-6	130	1,700	50 (M); 1.2*	2.0E+7	22 (M)	1.6E+5	<50		< 50	< 50	< 50	< 50	< 50	< 50
Arsenic	7440-38-2	5,800	4,600	4,600	7.2E+5	NA	7,600	9,000		1,900	2,700	3,600	4,100	2,800	1,000
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	3.3E+8	NA	3.7E+7	72,000		19,000	14,000	14,000	17,000	32,000	9,200
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	1.7E+6	NA	5.5E+5	920		< 200	< 200	< 200	< 200	< 200	< 200
Chromium, Total	7440-47-3	18,000 (total)	30,000	3,300	2.6E+5	NA	2.5E+6	98,000		8,700*	9,400*	7,700*	7,300*	16,000*	5,600*
Chromium III (B,H)	16065-83-1	18,000 (total)	1.0E+9 (D)	(G,X)	3.3E+8	NA	7.9E+8	16,000		NS	NS	NS	NS	16,000	NS
Chromium VI	18540-29-9	NA	30,000	3,300	2.6E+5	NA	2.5E+6	2,300		NS	NS	NS	NS	< 2,000	NS
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	1.3E+8	NA	2.0E+7	63,000		5,700	8,100	10,000	12,000	13,000	5,400
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	1.0E+8	NA	4.0E+5	200,000		4,200	4,700	5,600	5,300	8,500	2,600
Selenium (B)	7782-49-2	410	4,000	400	1.3E+8	NA	2.6E+6	1,400		350	440**	690**	450**	360	300
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27*	6.7E+6	NA	2.5E+6	<460		< 100	< 110	< 100	< 100	< 100	< 100
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	ID	NA	1.7E+8	210,000		16,000	18,000	19,000	22,000	19,000	14,000
Semivolatiles, ug/Kg															
beta-Chloronaphthalene	91-58-7	NA	6.2E+5	NA	ID	TX	5.6E+7	<330		< 330	< 330	< 330	< 330	< 330	< 330
2-Methylnaphthalene	91-57-6	NA	57,000	4,200	6.7E+8	1,700	8.1E+6	380		< 330	< 330	< 330	< 330	< 330	< 330
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.4E+10	2.00E+05	4.1E+7	2,800		< 330	< 330	< 330	< 330	< 330	< 330
Acenaphthylene	208-96-8	NA	5,900	ID	2.3E+9	DATA	1.6E+6	<330		< 330	< 330	< 330	< 330	< 330	< 330
Anthracene	120-12-7	NA	41,000	ID	6.7E+10	1.30E+07	2.3E+8	5,800		< 330	< 330	< 330	< 330	< 330	< 330
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	ID	1.6E+05 (MM)	20,000	11,000		< 330	< 330	< 330	< 330	< 330	< 330
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	1.5E+6	NA	2,000	10,000		< 330	< 330	< 330	< 330	< 330	< 330
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	NA	20,000	15,000		< 330	< 330	< 330	< 330	< 330	< 330
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	8.0E+8	NA	2.5E+6	5,500		< 330	< 330	< 330	< 330	< 330	< 330
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	ID	NA	2.0E+5	5,800		< 330	< 330	< 330	< 330	< 330	< 330
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	NA	2.0E+6	13,000		< 330	< 330	< 330	< 330	< 330	< 330
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	ID	NA	2,000	1,700		< 330	< 330	< 330	< 330	< 330	< 330
Fluoranthene	206-44-0	NA	7.3E+5	5,500	9.3E+9	NA	4.6E+7	32,000		< 330	< 330	< 330	< 330	< 330	< 330
Fluorene	86-73-7	NA	3.9E+5	5,300	9.3E+9	4.70E+05	2.7E+7	2,800		< 330	< 330	< 330	< 330	< 330	< 330
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	ID	NA	20,000	6,800		< 330	< 330	< 330	< 330	< 330	< 330
Naphthalene	91-20-3	NA	35,000	730	2.0E+8	67 (M)	1.6E+7	1,100		< 330	< 330	< 330	< 330	< 330	< 330
Phenanthrene	85-01-8	NA	56,000	2,100	6.7E+6	1,700	1.6E+6	25,000		< 330	< 330	< 330	< 330	< 330	< 330
Pyrene	129-00-0	NA	4.8E+5	ID	6.7E+9	2.50E+07	2.9E+7	25,000		< 330	< 330	< 330	< 330	< 330	< 330
Volatiles, VOCs ug/Kg															
Benzene (I)	71-43-2	NA	100	4,000 (X)	3.8E+8	1.7 (M)	1.8E+5	<65		< 50	< 50	< 50	< 50	< 50	< 50
Ethylbenzene (I)	100-41-4	NA	1,500	360	1.0E+10	12 (M)	2.2E+7 (C)	<65		< 50	< 50	< 50	< 50	< 50	< 50
Naphthalene	91-20-3	NA	35,000	730	2.0E+8	67 (M)	1.6E+7	680		< 330	< 330	< 330	< 330	< 330	< 330
Toluene (I)	108-88-3	NA	16,000	5,400	2.7E+10	3,700	5.0E+7 (C)	150		< 100	< 100	< 100	< 100	< 100	< 100
Xylenes (I)	1330-20-7	NA	5,600	820	2.9E+11	280 (J)	4.1E+8 (C)	240		< 150	< 150	< 150	< 150	< 150	< 150
Remaining VOCs	Varies	-	-	-	-	-	-	-		BDL	BDL	BDL	BDL	BDL	BDL

*- Total chromium concentrations detected in AKT Peerless' soil sample scollected from the subject property likely consist of chromium III based on further laboratory evaluations

**- Selenium concentrations detected are below the deveolped site-specific background criterioin.

Table 2: Summary of Groundwater Analytical Results
Former Wycoff Steel Site
Plymouth Township, Michigan
AKT Peerless Project No. 8231F-9-26

Guidesheet Number →		#1	#3	#7	#8	#9														
Parameters*	Chemical Abstract Service Number	Residential Drinking Water Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria and RBSLs	Residential Volitization to Indoor Air Pathway (VIAP)	Water Solubility	Flammability and Explosivity Screening Level	Maximum Concentration Detected	Sample Location	AKT-1 (W)	AKT-2 (W)	AKT-3 (W)	AKT-4 (W)	AKT-5 (W)							
								Collection Date	2/10/2015	2/10/2015	2/10/2015	2/10/2015	2/10/2015							
								Depth	11-16'	10-15'	5-10'	5-10'	5-10'							
<i>*(Refer to detailed laboratory report for method reference data)</i>																				
Nonspecific Grouping ug/L																				
Sulfate	14808-79-8	2.5E+5 (E)	NA	NA	NA	ID	1,100,000		1,100,000	110,000	26,000	9,200	20,000							
Metals ug/L																				
Mercury, Total	7439-97-6	2.0 (A)	0.0013	8.80E-02	56	ID	<0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2							
Arsenic	7440-38-2	10 (A)	10	NA	NA	ID	9.3		9.3	< 5	< 5	< 5	< 5							
Barium (B)	7440-39-3	2,000 (A)	(G)	NA	NA	ID	<100		< 100	< 100	< 100	< 100	< 100							
Cadmium (B)	7440-43-9	5.0 (A)	(G,X)	NA	NA	ID	<1		< 1	< 1	< 1	< 1	< 1							
Chromium, Total	7440-47-3	100 (A)	11	NA	NA	ID	11		11	< 10	< 10	< 10	< 10							
Copper (B)	7440-50-8	1,000 (E)	(G)	NA	NA	ID	13		13	5.3	< 5	< 5	< 5							
Iron (B)	7439-89-6	300 (E)	NA	NA	NA	ID	4,900		4,900	3,000	710	300	640							
Lead (B)	7439-92-1	4.0 (L)	(G,X)	NA	NA	ID	110		110	< 3	< 3	< 3	< 3							
Selenium (B)	7782-49-2	50 (A)	5.0	NA	NA	ID	8.6		< 5	8.6	< 5	< 5	< 5							
Silver (B)	7440-22-4	34	0.2 (M); 0.06	NA	NA	ID	<0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2							
Zinc (B)	7440-66-6	2,400	(G)	NA	NA	ID	60		54	60	< 50	< 50	< 50							
Semivolatiles, BNAs ug/L																				
beta-Chloronaphthalene	91-58-7	1,800	NA	TX	6,740	ID	<5		< 5	< 5	< 5	< 5	< 5							
2-Methylnaphthalene	91-57-6	260	19	66	24,600	ID	<5		< 5	< 5	< 5	< 5	< 5							
Acenaphthene	83-32-9	1,300	38	3,900 (S)	4,240	ID	<5		< 5	< 5	< 5	< 5	< 5							
Acenaphthylene	208-96-8	52	ID	65	3,930	ID	<5		< 5	< 5	< 5	< 5	< 5							
Anthracene	120-12-7	43 (S)	ID	43 (S)	43.4	ID	<5		< 5	< 5	< 5	< 5	< 5							
Benzo(a)anthracene (Q)	56-55-3	2.1	ID	9.4 (S)(MM)	9.4	ID	<1		< 1	< 1	< 1	< 1	< 1							
Benzo(a)pyrene (Q)	50-32-8	5.0 (A)	ID	NA	1.62	ID	<1		< 1	< 1	< 1	< 1	< 1							
Benzo(b)fluoranthene (Q)	205-99-2	1.5 (S, AA)	ID	NA	1.5	ID	<1		< 1	< 1	< 1	< 1	< 1							
Benzo(g,h,i)perylene	191-24-2	1.0 (M); 0.26 (S)	ID	NA	0.26	ID	<1		< 1	< 1	< 1	< 1	< 1							
Benzo(k)fluoranthene (Q)	207-08-9	1.0 (M); 0.8 (S)	NA	NA	0.8	ID	<1		< 1	< 1	< 1	< 1	< 1							
Chrysene (Q)	218-01-9	1.6 (S)	ID	NA	1.6	ID	<1		< 1	< 1	< 1	< 1	< 1							
Dibenzo(a,h)anthracene (Q)	53-70-3	2.0 (M); 0.21	ID	NA	2.49	ID	<2		< 2	< 2	< 2	< 2	< 2							
Fluoranthene	206-44-0	210 (S)	1.6	NA	206	ID	<1		< 1	< 1	< 1	< 1	< 1							
Fluorene	86-73-7	880	12	1,700 (S)	1,980	ID	<5		< 5	< 5	< 5	< 5	< 5							
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	2.0 (M); 0.022 (S)	ID	NA	0.022	ID	<2		< 2	< 2	< 2	< 2	< 2							
Naphthalene	91-20-3	520	11	4.2 (M)	31,000	NA	<5		< 5	< 5	< 5	< 5	< 5							
Phenanthrene	85-01-8	52	2.0 (M); 1.4	9.5	1,000	ID	<2		< 2	< 2	< 2	< 2	< 2							
Pyrene	129-00-0	140 (S)	ID	140 (S)	135	ID	<5		< 5	< 5	< 5	< 5	< 5							
Volatiles, VOCs ug/L																				
1,1,1-Trichloroethane	71-55-6	200 (A)	89	180 (FF)	1.33E+6	ID	4.4		< 1	4.4	< 1	< 1	< 1							
Benzene (l)	71-43-2	5.0 (A)	200 (X)	1	1.75E+6	68,000	<1		< 1	< 1	< 1	< 1	< 1							
Ethylbenzene (l)	100-41-4	74 (E)	18	2.8	1.69E+5	43,000	<1		< 1	< 1	< 1	< 1	< 1							
Toluene (l)	108-88-3	790 (E)	270	300 (FF)	5.26E+5	61,000	<1		< 1	< 1	< 1	< 1	< 1							
Xylenes (l)	1330-20-7	280 (E)	41	75 (J)	1.86E+5	70,000	<3		< 3	< 3	< 3	< 3	< 3							
Remaining VOCs	Varies	-	-	-	-	-	-		BDL	BDL	BDL	BDL	BDL							

Table 3: Summary of Soil Analytical Results
Additional Soil Quality Assessment
Former Wycoff Steel Site
Plymouth Township, Michigan
AKT Peerless Project No.: 8231F-9-26

Guidesheet Number →		#10	#11	#12	#17	#18	#19																			
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Residential Particulate Soil Inhalation Protection Criteria & RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Volitization to Indoor Air Pathway (VIAP)	Sample Location	AKT-6	AKT-6	AKT-7	AKT-7	AKT-8	AKT-8	AKT-10	AKT-10	AKT-11	AKT-11	AKT-12	AKT-12	AKT-13	AKT-13				
								Collection Date	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015					
								Depth (feet bgs)	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4				
<i>*/Refer to detailed laboratory report for method reference data</i>																										
Metals ug/Kg																										
Selenium (B)	7782-49-2	410	4,000	400	1.3E+8	2.6E+6	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS							
Semivolatiles, ug/Kg																										
beta-Chloronaphthalene	91-58-7	NA	6.2E+5	NA	ID	5.6E+7	TX	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330					
2-Methylnaphthalene	91-57-6	NA	57,000	4,200	6.7E+8	8.1E+6	1,700	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	610	< 330	410	< 330	550	< 330					
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.4E+10	4.1E+7	2.00E+05	< 330	< 330	< 330	< 330	< 330	< 330	< 330	640	< 330	940	< 330	< 330	< 330	2,900	< 330				
Acenaphthylene	208-96-8	NA	5,900	ID	2.3E+9	1.6E+6	DATA	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330					
Anthracene	120-12-7	NA	41,000	ID	6.7E+10	2.3E+8	1.30E+07	< 330	< 330	< 330	< 330	340	< 330	1,200	< 330	2,100	< 330	< 330	< 330	6,500	< 330					
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	ID	20,000	1.6E+05 (MM)	560	< 330	1,500	< 330	1,300	< 330	3,100	< 330	5,000	< 330	< 330	14,000	< 330						
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	1.5E+6	2,000	NA	590	< 330	1,500	< 330	1,300	< 330	2,700	< 330	4,200	< 330	< 330	12,000	< 330						
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	20,000	NA	620	< 330	2,200	< 330	1,900	< 330	3,900	< 330	6,400	< 330	< 330	19,000	< 330						
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	8.0E+8	2.5E+6	NA	< 330	< 330	1,000	< 330	800	< 330	1,800	< 330	2,500	< 330	< 330	6,700	< 330						
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	ID	2.0E+5	NA	< 330	< 330	780	< 330	720	< 330	1,300	< 330	2,400	< 330	< 330	6,500	< 330						
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	2.0E+6	NA	550	< 330	1,600	< 330	1,500	< 330	3,300	< 330	5,400	< 330	< 330	16,000	< 330						
Dibeno(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	ID	2,000	NA	< 330	< 330	< 330	< 330	< 330	< 330	440	< 330	710	< 330	< 330	1,800	< 330						
Fluoranthene	206-44-0	NA	7.3E+5	5,500	9.3E+9	4.6E+7	NA	1,100	< 330	3,800	< 330	3,700	< 330	8,000	< 330	15,000	< 330	< 330	44,000	< 330						
Fluorene	86-73-7	NA	3.9E+5	5,300	9.3E+9	2.7E+7	4.70E+05	< 330	< 330	< 330	< 330	< 330	< 330	540	< 330	930	< 330	< 330	3,000	< 330						
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	ID	20,000	NA	400	< 330	1,200	< 330	1,100	< 330	2,200	< 330	3,200	< 330	< 330	8,800	< 330						
Naphthalene	91-20-3	NA	35,000	730	2.0E+8	1.6E+7	67 (M)	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	650	< 330	< 330	1,300	< 330						
Phenanthrene	85-01-8	NA	56,000	2,100	6.7E+6	1.6E+6	1,700	740	< 330	1,600	< 330	1,800	< 330	5,500	< 330	9,400	< 330	360	< 330	31,000	< 330					
Pyrene	129-00-0	NA	4.8E+5	ID	6.7E+9	2.9E+7	2.50E+07	950	< 330	2,600	< 330	2,300	< 330	6,100	< 330	8,900	< 330	< 330	28,000	< 330						

**- Selenium concentrations detected are below the developed site-specific background criterion.

Table 3: Summary of Soil Analytical Results
Additional Soil Quality Assessment
Former Wycoff Steel Site
Plymouth Township, Michigan
AKT Peerless Project No.: 8231F-9-26

Guidesheet Number →	#10	#11	#12	#17	#18	#19																									
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Residential Particulate Soil Inhalation Protection Criteria & RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Volitization to Indoor Air Pathway (VIAP)	Sample Location	AKT-14	AKT-14	AKT-15	AKT-15	AKT-16	AKT-16	AKT-17	AKT-17	AKT-18	AKT-18	AKT-19	AKT-19	AKT-20	AKT-20	AKT-21	AKT-21	AKT-22	AKT-22	AKT-23	AKT-23	AKT-24	AKT-24	AKT-25
								Collection Date	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015	3/9/2015
								Depth (feet bgs)	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	2-4	
Metals ug/Kg																															
Selenium (B)	7782-49-2	410	4,000	400	1.3E+8	2.6E+6	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	220	350	290	440**	420**	330								
Semivolatiles, ug/Kg																															
beta-Chloronaphthalene	91-58-7	NA	6.2E+5	NA	ID	5.6E+7	TX	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
2-Methylnaphthalene	91-57-6	NA	57,000	4,200	6.7E+8	8.1E+6	1,700	1,300	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.4E+10	4.1E+7	2.00E+05	7,200	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Acenaphthylene	208-96-8	NA	5,900	ID	2.3E+9	1.6E+6	DATA	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Anthracene	120-12-7	NA	41,000	ID	6.7E+10	2.3E+8	1.30E+07	15,000	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	ID	20,000	1.6E+05 (MM)	23,000	< 330	1,100	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	1.5E+6	2,000	NA	19,000	< 330	1,100	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	20,000	NA	25,000	< 330	1,500	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	8.0E+8	2.5E+6	NA	11,000	< 330	650	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	ID	2.0E+5	NA	9,300	< 330	470	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	2.0E+6	NA	23,000	< 330	1,100	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Dibeno(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	ID	2,000	NA	2,800	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Fluoranthene	206-44-0	NA	7.3E+5	5,500	9.3E+9	4.6E+7	NA	60,000	< 330	2,600	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Fluorene	86-73-7	NA	3.9E+5	5,300	9.3E+9	2.7E+7	4.70E+05	7,100	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	ID	20,000	NA	14,000	< 330	850	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Naphthalene	91-20-3	NA	35,000	730	2.0E+8	1.6E+7	67 (M)	1,300	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Phenanthrene	85-01-8	NA	56,000	2,100	6.7E+6	1.6E+6	1,700	52,000	< 330	1,400	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													
Pyrene	129-00-0	NA	4.8E+5	ID	6.7E+9	2.9E+7	2.50E+07	42,000	< 330	2,100	< 330	< 330	< 330	< 330	< 330	< 330	< 330	NS													

**- Selenium concentrations detected are below

Table 3: Summary of Soil Analytical Results
Additional Soil Quality Assessment
Former Wycoff Steel Site
Plymouth Township, Michigan
AKT Peerless Project No.: 8231F-9-26

Guidesheet Number →	#10	#11	#12	#17	#18	#19		
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Residential Particulate Soil Inhalation Protection Criteria and RBSLs	Residential Direct Contact Criteria and RBSLs	Residential Volitization to Indoor Air Pathway (VIAP)	Sample Location
*(Refer to detailed laboratory report for method reference data)								AKT-26
Metals ug/Kg								
Selenium (B)	7782-49-2	410	4,000	400	1.3E+8	2.6E+6	NA	490**
Semivolatiles, ug/Kg								
beta-Chloronaphthalene	91-58-7	NA	6.2E+5	NA	ID	5.6E+7	TX	NS
2-Methylnaphthalene	91-57-6	NA	57,000	4,200	6.7E+8	8.1E+6	1,700	NS
Acenaphthene	83-32-9	NA	3.0E+5	8,700	1.4E+10	4.1E+7	2.00E+05	NS
Acenaphthylene	208-96-8	NA	5,900	ID	2.3E+9	1.6E+6	DATA	NS
Anthracene	120-12-7	NA	41,000	ID	6.7E+10	2.3E+8	1.30E+07	NS
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	ID	20,000	1.6E+05 (MM)	NS
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	1.5E+6	2,000	NA	NS
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	ID	20,000	NA	NS
Benzo(g,h,i)perylene	191-24-2	NA	NLL	NLL	8.0E+8	2.5E+6	NA	NS
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	ID	2.0E+5	NA	NS
Chrysene (Q)	218-01-9	NA	NLL	NLL	ID	2.0E+6	NA	NS
Dibenzo(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	ID	2,000	NA	NS
Fluoranthene	206-44-0	NA	7.3E+5	5,500	9.3E+9	4.6E+7	NA	NS
Fluorene	86-73-7	NA	3.9E+5	5,300	9.3E+9	2.7E+7	4.70E+05	NS
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	ID	20,000	NA	NS
Naphthalene	91-20-3	NA	35,000	730	2.0E+8	1.6E+7	67 (M)	NS
Phenanthrene	85-01-8	NA	56,000	2,100	6.7E+6	1.6E+6	1,700	NS
Pyrene	129-00-0	NA	4.8E+5	ID	6.7E+9	2.9E+7	2.50E+07	NS

**- Selenium concentrations detected are below the developed site-specific background criterion.

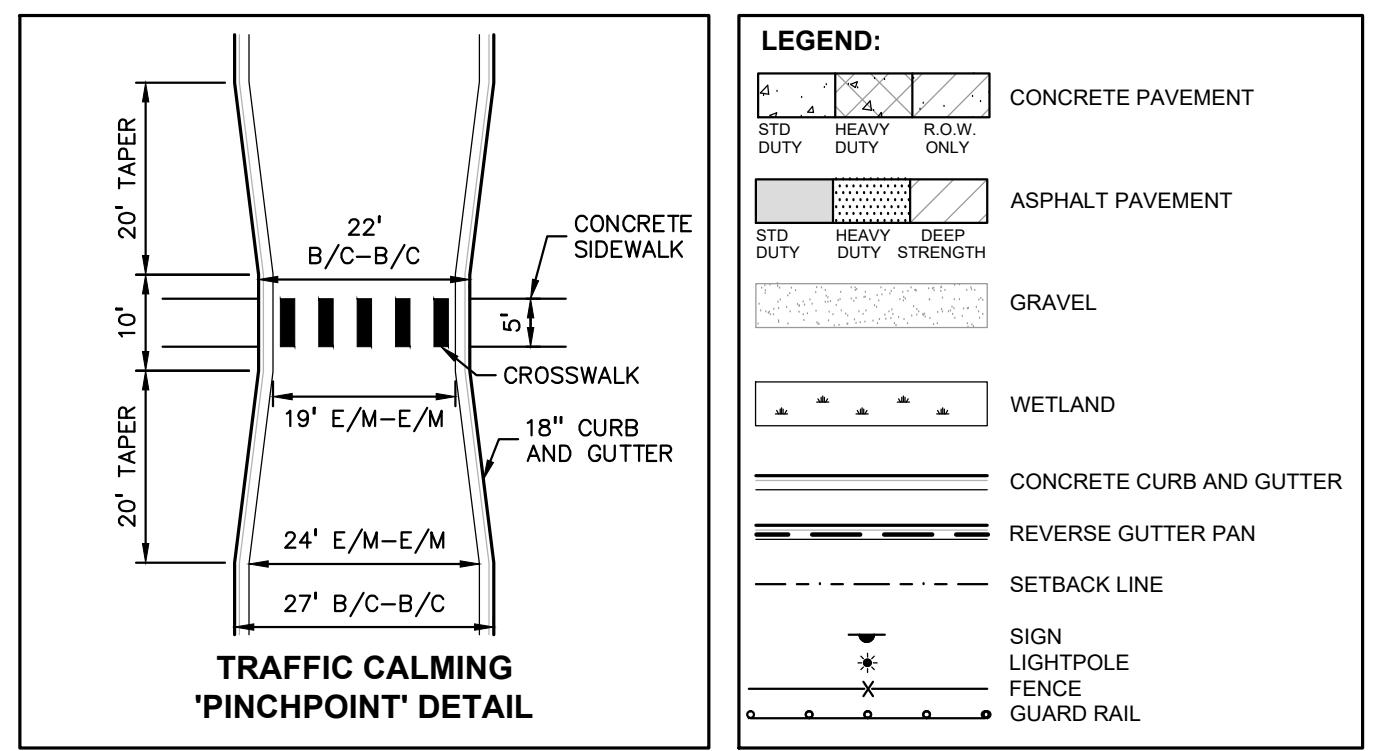
Table 5: Summary of Groundwater Analytical Results from Previous Environmental Investigations
Former Wycoff Steel
1000 General Drive
Plymouth Township, Michigan
AKT Peerless Project No. 8231F-9-26

Parameters*	Chemical Abstract Service Number	Residential Drinking Water Criteria	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential Volitization to Indoor Air Pathway (VIAP)	Non-Residential Volitization to Indoor Air Pathway (VIAP)	Water Solubility	Flammability and Explosivity Screening Level	Sample Location	A7GW-1	MW-1	MW-6	MW-201	MW-202	MW-204	MW-205
									Collection Date	5/9/2002	12/18/2012	12/18/2012	12/18/2012	12/18/2012	12/18/2012	11/9/2005
									Depth	-	-	-	-	-	-	-
<i>*(Refer to detailed laboratory report for method reference data)</i>																
Metals ug/L																
Antimony	7440-36-0	6.0 (A)	6.0 (A)	130 (X)	NA	NA	NA	ID		16	NS	NS	NS	NS	NS	NS
Arsenic	7440-38-2	10 (A)	10 (A)	10	NA	NA	NA	ID		20	<1	12	19	NS	2	1
Beryllium	7440-41-7	4.0 (A)	4.0 (A)	(G)	NA	NA	NA	ID		<1	NS	NS	NS	NS	NS	NS
Cadmium (B)	7440-43-9	5.0 (A)	5.0 (A)	(G,X)	NA	NA	NA	ID		4	NS	NS	NS	NS	NS	NS
Chromium, Total	7440-47-3	100 (A)	100 (A)	11	NA	NA	NA	ID		310	NS	NS	NS	NS	NS	NS
Cobalt	7440-48-4	40	100	100	NA	NA	NA	ID		260	NS	NS	NS	NS	NS	NS
Iron (B)	7439-89-6	300 (E)	300 (E)	NA	NA	NA	NA	ID		NS	90	12,000	33,000	NS	4,100	250
Lead (B)	7439-92-1	4.0 (L)	4.0 (L)	(G,X)	NA	NA	NA	ID		550	NS	NS	NS	NS	NS	NS
Mercury, Total	7439-97-6	2.0 (A)	2.0 (A)	0.0013	8.80E-02	0.3	56	ID		3	NS	NS	NS	NS	NS	NS
Nickel (B)	7440-02-0	100 (A)	100 (A)	(G)	NA	NA	NA	ID		150	NS	NS	NS	NS	NS	NS
Selenium (B)	7782-49-2	50 (A)	50 (A)	5.0	NA	NA	NA	ID		11	NS	NS	NS	NS	NS	NS
Silver (B)	7440-22-4	34	98	0.2 (M); 0.06	NA	NA	NA	ID		1	NS	NS	NS	NS	NS	NS
Sodium	7440-23-5	2.3E+5 (HH)	3.5E+5	NA	NA	NA	NA	ID		<2	NS	NS	NS	NS	NS	NS
Zinc (B)	7440-66-6	2,400	5,000 (E)	(G)	NA	NA	NA	ID		760	NS	NS	NS	NS	NS	NS
<i>Semivolatiles, ug/L</i>																
Semivolatiles	Varies	-	-	-	-	-	-	-		BDL	NS	NS	NS	NS	NS	NS
<i>Volatiles, VOCs ug/L</i>																
Benzene (I)	71-43-2	5.0 (A)	5.0 (A)	200 (X)	1	8.4	1.75E+6	68,000		<1	NS	NS	NS	NS	NS	NS
Ethylbenzene (I)	100-41-4	74 (E)	74 (E)	18	1.69E+5	28	1.69E+5	43,000		<1	NS	NS	NS	NS	NS	NS
Toluene (I)	108-88-3	790 (E)	790 (E)	270	5.26E+5	6,600 (FF)	5.26E+5	61,000		<1	NS	NS	NS	NS	NS	NS
Xylenes (I)	1330-20-7	280 (E)	280 (E)	41	1.86E+5	410 (J)	1.86E+5	70,000		<3	NS	NS	NS	NS	NS	NS
Remaining VOCs	Varies	-	-	-	-	-	-	-		BDL	NS	NS	NS	NS	NS	NS
<i>Misc.</i>																
Sulfates	14808798	2.5E+5 (E)	2.5E+5 (E)	NA	NA	NA	NA	ID		NS	75,000	1,400,000	1,500,000	NS	39,000	26,000

- (A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.
- (B) Background, as defined in R 299.1(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
- (C) The criterion developed under R 299.20 to R 299.26 exceeds the chemical-specific soil saturation screening level (C_{sat}). The person proposing or implementing response activity shall document whether additional response activity is required to control free-phase liquids or NAPL to protect against risks associated with free-phase liquids by using methods appropriate for the free-phase liquids present. Development of a site-specific C_{sat} or methods presented in R 299.22, R 299.24(5), and R 299.26(8) may be conducted for the relevant exposure pathways.
- (D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or $1.0E+9$ parts per billion (ppb).
- (E) Criterion is the aesthetic drinking water value, as required by Section 20120a(S) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value [as provided in the table in Footnote (E) in R 299.49].
- (F) Criterion is based on adverse impacts to plant life and phytotoxicity.
- (G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO₃/L, use 400 mg CaCO₃/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote. [See table in Footnote (G) in R 299.49].
- (H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.
- (I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.
- (K) Hazardous substance may be flammable or explosive, or both.
- (L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(9) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable concentrations of site-specific soil and drinking water concentrations are presented in the [table in Footnote (L) in R 299.49].
- (M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.
- (N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of $2.0E+5$ ug/kg.
- (O) The concentration of all polychlorinated and polybrominated dibenzodioxin and dibenzofuran isomers present at a facility, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon their relative potency, shall be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin. The generic cleanup criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin are not calculated according to the algorithms presented in R 299.14 to R 299.26. The generic cleanup criteria are being held at the values that the DEQ has used since August 1998, in recognition of the fact that national efforts to reassess risks posed by dioxin are not yet complete. Until these studies are complete, it is premature to select a revised slope factor and/or reference dose for calculation of generic cleanup criteria.
- (P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Nonresidential direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.
- (Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.
- (R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (S) Criterion defaults to the hazardous substance-specific water solubility limit.
- (T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable. [See table in Footnote (T) in R 299.49].
- (U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules.
- (V) Criterion is the aesthetic drinking water value as required by Section 20120a(S) of the NREPA. Concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) and 20120b of the NREPA.
- (W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.
- (X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the [table in Footnote (X) in R 299.49], except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in [the table in Footnote (G) in R 299.49]. Soil protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.
- (Y) Source size modifiers shown in the [table in Footnote (Y) in R 299.49] shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre. The modifier shall be multiplied by the generic soil inhalation criteria shown in the table of generic cleanup criteria to determine the applicable criterion. See Footnote (C) in R 299.49.
- (Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.
- (AA) Use 10,000 ug/L where groundwater enters a structure through the use of a water well, sump or other device. Use 28,000 ug/L for all other uses.
- (BB) The state drinking water standard for asbestos (fibers greater than 10 micrometers in length) is in units of a million fibers per liter of water (MFL). Soil concentrations of asbestos are determined by polarized light microscopy.
- (CC) **Groundwater:** The generic GSI criteria are based on the toxicity of unionized ammonia (NH₃); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH₃ in the surface water. This percent NH₃ is a function of the pH and temperature of the receiving surface water and can be estimated using the [table in Footnote (CC) in R 299.49], taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975). The generic approach for estimating NH₃ assumes a default pH of 8 and default temperatures of 68 °F and 85 °F for cold water and warm water surface water, respectively. The resulting NH₃ is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH₃N) concentration in the groundwater and the resulting NH₃ concentration compared to the applicable GSI criterion. As an alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the [table in Footnote (CC) in R 299.49], a lower percent unionized ammonia concentration for comparison to the generic GSI.
- (DD) Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.
- (EE) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure. Nonresidential direct contact criteria are protective for a pregnant adult receptor.
- (FF) The values listed in the table in Footnote (EE) in R 299.49 are applicable generic GSI criteria as required by Section 20120e of the NREPA.
- (GG) The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the total dissolved solids criterion is applicable.
- (HH) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or $8.4E+6$ ug/m³.
- (II) The residential criterion for sodium is 230,000 ug/L in accordance with the Sodium Advisory Council recommendation and revised Groundwater Discharge Standards.
- (NA) Insufficient data to develop criterion.
- (NLL) A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
- (NLV) Hazardous substance is not likely to leach under most soil conditions.
- (ug/kg) Micrograms per kilogram
- (ug/L) Micrograms per liter
- (NS) Not sampled
- (BDL) Below Laboratory Method Detection Limits
- BOLD** Exceeds highlighted criteria.

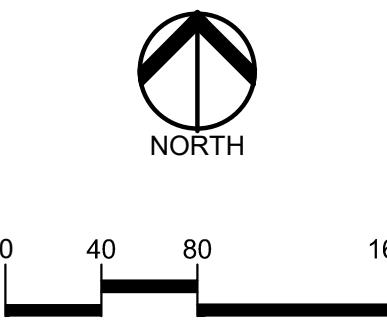
Appendix A

Proposed Site Plan



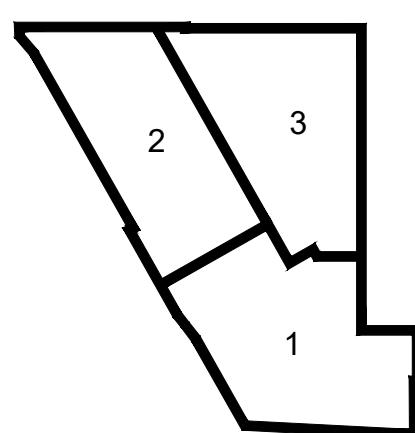
GENERAL NOTES:
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- NO PARKING FIRE LANE SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
- REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
- REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS



CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES ARE UNKNOWN AND APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE LOCATION AND ELEVATION OF THESE UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

KEY MAP:



CLIENT:
POMEROY PLYMOUTH, LLC
5480 CORPORATE DRIVE, SUITE 230
TROY, MICHIGAN 48083

TOLL BROTHERS
26200 TOWN CENTER DRIVE, SUITE 200
NOVI, MICHIGAN 48375

PROJECT TITLE:
PLYMOUTH WALK PUD
41700 ANN ARBOR ROAD
PLYMOUTH TOWNSHIP, MICHIGAN 48170

REVISIONS:
-
-

ORIGINAL ISSUE DATE:
XXXXXX, 2022

DRAWING TITLE:
OVERALL DEVELOPMENT PLAN

PEA JOB NO. 2020-0483
P.M. JEC
DN. BSH
DES. BSH
DRAWING NUMBER:

C-3.0

NOT FOR CONSTRUCTION

TABLES

Appendix A

Proposed Site Plan

TABLES

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Proposed Site Plan