

**SECTION 7A COMPLIANCE ANALYSIS**

**1240 SOUTH HARRISON ROAD  
(PARCEL IDENTIFICATION NUMBERS:  
33-20-01-24-123-009  
AND  
33-20-01-24-300-002)  
EAST LANSING, MICHIGAN 48823**

*for*

**MICHIGAN STATE UNIVERSITY  
EAST LANSING, MICHIGAN**

**AND**

**CITY OF EAST LANSING  
410 ABBOTT ROAD  
EAST LANSING, MICHIGAN 48823**

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**PREPARED FOR  
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EAST LANSING, MICHIGAN 48823  
AND  
CITY OF EAST LANSING  
EAST LANSING, MICHIGAN 48823**

**AKT PEERLESS PROJECT NO. 6643S-3-26**

**1.0 DETAILED CHARACTERISTICS OF PROPERTY USE**

**1.1 CURRENT USE OF THE PROPERTY**

The subject property is located in the southwest ¼ of Section 24 in East Lansing (T.4N./R.2W.), Ingham County, Michigan. The subject property is situated west of South Harrison Road. It consists of a nearly rectangular shaped parcel and an irregular shaped parcel that total approximately 15.70 acres.

Mr. Andrew Smith, MSU is the current manager of the subject property. The subject property is occupied by university storage and the Amtrak Station.

The following table presents additional information regarding the subject property. For ease of reference in this report, AKT Peerless has designated each of the subject property parcels with a letter. These designations have no relevance to legally recorded data about the subject property.

Parcel	Address	Tax Identification Number	Owner of Record	Approximate Acreage
A	1240 South Harrison Road	33-20-01-24-123-009	Board of Trustees, Michigan State University	1.61
B	Unaddressed Property	33-20-01-24-300-002	State Board of Agriculture	14.09

**CHICAGO**  
216 W. Jackson, Ste. 1060  
Chicago, IL 60606

**DETROIT**  
6200 Second Ave., Ste. 114  
Detroit, MI 48202

**FARMINGTON**  
22725 Orchard Lake Rd.  
Farmington, MI 48336

**LANSING**  
P.O. Box 23174  
Lansing, MI 48909-3174

**SAGINAW**  
214 Janes Ave.  
Saginaw, MI 48607

**TRAVERSE CITY**  
1693 Carlisle Road  
Traverse City, MI 49696

The subject property is currently developed as commercial and is currently used for a train/bus station and university storage. The City of East Lansing intends to utilize the subject property for construction of a new and/or expanded transportation hub (i.e. train, bus, etc.). Refer to Figure 1 for a topographic location map. Refer to Figure 2 for a sample location map.

## 1.2 EXISTING INFRASTRUCTURE FEATURES

This property is currently serviced by underground natural gas, electricity, municipal water, and municipal sewer. Utility services providers and connection dates area provided in the following table:

Utility / Service	Type	Utility Company or Municipality	Comments/Historical Services
heat	natural gas	Consumers Energy	Natural gas has been provided since at least 1969. A heating oil underground storage tank (UST) was previously located to the west of Building 3. Other historical services were not identified.
municipal waste	general refuse	MSU	General refuse is collected on a weekly basis.
potable water	municipal	MSU and City of East Lansing	Municipal drinking water has been provided since development in 1950.
electricity	electric lines	MSU and Lansing Board of Water and Light (LBW&L)	Electricity has been provided since development in 1950.
sewage disposal	municipal	City of East Lansing	Municipal sewerage utilities have been provided since development in 1950.
storm water	county	Ingham County	An enclosed county storm drain system was used since development in 1950.

In addition, the property is accessible by paved roadways.

## 1.3 PROPOSED CONSTRUCTION ACTIVITIES

With the exception of the following, no construction activities are proposed to occur at the property:

- Demolition of current Building 1, Building 3, and Building 4; and
- Construction of a 1-story, multi-modal (transportation hub) building on the northern portion of the subject property.

## 2.0 HAZARDOUS SUBSTANCE INFORMATION

### 2.1 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

AKT Peerless Environmental & Energy Services (AKT Peerless) conducted an Environmental

Phase I Environmental Site Assessment (ESA), a Phase II ESA, and a Supplemental Phase II ESA on the subject property. In addition, Strata Environmental Services Inc. (Strata) conducted an UST Assessment on the subject property. Please refer to the following sections for summaries of these investigations.

AKT Peerless' and Strata's environmental reports covered a range of environmental conditions associated with the subject property. Based on a review of available sources, the subject property consisted of undeveloped land from at least 1938 until approximately 1950 when a railroad platform and Building 2 were constructed. In 1963 Building 3 was constructed. In 1965 Building 1 was constructed. In 1967 Building 4 was constructed, and Building 5 was constructed in 1987. Operations at the subject property have included printing (1950 – c.2010), university storage (c.1963 – present), and a transit platform (c.1950 – present).

### **2.1.1 AKT Peerless' August 2010 Phase I Environmental Site Assessment (ESA)**

AKT Peerless completed a Phase I ESA for the property located at 1240 South Harrison Road (Parcel Identification Numbers: 33-20-01-24-123-009 and 33-20-01-24-300-002) in East Lansing, Michigan on August 7, 2010. AKT Peerless' Phase I ESA included, but was not limited to, a site walkover, review of government records, assembly and review of data from area maps and directories, assessment of aerial photographs, and interviews with the site owner, others familiar with the subject property, and government officials.

Based on the results of the findings of the Phase I ESA, the following recognized environmental conditions (RECs) were identified for the subject property:

1. An approximately 550-gallon heating oil UST with associated fill port and vent pipe is located to the west of Building 3. The UST is not currently in use. In addition, the installation date is unknown.
2. AKT Peerless observed stained soil/pavement beneath abandoned unknown machinery located to the west of Building 5.
3. AKT Peerless observed storage of large quantities of roofing repair materials within the garage area of Building 1. It is AKT Peerless' opinion that bulk storage of hazardous substances may have adversely impacted the subject property.
4. Building 2 was used for printing operations from 1950 until early 2010. It is AKT Peerless' opinion that the historical use of the subject property in association with the use and storage of hazardous substances and/or wastes may have adversely impacted the subject property.
5. The adjoining properties to the north, south, and west have contained railroad tracks since at least 1938. Potential concerns typically associated with railroad spurs include the use of fill materials as ballast to support ties and rails of the railroad tracks, and leaks or spills of hazardous materials or petroleum products. In addition, two train derailments with associated releases of coal and diesel fuel occurred during the last 30 years to the north of the subject property.

### **2.1.2 AKT Peerless' September 2010 Phase II ESA**

On August 10, 2010, AKT Peerless conducted a subsurface investigation at the subject property to further evaluate environmental concerns identified during previous environmental investigations. AKT Peerless: (1) drilled nine soil borings, (2) installed one temporary monitoring well, and (3) collected soil and groundwater samples from soil borings and the UST cavity for laboratory analyses. AKT Peerless submitted soil and groundwater samples for laboratory analyses of select parameters, including: volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PNAs), base neutral acids (BNAs), Michigan 10 Metals (arsenic, barium, cadmium, total chromium, copper, lead, mercury, selenium silver, and zinc), hexavalent chromium, fine and coarse fraction lead, and/or Michigan Department of Natural Resources and Environment (MDNRE) Light Distillate Oil Parameters [benzene, toluene, ethylbenzene, and xylenes (BTEX), trimethylbenzene isomers (TMBs), and PNAs].

AKT Peerless compared the laboratory analytical data to the applicable MDNRE Part 201 Residential/Commercial I Generic Cleanup Criteria (GCC) as published by the MDNRE Remediation Division (RD) including: Drinking Water and Drinking Water Protection (DW/DWP); Groundwater to Surface Water Interface and Groundwater to Surface Water Interface Protection (GSI/GSIP), Groundwater Contact Protection (GCP); Soil and Groundwater Volatilization to Indoor Air Inhalation (SVIAI/GVIAI); Volatile Soil Inhalation Criteria (VSIC); Particulate Soil Inhalation (PSI); and Direct Contact (DC). The results of the investigation indicated the following:

- Naphthalene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, fluorene, phenanthrene, and tetrachloroethylene were detected in subsurface soils in the vicinity of the roofing material storage in Building 1 (B-4) at concentrations exceeding the MDNRE Part 201 Residential/Commercial I GCC. Various concentrations in soil were detected above the groundwater surface water interface protection criteria, drinking water protection criteria, groundwater contact protection, direct contact criteria, and volatile soil inhalation criteria. Further, total chromium, benzo(a)pyrene, fluoranthene, and phenanthrene were detected in subsurface soils in the vicinity of the southern property boundary (B-10 and/or B-11) at concentrations exceeding MDNRE Part 201 Residential/Commercial I GCC. Various concentrations were detected above the groundwater surface water interface protection criteria, and direct contact criteria.

Target parameters were not detected above MDNRE Part 201 Generic Residential/Commercial I GCC in any of the groundwater samples collected.

### **2.1.3 Strata's September 2010 Laboratory Analytical Results for UST Assessment**

Following removal of the suspected heating oil UST on August 11, 2010, six soil samples (GP-2 through GP-7) were collected from the former UST cavity by Strata. The soil samples were submitted for laboratory analyses for MDNRE Light Distillate Oil Parameters (not including DRO). According to laboratory analytical results, ethylbenzene, naphthalene, 1,2,3-TMB, 1,2,4-TMB, 1,3,5, TMB, and xylenes were detected at concentrations exceeding MDNRE

Residential/Commercial I GCC. Various concentrations were detected above the groundwater surface water interface protection criteria, and drinking water protection criteria.

#### **2.1.4 AKT Peerless' November 2010 Supplemental Phase II Letter Report**

On October 14, 2010, AKT Peerless conducted a subsurface investigation at the subject property to further evaluate existing impact in the vicinity of soil boring B-4. AKT Peerless drilled five soil borings, and collected soil samples for laboratory analyses. AKT Peerless submitted soil samples for laboratory analyses of VOCs and PNAs.

AKT Peerless compared the laboratory analytical data to the applicable MDNRE Part 201 Residential/Commercial I GCC as published by the MDNRE RD including: DW/DWP; GSI/GSIP, GCP; SVIAI/GVIAI; VSIC; PSI; and DC. The results of the investigation indicated the following:

- Tetrachloroethylene was detected in subsurface soil to the south of Building 1 (B-12) at concentrations exceeding the MDNRE Part 201 Residential/Commercial I GCC. The concentration in soil was detected above the drinking water protection criteria.

Based on laboratory analytical results from subsurface investigations and the UST removal conducted in August 2010 and October 2010, the subject property meets the definition of a *facility*, as defined in Part 201 of the NREPA, Michigan PA) 451, 1994, as amended.

#### **2.1.5 AKT Peerless' December 2010 Baseline Environmental Assessment (BEA)**

Based on laboratory analytical results, the subject property meets the definition of a *facility*, as defined in Part 201 of the NREPA, Michigan PA 451, 1994, as amended. AKT Peerless completed a BEA for the subject property on behalf of the City of East Lansing on December 13, 2010. The BEA was disclosed to the MDNRE.

## **2.2 KNOWN CONTAMINATION**

AKT Peerless completed a Phase I ESA on the subject property that included a detailed evaluation of current and historical conditions on the subject property in an effort to identify RECs<sup>1</sup> and *historical recognized environmental conditions* (HRECs)<sup>2</sup>. Previous environmental investigations and reports, were reviewed during the course of the Phase I ESA.

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<sup>1</sup> ASTM Standard Practice E 1527-05 defines the term REC as the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate: (1) an existing release, (2) a past release, or (3) a material threat of a release of a hazardous substance or petroleum product into structures on the subject property or into the ground, groundwater, or surface water of the subject property. Neither HRECs nor RECs are intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

<sup>2</sup> ASTM defines the term HREC as an environmental condition which in the past would have been considered a REC, but which may or may not be considered a REC currently.

A Phase II ESA and Supplemental Phase II ESA were performed at the subject property by AKT Peerless to further evaluate the RECs identified in their August 2010 Phase I ESA. In addition, Strata performed UST assessment activities during removal of the suspected 550-gallon heating oil UST. AKT Peerless is not aware of any contaminated areas beyond those identified in these reports.

The following tables show contaminants that exceed MDNRE Industrial/Commercial II, III, and IV GCC established under Part 201 of the NREPA, 1995 PA 451, as amended (Part 201), sample locations that exceed MDNRE Part 201 Industrial/Commercial II, III, and IV GCC, maximum contaminant concentrations and MDNRE Part 201 Industrial/Commercial II, III, and IV GCC that have been exceeded.

### Summary of Soil Analytical Results Exceeding Industrial/Commercial II, III, and IV GCC

Parameter (CAS number)	Criteria Exceeded	Sample Identification	Maximum Concentration ug/Kg
Acenaphthene (83-32-9)	GSIP	B-4 (2-4')	26,000
Anthracene (120-12-7)	DWP GCP	B-4 (2-4')	65,000
Benzo(a)anthracene (56-55-3)	DC	B-4 (2-4')	68,000
Benzo(a)pyrene (50-32-8)	DC	B-4 (2-4') B-10 (0-0.5') B-11 (0-0.5')	46,000
Chromium Total (7440-47-3)	GSIP	B-10 (0-0.5')	18,800
Ethylbenzene (100-41-4)	DWP GSIP	GP-5 GP-6	4,700
Fluoranthene (206-44-0)	GSIP	B-4 (2-4') B-10 (0-0.5') B-11 (0-0.5')	136,000
Fluorene (86-73-7)	GSIP	B-4 (2-4')	69,000
Naphthalene (91-20-3)	GSIP	B-4 (2-4') GP-5 GP-6	92,000
Phenanthrene (85-01-8)	DWP GSIP VSI	B-4 (2-4') B-10 (0-0.5')	227,000
Tetrachloroethylene (127-18-4)	DWP GSIP	B-4 (2-4') B-12 (18-20')	2,560
1,2,3-Trimethylbenzene (526-73-8)	DWP GSIP	GP-2 GP-5 GP-6	30,000
1,2,4-Trimethylbenzene (95-63-6)	DWP GSIP	GP-5 GP-6	62,000

Parameter (CAS number)	Criteria Exceeded	Sample Identification	Maximum Concentration ug/Kg
1,3,5-Trimethylbenzene (108-67-8)	DWP GSIP	GP-2 GP-5 GP-6	16,000
Xylenes (1330-20-7)	GSIP	GP-5 GP-6	5,200

DWP – Drinking Water Protection Criteria

GSIP – Groundwater Surface Water Interface Protection Criteria

GCP – Groundwater Contact Protection Criteria

SVIAI – Soil Volatilization to Indoor Air Inhalation Criteria

VSI – Volatile Soil Inhalation Criteria

PSI – Particulate Soil Inhalation Criteria

DC – Direct Contact Criteria

Sample locations are depicted on Figure 2, and exceedence locations are mapped on Figure 3. Complete soil and groundwater analytical results are summarized in Tables 1 and 2.

### 2.3 HAZARDOUS SUBSTANCE CONCENTRATIONS, FATE, AND TRANSPORT

Environmental assessments indicate that soil has been impacted by hazardous substances on the subject property. Soil borings and the UST removal excavation on the property were conducted to a maximum depth of 20-feet below ground surface (bgs). Soil conditions across a majority of the subject property consist of sand from varying depths between just below the ground surface and 19.0 feet bgs, ranging in thickness between 1.0 feet and 11.0 feet. Clay was generally encountered from varying depths between just below the ground surface and 5.0 feet bgs, ranging in thickness between 2.0 feet and 14.0 feet. Fill material was also encountered in the area of Building 1 from just below the ground surface to a depth of approximately 4.0 feet bgs. Therefore, due to the RECs identified on the subject property and lithology the majority of soil samples were collected between the ground surface and 8.0 feet bgs, with some up to 20.0 feet bgs. Groundwater at the subject property was encountered within the former UST cavity at a depth of approximately 4.0 feet bgs. In addition, groundwater was encountered in one soil boring (B-9/TMW) advanced at the subject property at approximately 11.0 feet bgs. It is AKT Peerless' opinion that this groundwater is perched and discontinuous.

Concentrations of metals (total chromium), PNAs [acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, fluorene, and phenanthrene], and VOCs (ethylbenzene, naphthalene, tetrachloroethylene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes) were detected in the surface soil on the southern portion of the subject property, in fill material in the area of Building 1, and/or surrounding the former UST cavity.

Concentrations of hazardous substances identified on the subject property are shown in Tables 1 and 2 and Section 2.2.

Potential methods of hazardous substance transport appears to be soil leaching to the groundwater unit(s) encountered. Based on a review of local topography and historical environmental assessments, groundwater flow direction is expected to be northwest towards the Red Cedar River. Groundwater modeling, fate and transport studies have not been conducted with respect to the identified contamination. Based on existing data and discontinuous groundwater units encountered, no off-site migration of hazardous substances is anticipated.

## **2.4 CONTAMINATED SOIL RUNOFF TO SURFACE WATER**

The nearest surface water proximate to the subject property is the Red Cedar River, which is located approximately 3,966 feet north of the subject property. The subject property is located in an area with a separate sanitary collection and treatment system and storm water collection system, which is maintained by the City of East Lansing and Ingham County, respectively. Based on current site conditions, a significant potential does not exist for direct transport of contaminated soil runoff to surface water. However, protecting the water bodies of the State, is part of responsible site management, and future construction activities are proposed at the property. Therefore, erosion and sedimentation controls will be implemented during the construction phase to control sedimentation from disturbed soil, thus eliminating the environmental impact of the contaminated soil on surface waters. All appropriate soil erosion and sedimentation permitting will be obtained. Refer to Appendix A for a copy of the Disclosure Statement, which will be provided to contractors that conduct subsurface construction activities at the subject property.

## **2.5 EXPOSURE PATHWAY EVALUATION**

The analysis of potential human exposure pathways is based on existing conditions and proposed site development activities that will occur on the subject property. The intended land use of the subject property falls under the Commercial IV use category pursuant to the MDNRE's Operational Memorandum No. 1. Therefore hazardous substances identified on the subject property have been compared to Industrial/Commercial I, II, III, and IV GCC.

Contaminant levels identified at the subject property in soil exceed Industrial/Commercial I, II, III, and IV Drinking Water Protection, Groundwater Surface Water Interface Protection, Direct Contact, and Volatile Soil Inhalation, but are below other cleanup criteria.

Contaminant levels identified at the subject property in groundwater do not exceed Industrial/Commercial I, II, III, and IV GCC.

The analysis of potential exposure pathways is based on existing conditions and proposed site development activities that will occur on the subject property. Additional due care measures that will be taken prior to construction and commercial use are described in Section 4.1.

## 2.6 GROUNDWATER EXPOSURE

The following subsections describe the potential groundwater exposure pathways and evaluate hazardous substances in light of the applicable criteria. As discussed above, hazardous substance concentrations have been compared with MDNRE Part 201 Industrial/Commercial I, II, III, and IV GCC. The following groundwater exposure pathways have been evaluated:

- Drinking Water Criteria
- Groundwater Volatilization to Indoor Air Inhalation Criteria
- Groundwater Contact Criteria
- Acute Inhalation Screening Level

Groundwater was encountered in the former UST cavity at approximately 4.0 feet bgs and in one soil boring advanced at the subject property at approximately 11.0 feet bgs. Currently, municipal water services the subject property and surrounding properties. No drinking water wells are proposed to be installed at the subject property.

### 2.6.1 Drinking Water Criteria

Analytical results indicate that contaminant concentrations are below drinking water criteria. In addition, drinking water the subject property and surrounding area are provided with potable water exclusively from a municipal system. Therefore, based on analytical results and the above information, drinking water does not represent a risk to potential receptors.

### 2.6.2 Groundwater Volatilization to Indoor Air Inhalation

Analytical results indicate that contaminant concentrations are below groundwater volatilization to indoor air inhalation criteria. Therefore, based on analytical results, groundwater volatilization to indoor air inhalation does not represent a risk to potential receptors.

### 2.6.3 Groundwater Contact Criteria

Analytical results indicate that contaminant levels are below groundwater contact criteria. Based on analytical results groundwater contact does not represent a risk to potential receptors.

### 2.6.4 Acute Inhalation Screening Level

Analytical results indicate that contaminant levels are below acute inhalation screening levels. Therefore, based on analytical results acute inhalation does not represent a risk to potential receptors.

## 2.7 SOIL EXPOSURE

The following subsections describe the potential human soil exposure pathways and evaluate hazardous substances in light of the applicable criteria. As discussed above, hazardous substance concentrations have been compared with MDNRE Part 201 Industrial/Commercial I, II, III, and IV GCC. The following soil exposure pathways have been evaluated:

- Drinking Water Protection Criteria

- Groundwater Contact Protection Criteria
- Soil Volatilization to Indoor Air Inhalation Criteria
- Infinite Source Volatile Soil Inhalation Criteria
- Particulate Soil Inhalation Criteria
- Direct Contact Criteria

The soil samples were collected between ground surface and 20.0 feet bgs in soil borings advanced at the subject property.

### **2.7.1 Drinking Water Protection**

Contaminant concentrations were identified to exceed drinking water protection criteria. The subject property and surrounding area are provided with potable water exclusively from a municipal system, and future operation plans at the subject property do not include development of groundwater resources for the purpose of obtaining potable water. Further, no water wells are located on the property. Therefore, drinking water protection is not a complete exposure pathway.

### **2.7.2 Groundwater Contact Protection Criteria**

Analytical results indicate that contaminant levels are below groundwater contact protection criteria. Therefore, based on analytical results, groundwater contact protection is not a complete exposure pathway.

### **2.7.3 Soil Volatilization to Indoor Air Inhalation Criteria**

Analytical results show that contaminant levels are below the soil volatilization to indoor air inhalation criteria. Based on analytical results soil volatilization to indoor air inhalation does not represent a risk to potential receptors.

### **2.7.4 Infinite Source Volatile Soil Inhalation Criteria**

A contaminant concentration was identified to exceed infinite source volatile soil inhalation criteria. The contaminant concentration (phenanthrene) is located between 2.0 and 4.0 feet bgs in one location beneath Building 1. In addition, the contaminant concentration is also located beneath approximately 6.0 inches of concrete followed by approximately 2.0 feet of fill material. The source of this contamination appears to be related to backfill material used beneath Building 1.

The proposed development of the subject property will include exterior asphalt, concrete, and gravel paved areas, floor slabs, and landscaped/vegetative areas that will serve as a barrier to the potential infinite source volatile soil inhalation exceedence, eliminating the risk of human inhalation with site soil. In addition, contractors conducting any future subsurface work at the property – including the proposed development – will be provided with the Disclosure Statement attached as Appendix A. In addition, these contractors will be required to prepare a site-specific health and safety plan.

### **2.7.5 Particulate Soil Inhalation Criteria**

Analytical results show that contaminant levels are below the particulate soil inhalation criteria. Based on analytical results, particulate soil inhalation does not represent a risk to potential receptors.

### **2.7.6 Direct Contact**

A contaminant concentration was identified to exceed direct contact criteria. The contaminant concentration [benzo(a)pyrene] is located between 2.0 and 4.0 feet bgs in one location beneath Building 1. In addition, the contaminant concentration is also located beneath approximately 6.0 inches of concrete followed by approximately 2.0 feet of fill material. The source of this contamination appears to be related to backfill material used beneath Building 1.

The proposed development of the subject property will include exterior asphalt, concrete, and gravel paved areas, floor slabs, and landscaped/vegetative areas that will serve as a barrier to the potential direct contact exceedence, eliminating the risk of human contact with site soil. In addition, contractors conducting any future subsurface work at the property – including the proposed development – will be provided with the Disclosure Statement attached as Appendix A. In addition, these contractors will be required to prepare a site-specific health and safety plan.

## **2.8 FLAMMABILITY AND EXPLOSIVITY**

Analytical results were compared to flammability and explosivity screening levels. Groundwater contaminant levels are below flammability and explosivity levels. Based on site conditions encountered and analytical results no flammability and explosivity hazards were identified.

## **3.0 PLAN FOR RESPONSE ACTIVITY**

Based on the current site data, the following exposure pathways for groundwater and soil are potentially complete and require response activity:

### Groundwater

Target contaminant concentrations were not identified in groundwater samples collected from the subject property. Therefore, based on the lack of identified contamination, current and proposed use of the site, proposed construction activities, and redevelopment plan, no response activities are necessary to satisfy obligations under Section 7a and the Part 10 rules.

### Soil

Based on the identified contamination, current and proposed use of the site, proposed construction activities, and redevelopment plan, no response activities are necessary to satisfy obligations under Section 7a and the Part 10 rules, except concentrations of PNAs [benzo(a)pyrene and phenanthrene] exceeding MDNRE Industrial/Commercial I, II, III, and IV GCC.

Engineering controls and/or property restrictions will be utilized to prevent human exposure from identified contaminants. Further, the proposed development of the subject property will include exterior asphalt, concrete, and gravel paved areas, floor slabs, and landscaped/vegetative areas that will serve as a barrier to the potential direct contact/infinite source volatile soil inhalation exceedences, eliminating the risk of human contact with site soil. In addition, contractors conducting any future subsurface work at the property – including the proposed development – will be provided with the Disclosure Statement attached as Appendix A. In addition, these contractors will be required to prepare a site-specific health and safety plan.

#### **4.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH DUE CARE OBLIGATIONS**

The following sections provide documentation that the proposed use of the subject property will comply with Section 7a obligations. Compliance with due care obligations is discussed in the following sections to ensure due care needs are met for the property while the property is vacant. In addition exacerbation and due care are discussed in relation to proposed future subsurface activities.

##### **4.1 PROCEDURES (RECOMMENDATIONS)**

As the following sections address, based on current and proposed use of the site, proposed construction activities, and redevelopment plan, no exposures are expected.

###### **4.1.1 Exacerbation**

###### **DURING VACANT PROPERTY USE**

The site is currently occupied by the Amtrak Train Station, and Michigan State University Storage. However, in the event the property is vacated, personnel may be on-site to perform typical maintenance activities (i.e. cleaning, landscaping, etc.). No potential for contaminant exacerbation is expected in the event the property is vacated.

###### **HYPOTHETICAL FUTURE SUBSURFACE ACTIVITIES**

Soil erosion and exacerbation controls to be imposed regarding any potential future construction, landscaping, utility installation/repair, or other subsurface activities will include the following:

**Due to the presence of contamination exceeding cleanup criteria, impacted soils will not be exacerbated.** Should subsurface soil become exposed, through excavation, grading, etc., appropriate action will be taken to prevent exacerbation. Including: (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) implement precaution to prevent track-off of soils to public right-of-ways and

roadways. Unless proper characterization is conducted, excavated soil will not be relocated to non-impacted portions of the subject property or another parcel.

**Precautionary measures will be utilized to eliminate the risk of erosion and runoff during construction activities.** Should construction activities take place, typical controls, such as site grading to control runoff, storm water controls (diversions, filters, etc.), and erosion protection, will be installed to prevent contaminant migration through sedimentation, precipitation runoff and erosion.

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. A more detailed soil erosion control plan, and a soil erosion permit, will be developed/obtained once a grading plan is finalized for the property.

**Due to the potential for groundwater to be present during subsurface activities, proper groundwater management will be implemented during construction activities.** Should construction activities take place, generally, all groundwater encountered will be left in place, or containerized/ characterized and properly disposed in accordance with state and federal law. Groundwater will be isolated from surface water by implementing pumping procedures which contain the groundwater and discharge only to contained treatment systems, such as the municipal sanitary sewer or tanker trucks for disposal at an approved facility. The contractor will obtain permits from the local municipality to utilize the sanitary system for groundwater disposal. Encountered groundwater may also be left in place and excavations subsequently backfilled, if there is no negative impact on construction methods. Because there is no way to delineate between groundwater in excavations and precipitation runoff collected in excavations, all pumped water will be handled in the same manner.

#### **4.1.2 Due Care**

##### **DURING VACANT PROPERTY USE**

**Due to the presence of contaminants at concentrations, which exceed drinking water protection criteria, municipal water service will be maintained at the subject property.** There will be no alteration to the site utilities or other subsurface activities. Based on contamination identified and current property conditions no exposures are expected if the property is vacated.

##### **HYPOTHETICAL FUTURE SUBSURFACE ACTIVITIES**

Due Care controls to be imposed regarding any potential future construction, landscaping, utility installation/repair, or other subsurface activities will include the following:

**Due to the presence of contamination, impacted groundwater and soils will be isolated from the public.** This will be achieved principally by providing potable water from an imported source. Groundwater wells will be prohibited, even for non-potable purposes, except for environmental assessment activities. The imported source of potable water may include connection to municipal water sources at the property, bottled water service, or large-container water source (tanker truck, etc.).

**Pumped groundwater will be contained and removed in accordance with approved methods,** either by containerizing and disposing or by pumping to the municipal sewage system (not the storm water sewer).

**Excavation activities will be conducted under a Health and Safety Plan.** Any contractors working with materials containing potentially hazardous substances will prepare a Health and Safety Plan, which will include, at a minimum, emergency contact numbers, hospital locations, personal protective equipment (i.e. gloves, boots, coveralls, etc.), and decontamination procedures. Health and Safety Plans prepared for this work will be read and signed by all workers assigned to the project.

**During construction activities, when impacted soils become exposed, through excavation, grading, etc., appropriate action will be taken to prevent an unacceptable risk to the public health.** Including: (1) promptly returning impacted soil to the excavation, (2) removing the impacted soil to a proper disposal facility, and backfilling with clean fill material, and/or (3) properly managing soil through the use of erosion controls, etc. to prevent contaminated soil runoff. Any open excavations will be fenced to keep unauthorized people from entering work zone(s).

**Although not anticipated, any buried containers (i.e. underground storage tanks (USTs), drums, pipelines, etc.) containing a hazardous substance that are discovered during subsurface activities will appropriately characterized and removed.** Activity nearby abandoned containers, particularly activities that could result in damage to the container or a possible release of the contents, will be halted until the container and the contents are evaluated and proper disposal and removal can be performed. Subsurface activities in the vicinity of the container(s) will not resume until the abandoned container(s) are properly removed.

#### **4.1.3 Reasonable Precautions**

##### **VACANT PROPERTY**

Location and depth of contamination, and site conditions including asphalt, concrete and gravel paved areas, floor slabs and landscaped/vegetative areas is believed sufficient to prevent the reasonably foreseeable acts and omissions of a third party if the property is vacated.

##### **HYPOTHETICAL FUTURE SUBSURFACE ACTIVITIES**

**Due to the presence of contamination, excavation on the property will be restricted except for the purpose of construction, landscaping, or utility installation/repair.** All activities related to construction, landscaping, and utility installation/repair will be conducted by the site owner or authorized contractor.

**The property owner will employ knowledgeable personnel to provide maintenance and monitoring of site conditions.** On-site knowledgeable personnel will ensure that any contractors conducting utility repair will sign the Contractors Disclosure Statement, which states that the site is contaminated and describes proper soil and groundwater handling procedures. The site manager will also monitor on-site operations and prevent subsurface activities unless procedures described within this report are followed.

**The property owner will notify all on-site contractors of the presence of contaminants at concentrations, which exceed Part 201 Industrial/Commercial I, II, III, and IV GCC.** The contractors will be provided with a Disclosure Statement (discussed in Section 5.0), which outlines soil and groundwater handling requirements. Specifically, contractors will be: (1) made aware of known locations of contamination, (2) prohibited from utilizing groundwater for any purpose, including non-potable uses, and (3) groundwater, where encountered, will be handled in accordance with specific guidelines. Contractors will also be required to post “no trespassing” signs and/or fencing to restrict the public from entering the work areas. Open excavations will be fenced to prevent access by unauthorized personnel. In addition, the contractor(s) will be required to implement control measures to prevent off-site migration of impacted soil and groundwater, including soil erosion control measures described earlier.

## **5.0 DISCLOSURE**

The City of East Lansing will be the primary administrator of this report for the subject property. The City of East Lansing will disclose the contents of this report to any contractors or relevant third parties. AKT Peerless also recommends that the City of East Lansing require that subcontractors or third parties performing work at the subject property sign a Disclosure Statement prior to commencing work.

The City of East Lansing will notify contractors of the soil and/or groundwater with contamination levels above GCC. The disclosure will include the contaminant identification, level of impact, and precautionary methods for interaction with the impacted soil and/or groundwater. Providing a copy of this report for review should be sufficient to communicate the above.

Attached as Appendix A is a Contractor Disclosure Statement. The statement provides the notices describe above regarding the presence of contamination, handling procedures, and prohibited activities at the property.

The City of East Lansing will notify future personnel at the subject property of the environmental condition of the site. The notification will be provided to inform future personnel



of the site conditions, ensure they do not exacerbate site conditions, or cause an exposure to contaminants. The notification will be verbal or written and a copy of this due care plan will be made available for review by on-site personnel.

Revision to the disclosure statements will be made if necessary upon changes to property conditions and/or development plans.

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...the nineteenth is the fact that the ...

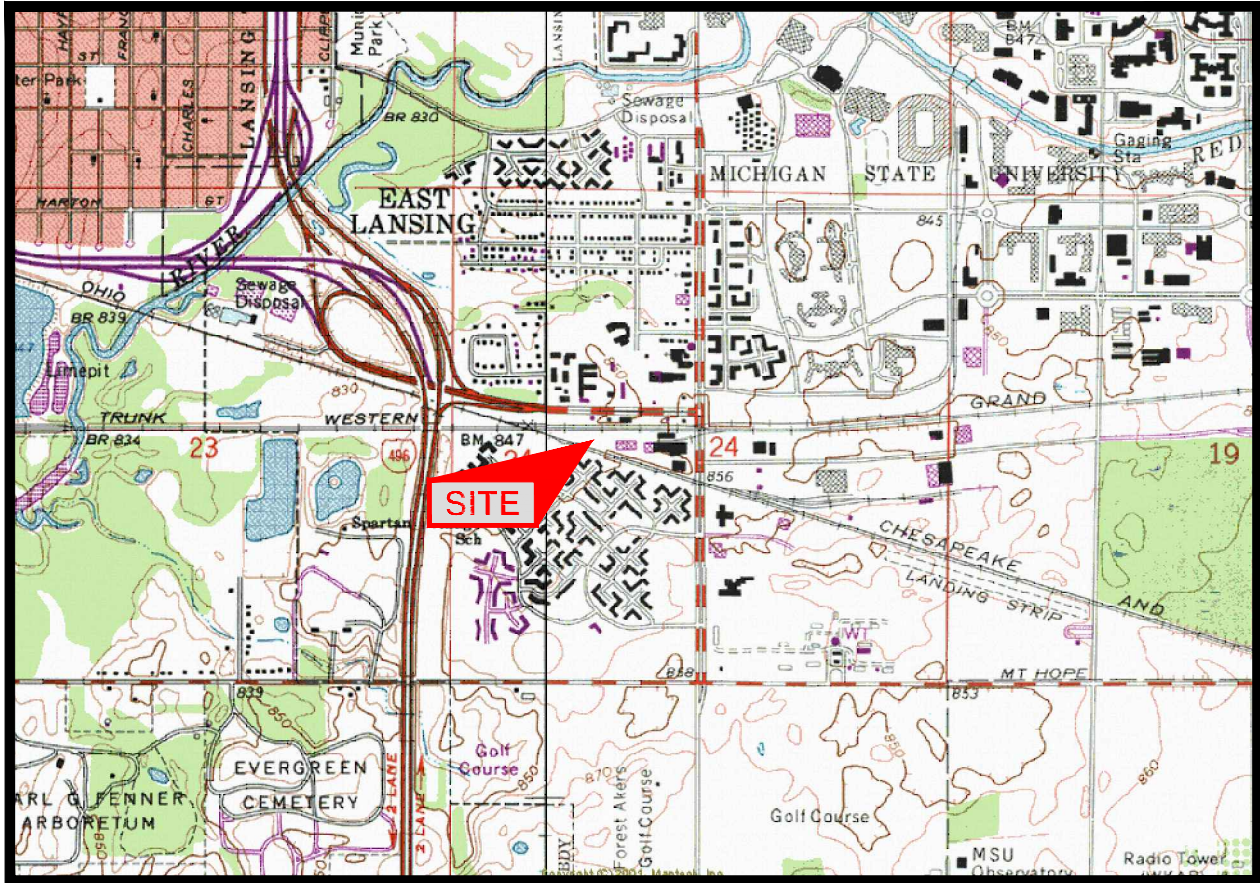
...the twentieth is the fact that the ...

...the twenty-first is the fact that the ...

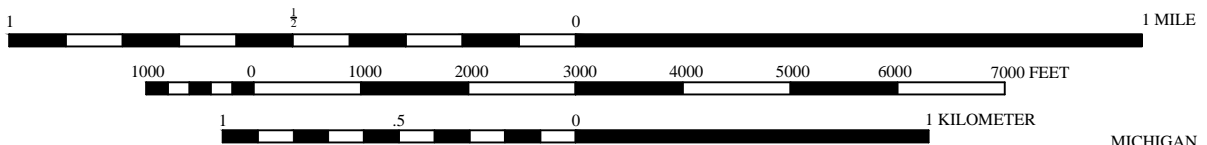
...the twenty-second is the fact that the ...

**FIGURES**

*EAST LANSING QUADRANGLE*  
 MICHIGAN - INGHAM COUNTY  
 7.5 MINUTE SERIES (TOPOGRAPHIC)

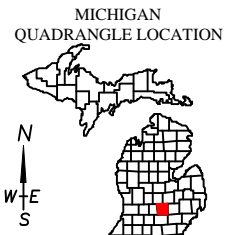


T.4 N. - R.2 W.



CONTOUR INTERVAL 5 FEET  
 DATUM IS MEAN SEA LEVEL

IMAGE TAKEN FROM 1970 U.S.G.S. TOPOGRAPHIC MAP  
 PHOTOREVISED 1976



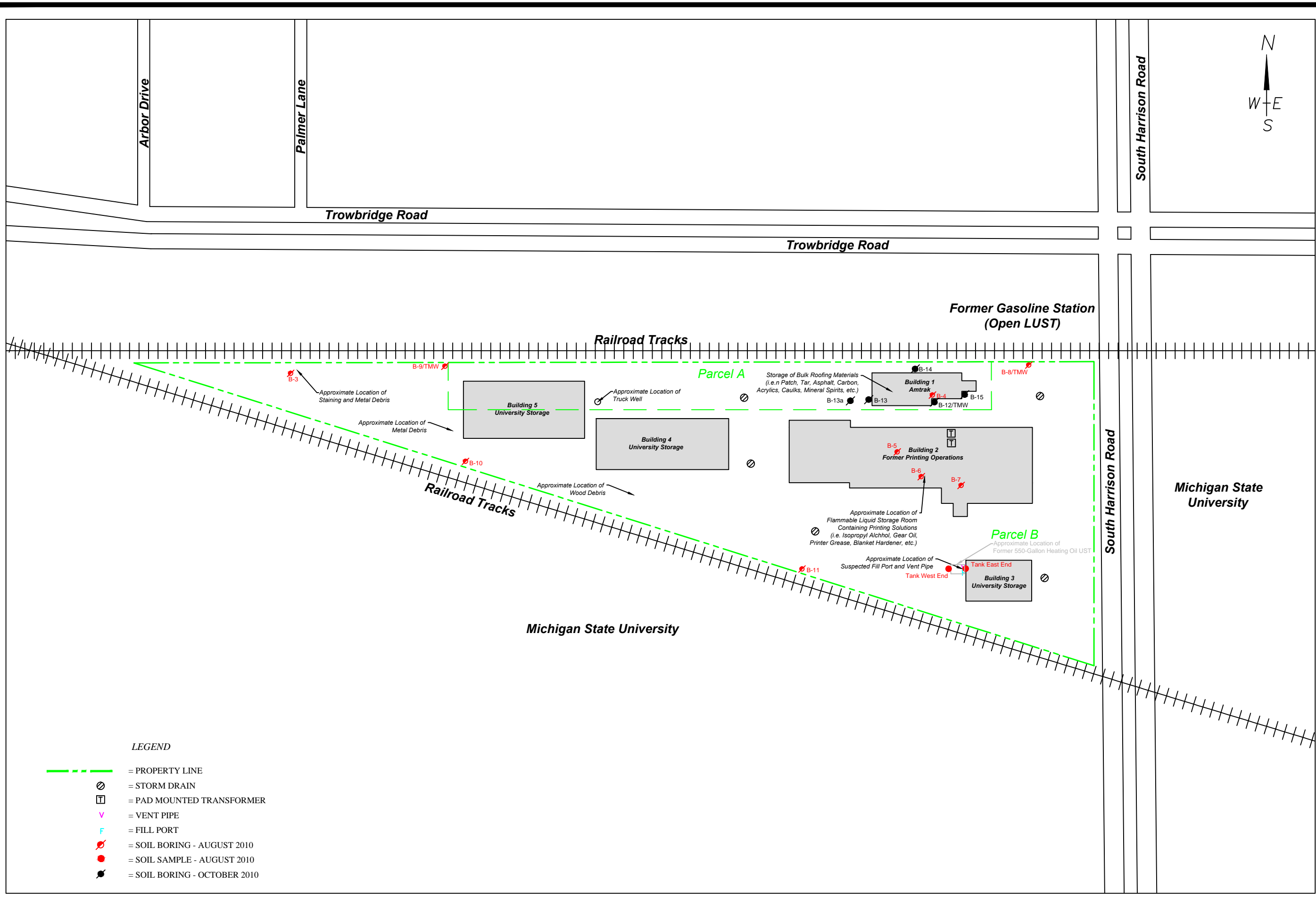
**AKTPEERLESS**  
 environmental & energy services  
 CHICAGO DETROIT FARMINGTON LANSING SAGINAW  
 www.aktpeerless.com

*TOPOGRAPHIC LOCATION MAP*

AMTRAK STATION  
 1240 SOUTH HARRISON ROAD  
 EAST LANSING, MICHIGAN  
 PROJECT NUMBER : 6643s-3-26

DRAWN BY: OGO  
 DATE: 12-02-10

FIGURE 1



DRAWN BY: OGO  
 DATE: 12-02-10

0 75 150  
 SCALE: 1" = 150'±0

FIGURE 2

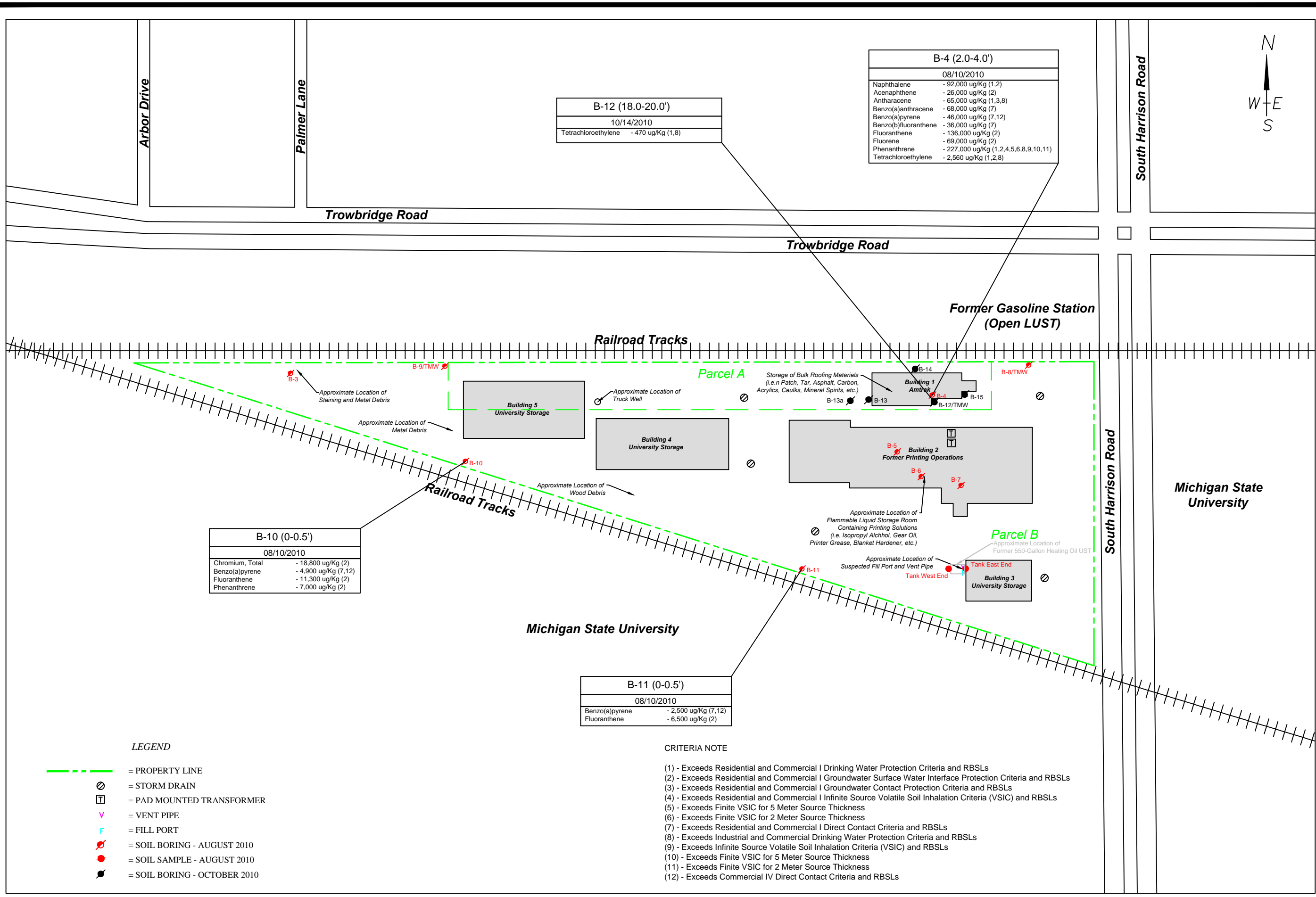
SAMPLE LOCATION MAP

AMTRAK STATION  
 1240 SOUTH HARRISON ROAD  
 EAST LANSING, MICHIGAN  
 PROJECT NUMBER : 6643s-3-26

LEGEND

- = PROPERTY LINE
- = STORM DRAIN
- = PAD MOUNTED TRANSFORMER
- = VENT PIPE
- = FILL PORT
- = SOIL BORING - AUGUST 2010
- = SOIL SAMPLE - AUGUST 2010
- = SOIL BORING - OCTOBER 2010

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DRAWN BY: OGO  
DATE: 12-02-10

0 75 150  
SCALE: 1" = 150'±

FIGURE 3

SITE MAP WITH SOIL ANALYTICAL RESULTS EXCEEDING MDNRE GCC

AMTRAK STATION  
1240 SOUTH HARRISON ROAD  
EAST LANSING, MICHIGAN  
PROJECT NUMBER : 6643s-3-26

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...the twentieth is the fact that the ...

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...the twenty-second is the fact that the ...

**TABLES**

**Table 1, Summary of Soil Analytical Results**  
**Amtrak Property**  
**Phase II ESA - August 2010**  
**1240 South Harrison Road**  
**East Lansing, Michigan**  
**AKT Peerless Project No. 6643S**

Guidesheet Number	#10	#12	#13	#20	#21	#22	#23	#24	#25	#26	#29	Sample Location	Tank East End	Tank West End	B-3 (0.5-1)	B-4 (2-4)	B-5 (0.5-1)	B-6 (0.5-1)	B-7 (0.5-1)	B-8 (6-8)	B-8 (18-20)	B-9 (9-11)	B-10 (0-0.5)	B-11 (0-0.5)	FDS B-7 (0.5-1)	
Parameters*	Chemical Abstract Service Number	Statewide Default Background Levels	Groundwater Surface Water Interface Protection Criteria and RBSLs	Groundwater Contact Protection Criteria and RBSLs	Soil Saturation Concentration Screening Levels	Industrial and Commercial Drinking Water Protection Criteria and RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria and RBSLs	Commercial IV Direct Contact Criteria and RBSLs	Collection Date	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010	08/10/2010
*(Refer to detailed laboratory report for method reference data)													Depth	4 feet	4 feet	0.5-1 feet	2-4 feet	0.5-1 feet	0.5-1 feet	0.5-1 feet	6-8 feet	18-20 feet	9-11 feet	0-0.5 feet	0-0.5 feet	0.5-1 feet
<b>Metals ug/Kg</b>																										
Arsenic	7440-38-2	5,800	70,000 (X)	2.0E+6	NA	4600	NLV	NLV	NLV	NLV	9.1E+5	41,000	NS	NS	1,250	2,610	710	740	1,010	580	360	240	5,290	1,600	810	
Barium (B)	7440-39-3	75,000	(G,X)	1.0E+9 (D)	NA	1.3E+6	NLV	NLV	NLV	NLV	1.5E+8	1.4E+8	NS	NS	22,500	30,800	8,700	7,700	7,000	12,600	1,900	44,200	41,900	24,500	6,500	
Cadmium (B)	7440-43-9	1,200	(G,X)	2.3E+8	NA	6,000	NLV	NLV	NLV	NLV	2.2E+6	2.1E+6	NS	NS	<200	290	<200	<200	<200	330	<200	<200	2,070	330	<200	
Chromium, Total	7440-47-3	18,000 (total)	3,300	1.4E+8	NA	30,000	NLV	NLV	NLV	NLV	2.4E+5	9.6E+6	NS	NS	2,420	3,830	1,500	1,490	1,090	800	730	3,950	18,800	4,030	930	
Chromium III (B,H)	16065-83-1	18,000 (total)	(G,X)	1.0E+9 (D)	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.5E+8	1.0E+9 (D)	NS	NS	NS	3,830	NS	NS	NS	NS	NS	3,950	18,800	4,030	NS	
Chromium VI	18540-29-9	NA	3,300	1.4E+8	NA	30,000	NLV	NLV	NLV	NLV	2.4E+5	9.6E+6	NS	NS	NS	BDL	NS	NS	NS	NS	NS	BDL	BDL	BDL	NS	
Copper (B)	7440-50-8	32,000	(G)	1.0E+9 (D)	NA	5.8E+6	NLV	NLV	NLV	NLV	5.9E+7	7.6E+7	NS	NS	4,900	14,300	2,500	2,300	3,000	2,300	2,500	5,400	39,500	7,800	2,000	
Lead (B)	7439-92-1	21,000	(G,X)	ID	NA	7.0E+5	NLV	NLV	NLV	NLV	4.4E+7	4.0E+5	NS	NS	7,250	35,400	3,640	2,300	2,580	1,790	1,750	6,480	92,300	16,100	1,810	
Fine Fraction Lead	-	21,000	(G,X)	ID	NA	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Coarse Fraction Lead	-	21,000	(G,X)	ID	NA	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Mercury, Total	7439-97-6	130	50 (M); 1.2	47,000	NA	1,700	89,000	62,000	62,000	62,000	8.8E+6	6.0E+5	NS	NS	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium (B)	7782-49-2	410	400	7.8E+7	NA	4,000	NLV	NLV	NLV	NLV	5.9E+7	1.0E+7	NS	NS	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
Silver (B)	7440-22-4	1,000	100 (M); 27	2.0E+8	NA	13,000	NLV	NLV	NLV	NLV	2.9E+6	9.4E+6	NS	NS	<200	<200	<200	<200	3,310	<200	<200	<200	240	<200	590	
Zinc (B)	7440-66-6	47,000	(G)	1.0E+9 (D)	NA	5.0E+6	NLV	NLV	NLV	NLV	ID	6.6E+8	NS	NS	12,300	35,700	4,500	3,700	6,200	3,400	7,200	10,400	264,000	38,400	5,200	
<b>Semivolatiles, BNAs, ug/Kg</b>																										
bis(2-Ethylhexyl)phthalate	117-81-7	NA	NLL	NLL	1.0E+7	NLL	NLV	NLV	NLV	NLV	8.9E+8	1.0E+7 (C)	NS	NS	NS	NS	NS	NS	NS	<300	<300	<300	400	600	NS	
Naphthalene	91-20-3	NA	870	2.1E+6	NA	1.0E+5	4.7E+5	3.5E+5	3.5E+5	3.5E+5	8.8E+7	6.1E+7	<300	<300	<300	92,000	NS	NS	NS	<300	<300	<300	<300	<300	<300	NS
Remaining BNAs	Varies	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	BDL	BDL	BDL	BDL	BDL	NS	
<b>Semivolatiles, PVAs, ug/Kg</b>																										
Acenaphthene	83-32-9	NA	4,400	9.7E+5	NA	8.8E+5	3.5E+8	9.7E+7	9.7E+7	9.7E+7	6.2E+9	1.5E+8	<300	<300	<300	26,000	NS	NS	NS	<300	<300	<300	700	500	NS	
Acenaphthylene	208-96-8	NA	ID	4.4E+5	NA	17,000	3.0E+6	2.7E+6	2.7E+6	2.7E+6	1.0E+9	6.1E+6	<300	<300	<300	<2,000	NS	NS	NS	<300	<300	<300	<300	<300	NS	
Anthracene	120-12-7	NA	ID	41,000	NA	41,000	1.0E+9 (D)	1.6E+9	1.6E+9	1.6E+9	2.9E+10	8.6E+8	<300	<300	<300	65,000	NS	NS	NS	<300	<300	<300	1,700	1,200	NS	
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	1.1E+5	300	<300	<300	68,000	NS	NS	NS	<300	<300	<300	5,000	2,600	NS	
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	1.9E+6	11,000	500	<300	<300	46,000	NS	NS	NS	<300	<300	<300	4,900	2,500	NS	
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	NA	NLL	ID	ID	ID	ID	ID	1.1E+5	500	<300	<300	36,000	NS	NS	NS	<300	<300	<300	4,400	2,100	NS	
Benzo(k)fluoranthene (Q)	191-24-2	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	3.5E+8	9.5E+6	300	<300	<300	11,000	NS	NS	NS	<300	<300	<300	2,500	1,500	NS	
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	1.1E+6	400	<300	<300	46,000	NS	NS	NS	<300	<300	<300	3,900	1,900	NS	
Chrysene (Q)	218-01-9	NA	NLL	NLL	NA	NLL	ID	ID	ID	ID	ID	1.1E+7	400	<300	<300	56,000	NS	NS	NS	<300	<300	<300	5,100	2,500	NS	
Dibenz(a,h)anthracene (Q)	53-70-3	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	11,000	<300	<300	<300	2,000	NS	NS	NS	<300	<300	<300	<300	<300	NS	
Fluoranthene	206-44-0	NA	5,500	7.3E+5	NA	7.3E+5	1.0E+9 (D)	8.9E+8	8.8E+8	8.8E+8	4.1E+9	1.7E+8	300	<300	<300	136,000	NS	NS	NS	<300	<300	<300	11,300	6,500	NS	
Fluorene	86-73-7	NA	5,300	8.9E+5	NA	8.9E+5	1.0E+9 (D)	1.5E+8	1.5E+8	1.5E+8	4.1E+9	1.0E+8	<300	<300	<300	69,000	NS	NS	NS	<300	<300	<300	700	500	NS	
Indeno(1,2,3-cd)pyrene (Q)	193-39-5	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	1.1E+5	<300	<300	<300	13,000	NS	NS	NS	<300	<300	<300	2,400	1,400	NS	
1-Methylnaphthalene*	90-12-0	NA	ID	5.5E+6	NA	1.7E+5	ID	ID	ID	ID	ID	3.1E+7	<300	<300	<300	27,000	NS	NS	NS	<300	<300	<300	<300	<300	NS	
2-Methylnaphthalene	91-57-6	NA	ID	5.5E+6	NA	1.7E+5	ID	ID	ID	ID	ID	3.1E+7	<300	<300	<300	49,000	NS	NS	NS	<300	<300	<300	<300	<300	NS	
Phenanthrene	85-01-8	NA	5,300	1.1E+6	NA	1.6E+5	5.1E+6	1.9E+5	1.9E+5	1.9E+5	2.9E+6	6.1E+6	<300	<300	<300	227,000	NS	NS	NS	<300	<300	<300	7,000	4,700	NS	
Pyrene	129-00-0	NA	ID	4.8E+5	NA	4.8E+5	1.0E+9 (D)	7.8E+8	7.8E+8	7.8E+8	2.9E+9	1.1E+8	400	<300	<300	105,000	NS	NS	NS	<300	<300	<300	8,900	5,100	NS	
<b>Volatiles ug/Kg</b>																										
2-Methylnaphthalene	91-57-6	NA	ID	5.5E+6	NA	1.7E+5	ID	ID	ID	ID	ID	3.1E+7	NS	NS	<400	2,600	<400	<400	<300	<400	<400	<400	<400	<400	<300	<300
Naphthalene	91-20-3	NA	870	2.1E+6	NA	1.0E+5	4.7E+5	3.5E+5	3.5E+5	3.5E+5	8.8E+7	6.1E+7	NS	NS	<400	5,700	<400	<400	<300	<400	<400	<400	<400	<400	<300	<300
Tetrachloroethylene	127-18-4	NA	900 (X)	88,000 (C)	88,000	100	60,000	6.0E+5	1.4E+6	3.3E+6	6.8E+9	88,000 (C)	NS	NS	<50	2,560	<60	<50	<50	<50	<70	<70	<60	<50	<50	
Xylenes (I)	1330-20-7	NA	700	1.5E+5 (C)	1.5E+5	5,600	1.5E+5 (C)	5.4E+7	6.5E+7	1.3E+8	1.3E+11	1.5E+5 (C)	<160	<150	<150	100	<160	<150	<150	<150	<170	<170	<160	<150	<150	
Remaining VOCs	Varies	-	-	-	-	-	-	-	-	-	-	-	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
<b>Total Petroleum Hydrocarbons ug/Kg</b>																										
Diesel Range Organics (DRO)	-	50,000	50,000	50,000	50,000	-	-	-	-	-	-	-	6,000	8,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 1, Summary of Soil Analytical Results  
Phase II ESA - October 2010  
Amtrak Property  
1240 South Harrison Road  
East Lansing, Michigan  
AKT Peerless Project No. 6643S**

Guidesheet Number →		#10	#12	#13	#20	#21	#22	#23	#24	#25	#26	#29																							
Parameters*  <i>*(Refer to detailed laboratory report for method reference data)</i>	Chemical Abstract Service Number	Statewide Default Background Levels	Groundwater Surface Water Interface Protection Criteria and RBSLs	Groundwater Contact Protection Criteria and RBSLs	Soil Saturation Concentration Screening Levels	Industrial and Commercial Drinking Water Protection Criteria and RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria and RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) and RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria and RBSLs	Commercial IV Direct Contact Criteria and RBSLs	Sample Location	B-12 (2-4)	B-12 (4-6)	B-12 (18-20)	B-13 (2-4)	B-13a (2-4)	B-13a (4-6)	B-14 (2-4)	B-14 (5-7)	B-15 (2-4)	B-15 (4-6)	FDS [B-14 (5-7)]											
													Collection Date	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010	10/14/2010
													Depth	2-4 feet	4-6 feet	18-20 feet	2-4 feet	2-4 feet	4-6 feet	2-4 feet	5-7 feet	2-4 feet	4-6 feet	5-7 feet											
<b>Semivolatiles, BNAs ug/Kg</b>																																			
Naphthalene	91-20-3	NA	870	2.1E+6	NA	1.0E+5	4.7E+5	3.5E+5	3.5E+5	3.5E+5	8.8E+7	6.1E+7		<300	<300	<300	<300	<300	<300	<300	<300	<300	<300	<300											
<b>Semivolatiles, PNAs ug/Kg</b>																																			
Benzo(a)anthracene (Q)	56-55-3	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	1.1E+5		<300	<300	<300	<300	<300	<b>700</b>	<300	<300	<300	<300	<300	<300										
Benzo(a)pyrene (Q)	50-32-8	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	1.9E+6	11,000		<300	<300	<300	<300	<300	<b>800</b>	<300	<300	<300	<300	<300	<300										
Benzo(b)fluoranthene (Q)	205-99-2	NA	NLL	NLL	NA	NLL	ID	ID	ID	ID	ID	1.1E+5		<300	<300	<300	<300	<b>500</b>	<b>900</b>	<300	<300	<300	<300	<300	<300										
Benzo(k)fluoranthene (Q)	207-08-9	NA	NLL	NLL	NA	NLL	NLV	NLV	NLV	NLV	ID	1.1E+6		<300	<300	<300	<300	<b>500</b>	<b>800</b>	<300	<300	<300	<300	<300	<300										
Chrysene (Q)	218-01-9	NA	NLL	NLL	NA	NLL	ID	ID	ID	ID	ID	1.1E+7		<300	<300	<300	<300	<b>800</b>	<300	<300	<300	<300	<300	<300	<300										
Fluoranthene	206-44-0	NA	5,500	7.3E+5	NA	7.3E+5	1.0E+9 (D)	8.9E+8	8.8E+8	8.8E+8	4.1E+9	1.7E+8		<300	<300	<300	<300	<b>1,100</b>	<300	<300	<300	<300	<300	<300	<300										
Phenanthrene	85-01-8	NA	5,300	1.1E+6	NA	1.6E+5	5.1E+6	1.9E+5	1.9E+5	1.9E+5	2.9E+6	6.1E+6		<300	<300	<300	<300	<b>500</b>	<300	300	<300	<300	<300	<300	<300										
Pyrene	129-00-0	NA	ID	4.8E+5	NA	4.8E+5	1.0E+9 (D)	7.8E+8	7.8E+8	7.8E+8	2.9E+9	1.1E+8		<300	<300	<300	<300	<b>300</b>	<b>1,200</b>	<300	<300	<300	<300	<300	<300										
Remaining PNAs	Varies	-	-	-	-	-	-	-	-	-	-	-		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL										
<b>Volatiles, VOCs ug/Kg</b>																																			
2-Methylnaphthalene	91-57-6	NA	ID	5.5E+6	NA									<400	<400	<300	<400	<400	<400	<600	<b>400</b>	<700	<400	<400	<400										
Tetrachloroethylene	127-18-4	NA	900 (X)	88,000 (C)	88,000	<b>100</b>	60,000	6.0E+5	1.4E+6	3.3E+6	6.8E+9	88,000 (C)		<60	<60	<b>470</b>	<60	<60	<90	<60	<100	<60	<60	<60	<60										
Toluene (I)	108-88-3	NA	2,800	2.5E+5 (C)	2.5E+5	16,000	2.5E+5 (C)	3.3E+6	3.6E+7	3.6E+7	1.2E+10	2.5E+5 (C)		<100	<100	<100	<100	<100	<200	<b>200</b>	<200	<100	<100	<100	<100										
1,2,4-Trimethylbenzene (I)	95-63-6	NA	570	1.1E+5 (C)	1.1E+5	2,100	1.1E+5 (C)	2.5E+7	6.0E+8	6.0E+8	3.6E+10	1.1E+5 (C)		<100	<100	<100	<100	<100	<200	<b>100</b>	<200	<100	<100	<100	<100										
Xylenes (I)	1330-20-7	NA	700	1.5E+5 (C)	1.5E+5	5,600	1.5E+5 (C)	5.4E+7	6.5E+7	1.3E+8	1.3E+11	1.5E+5 (C)		<160	<160	<150	<b>220</b>	<b>70</b>	<290	<b>540</b>	<300	<160	<160	<160	<160										
Remaining VOCs	Varies	-	-	-	-	-	-	-	-	-	-	-		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL										

**Table 2, Summary of Groundwater Analytical Results**  
**Amtrak Property**  
**1240 South Harrison Road**  
**East Lansing, Michigan**  
**AKT Peerless No. 6643S**

Guidesheet Number →	#2	#3	#5	#6	#7	#8	#9					
Parameters*  <i>*(Refer to detailed laboratory report for method reference data)</i>	Chemical Abstract Service Number	Industrial and Commercial II III and IV Drinking Water Criteria and RBSLs	Groundwater Surface Water Interface Protection Criteria and RBSLs	Industrial and Commercial II III and IV Groundwater Volatilization to Indoor Air Inhalation Criteria and RBSLs	Groundwater Contact Criteria and RBSLs	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level	Sample Location	Tank Basin	B-9/ TMW	FDW Tank Basin
									Collection Date	08/10/2010	08/10/2010	08/10/2010
									Depth	4 feet	11 feet	4 feet
<b>Metals</b>												
Arsenic	7440-38-2	10 (A)	150 (X)	NLV	4,300	NA	ID	ID		NS	<b>6</b>	NS
Barium (B)	7440-39-3	2,000 (A)	(G,X)	NLV	1.4E+7	NA	ID	ID		NS	<b>157</b>	NS
Zinc (B)	7440-66-6	5,000 (E)	(G)	NLV	1.1E+8	NA	ID	ID		NS	<b>6</b>	NS
Remaining Metals	Varies	-	-	-	-	-	-	-		NS	BDL	NS
<b>Semivolatiles, BNAs</b>												
bis(2-Ethylhexyl)phthalate	117-81-7	6.0 (A)	32	NLV	320 (AA)	340	NA	340 (S)		NS	<b>10</b>	NS
Remaininag BNAs	Varies	-	-	-	-	-	-	-		NS	BDL	NS
<b>Semivolatiles, PNAs</b>												
PNAs	Varies	-	-	-	-	-	-	-		BDL	BDL	BDL
<b>Volatiles, VOCs</b>												
VOCs	Varies	-	-	-	-	-	-	-		BDL	BDL	BDL

FOOTNOTES

FOR THE PART 201 CRITERIA/PART 213 RISK-BASED SCREENING LEVELS  
RRD OPERATIONAL MEMORANDUM No. 1

- (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 299.5701(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.
- (C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration ( $C_{sat}$ ) since the calculated risk-based criterion is greater than  $C_{sat}$ . Concentrations greater than  $C_{sat}$  are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.
- (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(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
- (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.
- (H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria.
- (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(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules.
- (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.
- (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. Industrial-commercial 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 and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of \$45, from the superintendent of documents, government printing office, washington, dc 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.
- (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 and are available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulations may be purchased, at a cost as of the time of adoption of these rules of \$55, from the superintendent of documents, Government Printing Office, Washington, dc 20401, or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost. Alternatives to compliance with the tscsa 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.
- (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 and is available for inspection at the DEQ, 525 West Allegan Street, Lansing, Michigan. Copies of the regulation may be purchased, at a cost as of the time of adoption of these rules of \$45, from the Superintendent of Documents, Government Printing Office, Washington, dc 20401 (stock number 869-044-00155-1), or from the DEQ, RRD, 525 West Allegan Street, Lansing, Michigan 48933, at cost.
- (V) Criterion is the aesthetic drinking water value as required by Section 20120a(5) 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) 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 this footnote, 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 footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, 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 following table shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre.
- (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) Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.
- (BB) The state drinking water standard for asbestos is in units of fibers per milliliter of water (l/mL) longer than 10 millimicrons. 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 following table, taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975).
- (DD) Hazardous substance causes developmental effects. Residential and commercial I direct contact criteria are protective of both prenatal and postnatal exposure. Industrial and commercial II, III and IV direct contact criteria are protective for a pregnant adult receptor.
- (EE) The following are applicable generic GSI criteria as required by Section 20120a(15) of the NREPA.
- (FF) 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.
- (GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and commercial/industrial 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.
- ID Insufficient data to develop criterion.
- NA A criterion or value is not available or, in the case of background and CAS numbers, not applicable.
- NLL Hazardous substance is not likely to leach under most soil conditions.
- NLV Hazardous substance is not likely to volatilize under most conditions.
- ug/Kg Micrograms per kilogram
- ug/L Micrograms per liter
- NS Not sampled
- \* Criterion not developed. Contaminant levels measured against compound with nearest chemical structure
- BDL Below Laboratory Method Detection Limits

The first part of the document discusses the importance of maintaining accurate records in a laboratory setting. It emphasizes the need for clear labeling and consistent documentation to ensure the reliability of experimental results. The author notes that many common mistakes, such as using ambiguous abbreviations or failing to record the date and time of observations, can lead to significant errors in data interpretation.

In the second section, the author provides a detailed overview of the experimental procedures used in the study. This includes a description of the equipment used, the specific steps followed during each trial, and the methods employed for data collection and analysis. The goal is to provide a clear and replicable protocol for other researchers in the field.

The third part of the document presents the results of the experiments. The author uses a combination of tables and text to present the data, ensuring that the information is easy to understand and interpret. Each table is accompanied by a brief explanation of the data it contains, and the overall trends are discussed in the accompanying text. The author also includes a discussion of the potential sources of error and how they might have affected the results.

Finally, the document concludes with a summary of the findings and a discussion of their implications. The author reflects on the strengths and limitations of the study and offers suggestions for future research. This section is crucial for providing context and meaning to the data presented in the previous sections.

**APPENDIX A**

**CONTRACTOR DISCLOSURE STATEMENT**

## CONTRACTOR DISCLOSURE STATEMENT

**1240 SOUTH HARRISON ROAD  
(PARCEL IDENTIFICATION NUMBERS:  
33-20-01-24-123-009 AND 33-20-01-24-300-002)  
EAST LANSING, MICHIGAN 48823**

Contamination is present in soil at the subject property, at concentrations exceeding the Michigan Department of Natural Resources and Environment (MDNRE), Generic Cleanup Criteria (GCC) developed under the authority of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), P.A. 451 of 1994, as amended. Subsurface investigations conducted by AKT Peerless Environmental & Energy Services and Strata Environmental Services, Inc.'s. (Strata's) underground storage tank (UST) removal in August 2010 and October 2010 identified several exceedences of volatile organic compounds (VOCs) [i.e. ethylbenzene, naphthalene, 1,2,3-trimethylbenzene (TMB), 1,2,4-TMB, 1,3,5-TMB, tetrachloroethylene, and xylenes], polynuclear aromatic hydrocarbons (PNAs) [i.e. acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, fluorene, and phenanthrene], and metals (i.e. total chromium) at various locations throughout the subject property. The exceedences and locations are described in detail within the Section 7a Compliance Analysis, available for review from the property owner.

Complete delineation of all on-site impacts has not been conducted. As part of the due care obligation under Section 20107a, the following measures shall be followed during site activities:

**Precautions should be taken to ensure that impacted soil and groundwater are separated from the public.** A fence surrounding the excavation will be constructed to prevent unauthorized access to work area(s). Should subsurface soil become exposed, through excavation, grading, etc., appropriate action will be taken to prevent an unacceptable risk to the public health. Including: (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) implement precautions to prevent track-off of soils to public right of ways and roadways.

**Promptly fill excavations, below grade areas or voids from demolition or construction activities to ensure water does not collect within the area.** If excavations remain open and groundwater accumulates, all groundwater will be handled as described below. Surface water accumulation in an excavation will be handled in the same manner as contaminated groundwater.

**Groundwater isolation shall be achieved primarily through provision of municipal or imported potable water throughout the construction process.** Groundwater encountered

during earthwork activities will be removed, either by containerizing for disposal or by pumping to an approved municipal sanitary sewer. Groundwater will not be utilized for construction purposes or as potable water. Water pumping for the purposes of dewatering excavations in impacted areas will be conducted in accordance with applicable rules and regulations. It is permissible to leave encountered groundwater or storm water in place, and backfill excavations. It is not permissible to pump groundwater, accumulated rainwater, or surface water 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. Groundwater that accumulates in excavations that will be removed must be contained (i.e. bermed or diked area) until it can be properly handled. Groundwater and impacted surface water is not to be discharged from the property in any manner other than described herein or as approved by local, state, and federal authorities.

**Importation of fill material other than clean backfill from a gravel/sand yard is prohibited.** Importation of fill material from another property is prohibited until the fill materials have been characterized and deemed appropriate for use on site.

**All soil that is not re-used on site, beneath future buildings, landscaped areas, and/or pavement will be disposed at an approved landfill.** In no instance is soil to be transported off-site other than to an appropriate Type II landfill. Contractor is responsible for waste characterization and obtaining authorization to dump.

**At specific locations on the subject property exposure to contaminants in soil through direct contact or inhalation is a potential exposure,** however, fencing and signage will be utilized to restrict access to the site during construction except by authorized personnel. Appropriate worker protection will be necessary for work conducted in the areas where contaminant levels exceed direct contact and inhalation exposure.

**Excavation activities shall be conducted under a Health and Safety Plan (HASP).** Any contractors working with materials containing potentially hazardous substances will prepare a HASP, which will include, at a minimum, emergency contact numbers, hospital locations, personal protective equipment (i.e., gloves, boots, coveralls, etc.), and decontamination procedures. HASPs prepared for this work will be read and signed by all workers assigned to the project. The property owner or representative will review the contractors' HASP to determine if adequate understanding and protective measures will be implemented throughout the work, to protect workers and the public from accidental exposure to contamination.

**Excavation on the property should be restricted except for the purpose of construction, landscaping, or utility installation/repair by persons authorized by the property owner.**

**Hazardous substances and petroleum products will not be stored on the subject property in quantities considered significant.** This includes fuel above ground storage tanks (ASTs) for equipment being utilized on the subject property. The Baseline Environmental Assessment

(BEA) completed on the subject property requires specific controls for storage of hazardous substances on the subject property.

**Any buried containers (i.e. underground storage tanks (USTs), drums, pipelines, etc.) that are discovered during construction will be appropriately characterized and removed.** Any abandoned containers that are discovered will not be disturbed. Any construction activities that could result in damage to buried containers will be immediately ceased. Construction activities in the vicinity of the abandoned container will not resume until the abandoned container(s) is properly removed.

**Precautions to prevent the reasonably foreseeable acts or omissions of a third party will be implemented.** Contractors will be required to post “no trespassing” signs and/or fencing to prohibit the public from entering the subject property. Open excavations will be fenced to prevent access by unauthorized personnel. Subcontractors will not be brought onto the property without authorization of the property owner and completion of this disclosure statement.

I have read and understand this Disclosure Statement.

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Signature

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Company

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Date