

**INITIAL
MICHIGAN PUBLIC ACT 381 OF 1996, AS AMENDED
WORK PLAN TO CONDUCT
MDEQ ELIGIBLE SITE CHARACTERIZATION ACTIVITIES
HAMLIN & ADAMS PROPERTIES, LLC
28-ACRE VACANT PROPERTY
NORTHEAST CORNER OF HAMLIN ROAD AND ADAMS ROAD
ROCHESTER HILLS, MICHIGAN**

for

**CITY OF ROCHESTER HILLS
BROWNFIELD REDEVELOPMENT AUTHORITY
ROCHESTER HILLS, MICHIGAN**

SEPTEMBER 11, 2006

Approved by MDEQ on: _____

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**ENVIRONMENTAL WORK PLAN
HAMLIN & ADAMS PROPERTIES, LLC
28-ACRE VACANT PROPERTY
NORTHEAST CORNER OF HAMLIN ROAD AND ADAMS ROAD
ROCHESTER HILLS, MICHIGAN**

1.0 INTRODUCTION

AKT Peerless Environmental Services (AKT Peerless) has prepared this Environmental Work Plan for MDEQ Eligible Site Characterization Activities for the proposed Hamlin & Adams Properties, LLC Development located at the 28-Acre Vacant Property in the Northeast Corner of Hamlin Road and Adams Road, that includes (Parcel ID Numbers 15-29-101-022 & 15-29-101-023 hereinafter “the Property” or “the subject property”), in Rochester Hills, Michigan. See Figure 1 for a topographic site location map. The Rochester Hills Brownfield Redevelopment Authority (BRA) concurred with the provisions of the Brownfield Plan on September 28, 2006 and the City of Rochester Hills Council approved the Brownfield Plan on **DATE**. See Appendix A for the Brownfield Plan.

The current owner of the Property, Hamlin & Adams, LLC (hereinafter referred to as the Developer) intend to redevelop the Property for use as a mixed use commercial and office development. The estimated costs of eligible activities subject to this Work Plan is \$188,890. This Work Plan is being conducted in support of the total project investment of approximately \$19.3 million. Construction is anticipated to begin in late 2007 and will continue until estimated completion in the fourth quarter of 2013.

Based on the current site conditions, certain activities are necessary to prepare the Property for redevelopment. However, since the nature and extent of contaminants at the subject property have not been fully defined, additional site characterization activities are necessary to identify due care remedial activities and associated costs prior to implementing redevelopment activities at the subject property. The following sections

present site background information, current property conditions, the proposed site characterization activities, and the costs associated with the proposed activities.

1.1 ELIGIBLE PROPERTY INFORMATION

1.1.1 Location

The eligible property consists of two vacant parcels (Parcel ID Numbers 15-29-101-022 & 15-29-101-023), in Rochester Hills, Michigan (City) totaling approximately 28-acres. The Property is situated on the northeast corner of the intersection of Hamlin Road and Adams Road, and is located in northwest quarter (NW ¼) of Section 29 of Township 3 North (T. 3N.) Range 11 East (R. 11E.), Rochester Hills, Oakland County, Michigan. The Property is not improved and contains densely vegetated and wooded areas along the north, east, and south property boundaries. The central portion of the property consists of open space.

See Appendix A for the approved Brownfield Plan, which includes the legal description of the Property.

1.1.2 Current Ownership

Hamlin & Adams Properties LLC currently owns the Property. See the Category N BEA in Appendix C for additional ownership information. Contact information is as follows:

Mr. Paul Aragona
37020 Garfield, Suite T-1
Clinton Township, MI 48036
Phone: 586-286-0334
Fax: 586-286-1215

Hamlin & Adams Properties LLC purchased the property on October 27, 2005. AKT Peerless prepared a Category N Baseline Environmental Assessment (BEA), dated November 10, 2005, on behalf of Hamlin & Adams Properties LLC for the Property. The Category N BEA was submitted to the MDEQ under disclosure. The Category N BEA was prepared in accordance with (1) Section 20126(1)(c) of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), 1994 Public Act (PA) 451, as

amended (Part 201), and (2) Michigan Department of Environmental Quality (MDEQ) *Instructions for Preparing and Disclosing Baseline Environmental Assessments and Section 7a Compliance Analysis*, dated March 11, 1999. Therefore, Hamlin & Adams Properties LLC is not a liable party for the existing contamination at the Property.

1.1.3 Delinquent Taxes, Interest, and Penalties

No delinquent taxes, interest, or penalties are known to exist for the property.

1.1.4 Existing and Proposed Future Zoning For Each Eligible Property

The Property is zoned R-2 Residential. However, a Consent Judgment between Developer and the City case no. 04-060730-CZ dated April 19, 2006 for the Property allows the Developer to redevelop the Property for commercial retail and office use in accordance with the provisions of the Consent Judgment. A copy of the Consent Judgment is provided in Appendix B.

1.2 HISTORICAL USE OF EACH ELIGIBLE PROPERTY

The Property consisted of undeveloped land from at least 1940 until at the least the mid 1950's when the western parcel was used for slaughterhouse operations. Illegal dumping occurred on the Property, mostly on the eastern parcel in the early 1970's. The historical dumping area on the eastern parcel is known as the Christianson Landfill. Currently, the subject property is overgrown with vegetation.

1.3 CURRENT USE OF EACH ELIGIBLE PROPERTY

In general, the site is level with adjacent properties and is located in a mixed commercial and residential area of Rochester Hills, Michigan. The Property is currently vacant, unimproved, and mostly covered with vegetation and wooded areas.

1.4 SUMMARY OF PROPOSED REDEVELOPMENT AND FUTURE USE FOR EACH ELIGIBLE PROPERTY

Supported by the City of Rochester Hills BRA, the Developer intends to redevelop the Property for use as a mixed-use commercial retail and office center. The redevelopment

project that is the basis of the Brownfield Redevelopment Plan will include approximately 168,000 square feet of new construction along with associated site amenities such as parking and landscaping. Proposed uses within the development will include pharmacy/drug store with one drive-thru lane; bank with two drive-thru lanes and one ATM lane; coffee shop with one drive-thru lane; restaurant; retail; and professional offices. Exact uses will be defined more fully as planning for the project continues and is formalized. The overall estimated investment for the portion of the project that is the basis for this plan is approximately \$19.3 million. Construction is anticipated to begin in late 2007 and will be conducted in phases. The Developer anticipates that it will take seven years to complete the build out of the entire project.

1.5 INFORMATION REQUIRED BY SECTION 15(15) OF THE STATUTE

1.5.1 Public Benefit

The overall benefit to the public is the transformation of a contaminated property into an attractive, mixed use commercial and office development. In addition, providing new tax revenues and employment for the community.

1.5.2 Job Creation

While exact job creation numbers are unknown at this time as tenants are pending, the project has the potential to create more than 200 jobs. An equal number of construction jobs could be created by the project.

1.5.3 Contamination Alleviation

The parcels of property that comprise the Property are "eligible property" as defined by Act 381 because they have been previously utilized for a commercial, industrial or residential purpose and meet the definition of a "facility" as defined by Act 381.

Under Part 201, a "facility" is defined as "any area, place, or property where a hazardous substance in excess of the concentrations which satisfy the requirements of Section 20120a(1)(a). has been released, deposited, disposed of, or otherwise comes to be located," M.C.L. § 324.20101(1)(o). A "release" is defined to include "spilling" or "leaking" of a hazardous substance into the environment. In addition, a "release"

includes the abandonment of containers or other closed receptacles containing hazardous substances, M.C.L. § 324.20101(1)(bb).

AKT Peerless reviewed: (a) previous environmental reports provided by the property owners attorney, (b) reports available at Michigan Department of Environmental Quality (MDEQ), (c) MDEQ's recent subsurface investigation in the drum disposal and fill area, and (d) AKT Peerless' and McDowell's excavation of test pits and sample collection/analysis.

Based on AKT Peerless' review of this information and limited subsurface investigation activities, significant environmental liabilities exist across the subject property, including the middle portion of the property identified as "clean". Presented below is a summary of AKT Peerless' findings and conclusions:

- Harding ESE conducted a subsurface investigation throughout the fenced area on the eastern part of the property in June 2002. The investigation was performed to further evaluate the drum burial area and groundwater conditions. Laboratory analytical results indicate that concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), arsenic, cadmium, chromium, lead, silver, zinc, and polychlorinated biphenyls (PCBs) exceed MDEQ Generic Residential and Commercial Cleanup Criteria. Further, the analytical results suggest that these soils may be hazardous waste. The extent of contamination within the buried drum area has not been adequately defined for commercial or residential development. Based on these results, extensive soil contamination exists near and within the fenced-in area.
- During previous investigations at the subject property, concentrations of PCBs were detected in soil samples exceeding MDEQ Generic Residential Cleanup Criteria in the northwest part of the eastern portion. During AKT Peerless' limited subsurface investigation and test pit activities in October 2002, concentrations of PCBs were confirmed to exist in the northwestern part of the eastern portion.
- During AKT Peerless' limited subsurface investigation and test pit activities in October 2002, buried 55-gallon drums, free phase liquids, and other debris were discovered in the southern part of the middle portion of the property. The discovery of these materials was made in an area that had previously received closure for residential use and was described as "clean". The extent of the buried material has not been defined for commercial or residential development. Further,

it is AKT Peerless opinion that other buried drums and debris exist on the middle portion of the property.

- During AKT Peerless' limited subsurface investigation and test pit activities in January-February 2005, buried drum remnants, metal, wood, plastic and glass debris were discovered in the north central portion of the subject property. In addition, buried waste materials associated with the fenced in area on the eastern parcel were determined to extend further west onto the western parcel. Soil samples collected along the north central property boundary indicated the presence of PCBs in shallow soils at concentrations exceeding Toxic Substance Control Act (TSCA) residential criteria. Soil and groundwater samples were submitted for select laboratory analyses of volatile organic compounds (VOCs), polynuclear aromatics (PNAs), polychlorinated biphenyls (PCBs), and Michigan metals.

1.5.4 Private Sector Contribution

Tax increment revenue generated by the new development will be captured by the Authority and used to reimburse the Authority and the Developer for the cost of their respective eligible activities completed on the Property. The private sector contribution is approximately \$19.3 million. It should be noted that the Developer has expended approximately \$70,000 for non-reimbursable environmental activities at the subject property. These environmental activities have included preliminary site assessment activities (i.e. Phase I ESA and subsurface investigations), Baseline Environmental Assessment (BEA), and associated meetings. In addition, as part of the Consent Judgment between the Developer and the City of Rochester Hills, the Developer is allocating \$150,000 of private monies for non-eligible activities at the subject property.

1.5.5 Cost Gap Comparison

No other property including Greenfield properties, were considered, due to the unique location and size of this property. The cost for the eligible activities necessary to redevelop this site are estimated at \$5.89 million. The cost for eligible activities to perform the subsurface investigation activities as described in this Work Plan is included in Table 1.

1.5.6 Brownfield Creation

This project will not create a new brownfield site, since the proposed future use does not include the use, storage, or handling of hazardous substances in significant quantities nor is relocation of an existing business contemplated at this time.

1.5.7 Additional Information

Not applicable.

2.0 CURRENT PROPERTY CONDITIONS

2.1 PROPERTY ELIGIBILITY

The Property is an "Eligible Property" as defined by Act 381 because it has been previously utilized for commercial purposes and meets the definition of a "facility"[□] as defined by Act 381.

The property is considered an "Eligible Property" based on the definition contained within Section 2 (m) of Act 145 of the Michigan Public Acts of 2000 (Act 145, amends the Brownfield Redevelopment Financing Act, Public Act 381 of 1996) based on the following findings:

Based on AKT Peerless' review of this information and limited subsurface investigation activities, significant environmental liabilities exist across the subject property. A summary of findings and conclusions is provided below:

- Harding ESE conducted a subsurface investigation throughout the fenced area on the eastern part of the property in June 2002. The investigation was performed to further evaluate the drum burial area and groundwater conditions. Laboratory analytical results indicate that concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), arsenic, cadmium, chromium, lead, silver, zinc, and polychlorinated biphenyls (PCBs) exceed

[□] Under Part 201, a "facility" is defined as "any area, place, or property where a hazardous substance in excess of the concentrations which satisfy the requirements of Section 20120a(1)(a). has been released, deposited, disposed of, or otherwise comes to be located," M.C.L. § 324.20101(1)(o). A "release" is defined to include "spilling" or "leaking" of a hazardous substance into the environment. In addition, a "release" includes the abandonment of containers or other closed receptacles containing hazardous substances, M.C.L. § 324.20101(1)(bb).

MDEQ Generic Residential and Commercial Cleanup Criteria. Further, the analytical results suggest that these soils may be hazardous waste. The extent of contamination within the buried drum area has not been adequately defined for commercial or residential development. Based on these results, extensive soil contamination exists near and within the fenced-in area.

- During previous investigations at the subject property, concentrations of PCBs were detected in soil samples exceeding MDEQ Generic Residential Cleanup Criteria in the northwest part of the eastern portion. During AKT Peerless' limited subsurface investigation and test pit activities in October 2002, concentrations of PCBs were confirmed to exist in the northwestern part of the eastern portion.
- During AKT Peerless' limited subsurface investigation and test pit activities in October 2002, buried 55-gallon drums, free phase liquids, and other debris were discovered in the southern part of the middle portion of the property. The discovery of these materials was made in an area that had previously received closure for residential use and was described as "clean". The extent of the buried material has not been defined for commercial or residential development. Further, it is AKT Peerless opinion that other buried drums and debris exist on the middle portion of the property.
- During AKT Peerless' limited subsurface investigation and test pit activities in January-February 2005, buried drum remnants, metal, wood, plastic and glass debris were discovered in the north central portion of the subject property. In addition, buried waste materials associated with the fenced in area on the eastern parcel were determined to extend further west onto the western parcel. Soil samples collected along the north central property boundary indicated the presence of PCBs in shallow soils at concentrations exceeding Toxic Substance Control Act (TSCA) residential criteria. Soil and groundwater samples were submitted for select laboratory analyses of volatile organic compounds (VOCs), polynuclear aromatics (PNAs), polychlorinated biphenyls (PCBs), and Michigan metals

The Property qualifies as an eligible property because it has been previously used for illegal dumping purposes and it is a facility.

2.2 SUMMARY OF ENVIRONMENTAL CONDITIONS

The following environmental site assessments have been conducted on the eligible property.

2.2.1 U.S. Environmental Protection Agency Site Assessment, dated September 1984

In September 1984 The U.S. Environmental Protection Agency (EPA) conducted a site assessment for the Christianson Landfill site. The purpose of the site assessment was to assess the Christianson Landfill for a possible immediate removal.

The EPA reviewed analytical data from the Oakland County Health Department (OCHD). The EPA decided that the site was not an immediate or significant threat to public health, welfare, or the environment.

The EPA concluded that an immediate removal was not necessary. However, the EPA suggests to the MDNR a continuation of the investigation and possible long-term remedial actions.

2.2.2 Michigan Department of Natural Resources March 30, 1989 Letter

On March 30, 1989, the Michigan Department of Natural Resources (MDNR) released a letter in correspondence with the Christianson and Adams Road Dumpsite.

The MDNR identified the site as an unlicensed landfill, receiving domestic and industrial wastes (i.e. drums were uncovered and identified as liquid paint waste in 1985 during residential development, and solid waste was discovered during a February 1988 visit). The site was identified as being in violation of Act 245, P.A. of 1929 and Act 641, P.A. 1978.

The MDNR recommended: (1) immediate removal of all drums, (2) a hydro-geological investigation to address soil and groundwater contamination, and a geophysical survey to locate buried drums, (3) corrective action plan for remediation of soil and groundwater

and removal of buried drums, and (4) securing the site to restrict unauthorized access and illegal dumping.

2.2.3 Michigan Department of Natural Resources December 2, 1991 Letter

On December 2, 1991, the MDNR released a letter in correspondence with the Christianson and Adams Road Dumpsite.

The MDNR identified hazardous levels of polychlorinated biphenyls (PCBs), benzene, toluene, xylenes, pesticides, phenols, polynuclear aromatics (PNAs), lead, chromium, cadmium, barium, selenium, silver, vanadium, zinc, and cyanide in soil. The MDNR also identified hazardous levels of 1,1-dichloroethylene (DCE), 1,1,1-trichloroethane (1,1,1-TCA), benzene, toluene, ethylbenzene, and xylenes (BTEX), bromoform, and the PCB arochlor 1254 in groundwater.

The MDNR came to a conclusion that the western 10 acres may be “de-listed” with a petition to “de-list”, however it will be a costly remediation for the remaining 17.5 acres where illegal dumping had occurred.

2.2.4 O’Brien & Gere Soil and Groundwater Survey, dated November 1994

In November 1994 O’Brien & Gere Engineers, Inc. (O’Brien) conducted a draft soil and groundwater survey for the Christianson Dump Site, Rochester Hills, Michigan. The purpose of this soil and groundwater survey was to develop an efficient approach to remediate approximately 19-acres of the western portion of the subject property.

To aid in their findings O’Brien reviewed Ecology and Environment, Inc., Site Screening Investigation, dated 1984. Their conclusions were as follows:

- Two main water-bearing units are present at the subject property.
- Groundwater was found to be at approximately 4-feet below ground surface, and flowing northeast towards the Clinton River.

O’Brien’s Investigation involved taking (1) 10 soil samples (5 from “far west” and 5 from “middle west”) from a depth between 0-6-feet below ground surface, (2) 5 soil borings

along eastern parcel boundary, (3) 7 soil borings near northern property boundary, (4) 2 test pits and 2 trenches, (5) installation of 1 nested pair of monitoring wells, (6) 9 groundwater samples from monitoring wells, and (7) laboratory analyses for Michigan metals², volatile organic compounds (VOCs), PNAs, semi-volatile organic compounds (SVOCs), PCBs, and pesticides.

O'Brien submitted soil samples for laboratory analyses of select parameters including, VOCs, PNAs, PCBs, SVOCs, and Michigan metals. The results of the laboratory analyses of the soil samples are summarized in the table below:

Parameter	Criteria Exceeded	Sample Identification	Maximum Concentration (µg/kg)
Dieldrin	MDNR Drinking Water Criteria Type B	SS-6 (0-2 feet)	650
beta-BHC	MDNR Drinking Water Criteria Type B	TP1W	65
Lead	Site Background Level	TR1S	30.5
Zinc	Site Background Level	TR1BOTTOM-S	68
Arsenic	Site Specific Metal Concentrations	SB5 (10-14 feet)	25
Cadmium	Site Specific Metal Concentrations	SB8 (18-20 feet)	3.4

O'Brien submitted groundwater samples for laboratory analyses of select parameters including, VOCs, PNAs, PCBs, SVOCs, and Michigan metals. The results of the laboratory analyses of the soil samples are summarized in the table below:

² Michigan metals: arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc.

Parameter	Criteria Exceeded	Sample Identification	Maximum Concentration (µg/kg)
Arsenic	Health Based Drinking Water Criteria Type B	MW2	25

The laboratory analytical results of soil samples indicated the presence of dieldrin and beta-BHC above MDNR Drinking Water Criteria Type B, concentrations of lead and zinc above Site Background Levels, and concentrations of arsenic and cadmium above Site Specific Metal Concentrations. In addition, laboratory analytical results of groundwater samples also indicated the presence of arsenic above Health Based Drinking Water Criteria Type B.

2.2.5 O'Brien & Gere Drum Remnant Removal Interim Remedial Activities, dated March 1998

In March 1998 O'Brien conducted Drum Remnant Removal and Interim Activities to address contamination on the eastern parcel of the Christianson/Adams Road Site. In addition O'Brien submitted a "de-listing" request for the western parcels (previously separated into two parcels) in December 1997.

During O'Brien's remedial activities they removed approximately 60- yds³ of drum remnants, which were disposed of at the Environmental Quality facility in Belleville, Michigan.

2.2.6 Michigan Department of Environmental Quality's October 19, 2000 Letter

On October 19, 2000, the Michigan Department of Environmental Quality (MDEQ) released a letter along with a field activity report in correspondence with the Christianson/Adams Dump Site.

During the MDEQ's August 22 and 23 site investigation they collected samples from monitoring wells MW4S, MW4D, MW5S, MW5D, MW7, and MW3. In addition monitoring wells MW1S, MW1D, MW2S, MW2D, and MW8 were extensively looked for. MW1 was found destroyed and the remaining monitoring wells could not be found

most likely due do extremely dense vegetation. The samples that were taken were run for laboratory analysis for VOCs.

The laboratory analysis of groundwater indicated the presence of trichloroethylene in MW7 above MDEQ Generic Cleanup Criteria. All other results were not detected above laboratory method detection limits.

2.2.7 Harding ESE Technical Memorandum No. 1: Soil Sampling and Monitoring Well Installation Christianson and Adams Road Dump, dated November 7, 2002

Harding ESE conducted a subsurface investigation throughout the fenced area on the eastern part of the subject property in June 2002. The investigation was performed to further evaluate the drum burial area and groundwater conditions. In 1999 and early 2000 DLZ, under contract to the MDEQ, approximately 5,600 buried drums were removed from the portion of the property that was subsequently enclosed by a fence.

Laboratory analytical results indicate that concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), arsenic, cadmium, chromium, lead, silver, zinc, and polychlorinated biphenyls (PCBs) exceed MDEQ Generic Residential and Commercial Cleanup Criteria.

Further, the analytical results suggest that these soils may be hazardous waste. The extent of contamination within the buried drum area has not been adequately defined for commercial or residential development. Based on these results, extensive soil contamination exists near and within the fenced-in area.

2.2.8 AKT Peerless' Limited Subsurface Investigation, dated October 2002

AKT Peerless conducted a limited subsurface investigation including a geophysical survey in October 2002 to evaluate potential environmental impact associated with historical landfilling activities, and the potential presence of additional, buried drums.

During AKT Peerless' limited subsurface investigation and test pit activities in October 2002, concentrations of PCBs were confirmed to exist in the northwestern part of the eastern parcel. In addition, buried 55-gallon drums, free phase liquids, and other debris were discovered in the southern part of the middle portion of the subject property. The discovery of these materials was made in an area that had previously received closure for residential use and was described as "clean".

The extent of the buried material has not been defined for commercial or residential development. Further, it is AKT Peerless' opinion that other buried drums and debris exist on the middle portion of the property. A report was not completed for this limited subsurface investigation.

2.2.9 AKT Peerless' Phase I Environmental Site Assessment, dated January 24, 2005

Hamlin\Adams Properties, LLC retained AKT Peerless to conduct a Phase I ESA Report of the subject property dated January 1, 2005. Based on its Phase I ESA, AKT Peerless identified the following recognized environmental conditions (RECs):

- The subject property has been operating as a landfill since at least the mid 1950s. The historical use of the subject property; typically included the dumping of household and slaughterhouse wastes, and illegal dumping of drums and waste containing a variety of chemicals including PCBs and paint like substances.
- The southern adjoining property has been operating as a landfill since at least the early 1960s until it's closure in 1978. This historical use of the property; typically include the dumping of sanitary wastes and known contaminants which include concentrations of: PCBs, arsenic, cadmium, chromium, lead, mercury, selenium, silver, zinc, acenaphthene, acenaphthylene, benzo (a) pyrene, butyl benzyl phthalate, carbazole, dibenzofuran, diethylphthalate, fluoranthene, fluorene, naphthalene, phenanthrene, phenol, benzene, chlorobenzene, 1,4-dichlorobenzene, ethylbenzene, n-butylbenzene, n-propylbenzene, tetrachloroethene, toluene, trichloroethene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylenes, and methane.

AKT Peerless recommended conducting a limited subsurface investigation to evaluate this concern associated with the subject property.

2.2.10 AKT Peerless' Limited Subsurface Investigation, dated January 24, 2005

On December 10, 2004, AKT Peerless conducted a limited subsurface investigation of the subject property to address the recognized environmental conditions identified in previous environmental investigations, and AKT Peerless' Phase I ESA. AKT Peerless' limited subsurface investigation is consistent with federal and state programs and ASTM standard methods. To evaluate the recognized environmental conditions identified at the subject property, AKT Peerless (1) hand-augered 10 soil borings, and (2) collected 13 soil samples and one groundwater sample for laboratory analysis. AKT Peerless performed a qualitative evaluation of all soil samples collected during drilling and a quantitative analysis (laboratory analysis) of the 13 discrete soil samples and one groundwater sample.

Soil and groundwater samples were submitted for select laboratory analyses of volatile organic compounds (VOCs), polynuclear aromatics (PNAs), polychlorinated biphenyls (PCBs), and Michigan metals.

Soil Analytical Results

Laboratory analytical results indicate target parameter concentrations of PCBs were detected above laboratory method detection limit in two samples. However, target parameter concentrations were not detected above applicable MDEQ Generic Residential Cleanup Criteria in either soil sample.

It should be noted that the concentration of PCBs found in B-3 (0-1) was detected above Direct Contact Criteria for the Toxic Substance Control Act (TSCA).

Groundwater Analytical Results

Laboratory analytical results indicate target parameter concentrations of barium, chromium, zinc, and chloromethane were detected above laboratory method detection limits. However, target parameter concentrations were not detected above the applicable MDEQ Residential Generic Cleanup Criteria in the groundwater sample.

Conclusion

Based on laboratory analytical results for this subsurface investigation, target parameter concentrations were not detected in soil or groundwater at the subject property above applicable MDEQ Generic Residential Cleanup Criteria. However, it should be noted that the concentration of PCBs found in B-3 (0-1) was detected above Direct Contact Criteria for the TSCA.

Analytical results from previous subsurface investigations show that target parameter concentrations were detected above the applicable MDEQ Generic Residential Cleanup Criteria. Therefore, the subject property meets the definition of a “facility”, as defined in Part 201 of Natural Resources and Environmental Protection Act (NREPA), Michigan Public Act (PA) 451, 1994, as amended.

2.2.11 AKT Peerless’ Supplemental Investigative Data letter report dated March 10, 2005

On February 12, 2005, AKT Peerless conducted a geophysical survey of the subject property. The geophysical survey was conducted using a G-858 Cesium magnetometer.

Prior to the survey, AKT Peerless established a grid at the property. The grid consisted of 22 north-south survey lines at intervals of 50-feet. Stations at each line were set at 20-foot intervals. It should be noted that the survey grid did not encompass the eastern fenced portion of the subject property. The grid was terminated at approximately 25-feet west of the west fence boundary.

The geophysical survey consisted of “walking” each line and obtaining a magnetometer reading at each station. Survey readings and station locations were stored in the survey

instrument's datalogger. A total of 1060 readings were recorded during the magnetometer survey. During the survey, any observed surface debris, specifically metallic debris, was noted.

Upon completion of the survey, the magnetometer survey data was imported into Surfer 8™ software for evaluation. Three-dimensional plots were generated using the survey data to identify potential "anomalous" areas that could indicate the presence of buried materials. The results of the magnetometer survey identified several anomalies at the subject property that required further investigation.

Based on the identification of several anomalous areas at the subject property, AKT Peerless implemented a test pit investigation to identify the source of the anomalies. On February 15, 2005, AKT Peerless retained Parks Development & Installation, Inc (Parks) of Milford, Michigan to excavate test pits at the subject property. At the direction of AKT Peerless, Parks excavated 24 test pits at the subject property. Test pits were excavated in areas identified as "anomalous" during the geophysical survey and also in areas that appeared to be visually disturbed.

The results of the test pits indicated the presence of buried materials in previously unidentified areas, specifically in the north central and south central portion of the subject property. The test pits also indicated that buried materials, historically identified within the fenced area, extend outside the fence to the west.

As part of test pit activities, AKT Peerless collected a total of four soil samples from test pits that were visually identified to be disturbed and/or containing debris. The soil samples were submitted, under chain of custody, to Midwest Analytical Services, Inc. (Midwest) of Ferndale, Michigan. The soil samples were analyzed for:

- Volatile Organic Compounds (VOCs),
- Polynuclear Aromatic Hydrocarbons (PNAs), and
- Michigan Metals (arsenic, barium cadmium, chromium, copper, lead, selenium, silver, zinc, and mercury).

The laboratory analyzed the samples for (1) VOCs in accordance with USEPA Method 8260; (2) PNAs in accordance with USEPA Method 8270C, (3) arsenic, barium cadmium, chromium, copper, lead, selenium, silver, and zinc in accordance with USEPA Method 6010B, and (4) mercury in accordance with USEPA Method 7471A.

Laboratory analytical results for the submitted soil samples were compared to the following applicable MDEQ Generic Cleanup Criteria.

- Statewide Default Background Level
- Residential & Commercial I Drinking Water Protection, Surface Water Interface Protection, and Soil Direct Contact Criteria
- Industrial & Commercial II, III, & IV Drinking Water and Surface Water Interface Protection Criteria
- Commercial III and IV Soil Direct Contact Criteria

The following is a summary of laboratory analytical results exceeding applicable MDEQ Generic Cleanup Criteria and the corresponding test pit locations of the soil samples submitted.

- **Xylenes** were detected in TP-2 exceeding MDEQ Generic Residential, Commercial, and Industrial Surface Water Interface Protection Criteria.
- **Arsenic** was detected in TP-2 and TP-16b exceeding MDEQ Statewide Default Background Levels but below Part 201 Generic Cleanup Criteria.
- **Barium** was detected in TP-3-1 and TP-21 exceeding MDEQ Statewide Default Background Levels but below Part 201 Generic Cleanup Criteria.
- **Cadmium** was detected in TP-16b and TP-21 exceeding MDEQ Statewide Default Background Levels and Generic Residential, Commercial, and Industrial Drinking Water Protection Criteria.
- **Chromium** was detected in all test pit locations exceeding MDEQ Generic Residential, Commercial, and Industrial Drinking Water and Surface Water Interface Protection Criteria.
- **Copper** was detected in TP-16b and TP-21 exceeding MDEQ Statewide Default Background Levels but below Part 201 Generic Cleanup Criteria.
- **Lead (fine fraction)** was detected in all test pit locations exceeding MDEQ Statewide Default Background Levels, Generic Residential & Commercial I, II, III, and IV Soil Direct Contact Criteria.
- **Lead (coarse fraction)** in all test pit locations exceeding MDEQ Statewide Default Background Levels but below Part 201 Generic Cleanup Criteria.
- **Mercury** in TP-16b and TP-21 exceeding MDEQ Statewide Default Background Levels, Residential, Commercial, and Industrial Surface Water Interface Protection Criteria.

- **Selenium** in TP-16b exceeding MDEQ Statewide Default Background Levels, Residential, Commercial, and Industrial Surface Water Interface Protection Criteria.
- **Silver** in TP-16b exceeding MDEQ Statewide Default Background Levels, Residential, Commercial, and Industrial Surface Water Interface Protection Criteria.
- **Zinc** in all test pit locations exceeding MDEQ Statewide Default Background Levels but below Part 201 Generic Cleanup Criteria.

Several constituents were detected at concentrations exceeding Part 201 Generic Drinking Water Protection Criteria (DWPC) and Groundwater to Surface Water Interface Protection Criteria (GSIPC).

Based on laboratory analytical results, target parameter concentrations were detected in soil samples extracted at the subject property above applicable MDEQ Generic Cleanup Criteria.

3.0 ENVIRONMENTAL MDEQ ELIGIBLE ACTIVITIES

Previous subsurface investigative activities by AKT Peerless and others identified the subject property as a facility. Several compounds exceed applicable Part 201 Residential and Commercial Generic Risk Based Screening Levels (RBSLs). In addition, several areas of buried waste materials have been identified at the subject property. Also, off-site migration of methane gas associated with the adjoining property to the south known as the Suburban Softball Site/former Cardinal Landfill has been identified. Therefore, AKT Peerless recommends additional subsurface investigation to further evaluate due care obligations and due care remedial activities, and to evaluate the potential presence of methane gas at the Property as a result of migration of methane gas from the adjoining Suburban Softball Site/Former Cardinal Landfill. AKT Peerless has identified six specific areas where further investigation is warranted including:

- Area of uncharacterized buried waste/debris material in north central portion of Property (Area A).
- Area of PCB impacted surface soils in northern portion of eastern parcel at the Property (Area B).
- Area of uncharacterized buried waste/debris/drum material in western portion of east parcel and east portion of west parcel (Area C).
- Area of uncharacterized buried waste/debris/drum material in south central portion of Property (Area D).

- Fenced in area in east parcel previously identified as containing drums and soils impacted with PCB and VOCs (Area E).
- Entire subject property to evaluate the potential presence of methane gas due to off-site migration of methane gas from adjoining Suburban Softball/Former Cardinal landfill site.

AKT Peerless proposed investigation is intended to further evaluate these areas to identify necessary due care remedial activities and further refine due care remedial cost estimates.

3.1 HEALTH AND SAFETY PLAN

A site-specific Health and Safety Plan (HASP) will be completed for redevelopment activities at the site. The HASP will comply with appropriate guidelines including the following:

- Michigan Occupational Safety and Health Act.
- Section 111(c)(6) of CERCLA.
- Occupational Safety and Health Administration requirements 29 CFR 1910 and 1926
- Standard Operating Safety Guide Manual (revised November 1984) by the Office of Emergency and Remedial Response.
- Occupation Safety and Health guidance manual for Hazardous Waste Site Activities (NIOSH/OSHA/USCG/EPA, DHHS [NIOSH] Publication No. 85-115, October 1985).

3.2 SUBSURFACE INVESTIGATIVE ACTIVITIES

3.2.1 Scope of Work

The following scope of work outlines the tasks to be performed at the subject property as part of a supplemental subsurface investigation. The purpose of the supplemental subsurface investigation is to delineate the extent of identified soil and groundwater contaminants in order to estimate quantities and associated costs for remediation.

AKT Peerless proposes to complete the following activities:

- Excavate up to 60 test pits in Areas A, B, C, and D to characterize and laterally and vertically delineate the extent of buried waste materials.

- Advance up to 40 soil borings to a maximum depth of 25 feet below ground surface (BGS) to delineate the lateral and vertical extent of PCB impacted soils in Area E.
- Advance 12 soil borings to a maximum depth of 40 feet BGS for installation of groundwater monitoring wells to evaluate groundwater conditions beneath the subject property.
- Collect up to 124 soil samples for analyses of target parameters including VOCs, SVOCs, PCBs, and heavy metals.
- Collect up to 12 samples for waste characterization purposes
- Conduct 2 groundwater monitoring events and collect up to 24 groundwater samples for analysis of target parameters including VOCs, SVOCs, PCBs, and heavy metals.
- Conduct an ambient air assessment for methane gas.
- Install 100 shallow temporary well assemblies to monitor near surface soils for methane gas
- Install 30 subsurface methane monitoring wells, 15 of which will be installed in the upper aquifer, to monitor subsurface soils and groundwater for methane gas
- Conduct 2 near surface methane gas monitoring events.
- Conduct 4 bi-weekly subsurface methane gas monitoring events and collect up to 30 methane gas samples for analysis by an analytical laboratory.
- Conduct 2 groundwater monitoring events for methane gas. Collect up to 20 groundwater samples for analysis of dissolved methane gas
- Submit the soil and groundwater samples to a fixed-base, independent laboratory for chemical analysis.
- Prepare a Supplemental Phase II site investigation report.

Sections 3.2.1.1 through 3.2.1.4 provide details regarding the proposed site investigation activities.

3.2.1.1 Test Pit Excavation Activities

AKT Peerless will retain an excavation subcontractor to excavate up to 60 test pits at the subject property to characterize and delineate the lateral and vertical extent of buried waste materials in Areas A, B, C, and D. Test pits will be excavated using a tire-mounted or track-mounted excavator, depending on site conditions. AKT Peerless field staff will observe test pit excavation activities and record notes regarding the type of buried waste materials, depth of buried waste materials, and dimensions of test pit. During test pit

activities, AKT Peerless will monitor ambient air conditions using a photo-ionization detector (PID) to monitor for VOC vapors and a four-gas meter capable of monitoring for methane gas. AKT Peerless will submit up to 60 soil samples from the native soils beneath waste materials for testing of target parameters such as VOCs, SVOCs, PCBs, and heavy metals. One sample per area (i.e. Areas A through D) will be collected for waste characterization purposes. The location of each test pit will be demarked with a survey stake for identification and location purposes. Each survey stake location will be surveyed using Global Positioning Survey (GPS) equipment. Proposed test pit locations are identified in Figure 2.

3.2.1.2 Delineation of PCB Impacted Soils in Area B

AKT Peerless will retain a drilling subcontractor to advance up to 40 soil borings in Area B for purposes of laterally and vertically delineating PCB impacted soils. Soil borings will be advanced using direct-push continuous sampling methodology to a maximum depth of 12 feet. Soil conditions will be recorded. AKT Peerless will collect up to three soil samples (i.e. one from the surface and two from subsurface) from each soil boring location for submittal to an analytical laboratory for analysis of PCBs. Each soil boring will be demarked with a stake for identification and location purposes. Each survey stake location will be surveyed using Global Positioning Survey (GPS) equipment. Twenty (20) of the proposed soil boring locations in Area B are identified in Figure 2. The remaining twenty (20) soil borings are for contingency purposes if the results of the soil samples indicate that lateral and vertical impact of PCBs have not been delineated.

3.2.1.3 Soil Borings in Area E (Fenced-In Area)

AKT Peerless will retain a drilling subcontractor to advance up to 40 soil borings in Area E for purposes characterizing reportedly impacted soils. Soil borings will be advanced using direct-push continuous sampling methodology to a maximum depth of 25 feet. Soil conditions will be recorded. AKT Peerless will collect three soil samples (i.e. one from the surface and two from subsurface) from each soil boring location. Three soil samples per soil boring will be submitted to an analytical laboratory for analysis of target

compounds. Each soil boring will be demarked with a stake for identification and location purposes. Proposed soil boring locations are provided on Figure 2.

3.2.1.4 Monitoring Well Installation and Groundwater Evaluation

AKT Peerless will retain a drilling subcontractor to advance 12 soil borings at the subject property for the installation of monitoring wells. Based on previous investigations at the property, laterally discontinuous cohesive layers are present at the subject property. It is anticipated that perched water-bearing zones are present above the discontinuous cohesive layers and that a granular semi-confined aquifer occurs below these cohesive layers. Soil borings will be advanced using hollow-stem auger methods to a maximum depth of 40 feet, or a minimum of 7.5 feet into the granular aquifer. Soil samples will be collected at 2.5 feet intervals until boring terminus. Soil borings advanced through a perched water-bearing zone will be double-cased to prevent potential contamination of the deeper granular aquifer. Soil samples will be visually logged and screened for VOCs with a PID by AKT Peerless field staff. One soil sample per soil boring, based on visual observation of impact or PID readings, will be submitted to an analytical laboratory for analysis of target parameters including VOCs, SVOCs, PCBs, and heavy metals.

Upon reaching desired depth, each of the deep soil borings will be converted to monitoring wells. Each monitoring well will be constructed with 2-inch diameter polyvinyl chloride (PVC) well casing and a 5-foot long, 2-inch diameter, 10-slot, PVC well screen. Upon installation, each monitoring well will be developed to improve communication between the well screen and the surrounding aquifer. A clean sand pack will be placed to a minimum of 1-foot above the top of each screen, followed by a hydrated bentonite seal. Each monitoring well will be completed with a cement-sealed, locking above grade protective casing. Each groundwater monitoring well will be surveyed for top-of-casing elevation and location. If perched water-bearing zones are encountered during drilling activities, shallow monitoring wells will be installed to monitor these perched water-bearing zones. For purposes of this Work Plan, AKT Peerless estimates that six (6) shallow monitoring wells will be installed in perched water-bearing zones.

AKT Peerless proposes to conduct two groundwater sampling events at the subject property. The initial groundwater sampling event will be conducted upon completion of well development activities. The second groundwater sampling event will be conducted approximately 1 month after the initial event. Prior to collecting groundwater samples, AKT Peerless will obtain static water level measurements from each well using an electronic water level indicator capable of measuring to 0.01 feet increments. Static water levels will be converted to elevation using top-of-casing survey elevation and used for development of groundwater elevation and flow map. AKT Peerless will collect groundwater samples from each of the monitoring wells using low-flow sampling methods as identified in the MDEQ's Operational Memorandum RRD-2. Collected groundwater samples will be submitted to an analytical laboratory for analysis of target parameters including VOCs, SVOCs, PCBs, and heavy metals.

Proposed monitoring well locations are identified in Figure 2.

3.2.1.5 Methane Gas Evaluation

AKT Peerless will conduct a methane gas assessment to evaluate the potential presence of methane gas at the subject property as a result of migration from the Suburban Softball/Former Cardinal Landfill site located on the adjoining property to the south. AKT Peerless' methane gas evaluation will consist of 1) surface/ambient air assessment, 2) near surface investigation, and 3) subsurface investigation.

Ambient Air Assessment

AKT Peerless proposes to conduct ambient air monitoring for methane gas at the site and adjacent properties over three separate monthly events. AKT Peerless will establish a grid over the subject property and adjacent properties using a grid line spacing of 100 feet and a station spacing of 50 feet along each line. Grid lines will be oriented in a north-south direction and will be demarked with wooden stakes.

Monitoring for methane in ambient air will be conducted using a landfill gas meter capable of reading the concentration of methane in parts per million (ppm) and percentage, and the percentage of the lower explosive limit for methane gas. At each station, the methane gas meter will be held approximately 2-3 inches above the ground surface and methane gas readings will be obtained over a period of at least one minute. The highest and lowest methane reading at each station will be recorded in a dedicated field book.

If methane gas is identified in ambient air at any location, AKT Peerless proposes to tighten the grid spacing at that location to identify the source location of methane gas. Grid spacing (including line and station spacing) will be reduced to 25 feet and then 10 feet. Methane readings will be recorded at each station and logged in the field book. Once the source location of methane gas is identified, AKT Peerless will install a 1-inch diameter monitoring point, using the methodologies identified previously, to identify the subsurface concentration of methane gas at that location.

Near Surface Methane Investigation

AKT Peerless will retain a drilling subcontractor to advance soil borings for the near surface methane investigation. AKT Peerless proposes to conduct up to 100 shallow soil borings for near surface methane investigation. Soil borings will be advanced at selected grid nodes of the grid that was established for the ambient air assessment. Shallow soil borings will be advanced with a direct push probe to a maximum depth of 5 feet below ground surface.

Upon reaching desired boring depth at each shallow soil boring, the probe will be extracted from the soil boring and a temporary well assembly consisting of a 1-inch diameter PVC casing with a 1-foot long, 1-inch diameter, 10-slot PVC well screen will be inserted into the soil boring. The annular space between the well casing and borehole, above the screen section, will be sealed with hydrated bentonite chips to prevent vertical migration of methane gas via the annular space.

Each shallow temporary monitoring well will be monitored for methane gas by inserting a flexible tube into the well casing to the bottom or screened section and then collecting a gas sample using a landfill gas meter, equipped with a vacuum pump, capable of reading methane gas concentration. The annular space between the flexible tubing and well casing will be sealed using a cap assembly or alternate method to prevent venting of any methane gas to ambient air from the well assembly. Each shallow well assembly will be monitored for ten minutes. The highest and lowest methane gas reading from each shallow well assembly will be recorded in a dedicated field book.

Two methane monitoring events, approximately one week apart, will be conducted at each shallow well assembly. Upon completion of the second monitoring event, each shallow well assembly will be removed and the boreholes will be backfilled with native soils.

Subsurface Methane Investigation

AKT Peerless will retain a drilling subcontractor to install up to 30 methane monitoring wells. Soil borings will be advanced with a heavy duty hydraulic push probe or drill rig using hollow-stem auger methods, depending on subsurface soil conditions. Soil samples will be collected on a continuous basis to evaluate subsurface soil conditions. A soil sample from each 5-foot push probe acetate liner or from each split spoon sample will be placed in a sealed plastic bag, shaken, and then evaluated for methane gas using a four-gas meter capable of reading methane gas. Upon reaching the desired depth, each soil boring will be converted to a methane monitoring well. Up to 15 soil borings will be terminated in the upper aquifer to monitor the potential for dissolved methane gas in groundwater. Each methane monitoring well will be constructed with 1-inch or 2-inch diameter PVC casing. Well screens will consist of 1-inch or 2-inch diameter PVC, 10-slot screens with a maximum length of 10 feet. A coarse pea gravel pack will be placed to a minimum of 1-foot above the top of each screen, followed by a hydrated bentonite seal. Each methane monitoring point will be completed with a cement-sealed, locking above grade protective casing. The well caps will be fitted with a cap with a brass sampling port to facilitate monitoring.

Up to 15 methane monitoring wells will be installed in the upper aquifer. Well screens in these 15 monitoring wells will be installed to straddle the soil/groundwater interface. The wells screens for these 15 monitoring wells will extend at least 5 feet into the groundwater bearing zone.

AKT Peerless proposes to evaluate each methane monitoring well on a bi-weekly basis for two months. Methane reading will be obtained from each monitoring well using a four-gas meter capable of measuring methane gas. Methane readings will be obtained from each monitoring point by attaching the sampling tube of the calibrated four-gas meter to the sampling port of the methane monitoring point, opening the sampling port, and obtaining continuous methane gas readings for at least thirty (30) minutes from each monitoring point. During the fourth and last methane monitoring event, AKT Peerless will collect methane gas samples for submittal to an analytical laboratory. Methane gas samples will be collected using Summa Canisters or tedlar bags.

During the first and third methane monitoring event, AKT Peerless will also collect a groundwater sample from each of the 15 methane monitoring wells installed within the upper aquifer. Groundwater samples will be collected using low-flow methodology in accordance with procedures identified in Part 201 Operational Memorandum RRD-2. Groundwater samples will be collected in tedlar bags and submitted to an analytical laboratory for analysis of dissolved methane gas.

3.2.2 Test Pit, Boring, and Well Placement, and Laboratory Analyses

See Figure 2 for a proposed test pit excavation location map. See Figure 2 for a proposed soil boring, groundwater monitoring well, and methane monitoring well location map. Soil and groundwater samples collected for chemical analysis will be submitted under chain-of-custody to a fixed-base, independent laboratory. The laboratory will conduct analyses using Michigan Department of Environmental Quality (MDEQ) and/or U.S. Environmental Protection Agency (EPA) approved analytical methods.

3.2.3 Methodologies and Quality Control

AKT Peerless proposes to retain a subcontractor to conduct up to 60 test pit excavations using a wheel mounted or track mounted excavator.

AKT Peerless also proposes to advance soil borings using either: (1) a hand auger, (2) a hydraulic push probe, or (3) retain a hollow-stem drilling contractor.. If borings are advanced with a hydraulic push probe, borings will be advanced following American Standard Testing and Materials publication ASTM D-6282 *Standard guide for Direct Push Soil Sampling for Environmental Site Characterizations*. When possible, a macro core soil sampler will be used to collect continuous soil samples. If time is limited or subsurface soils restrict the penetration of the macro core sampler, a 2-foot-long discrete sampler will be used in place of the macro sampler. AKT Peerless will request the local utility companies to mark on the ground surface the locations of buried utilities (e.g., electrical lines, telephone lines, sewers, water mains, and natural gas pipes).

At soil borings advanced using 4¹/₄-inch inside-diameter, hollow-stem augers, soil samples will be collected continuously to desired depths using a 2-inch, outer-diameter, split spoon sampler or a similar device in accordance with ASTM D-4700-91(1998)e1 *Standard Guide for Soil Sampling from the Vadoze Zone* . Soil samples collected in the field will be visually examined in accordance with the Unified Soil Classification System, ASTM D-2488. As appropriate, soil samples collected in the field will be screened for VOCs using portable OVM/PID. To ensure accurate VOC screening, the quantity of the soil, temperature, and headspace volume will be kept as constant as possible. The OVM/PID will be calibrated prior to mobilization to the site.

AKT Peerless proposes to retain a drilling subcontractor to install groundwater monitoring wells at the subject property. Groundwater monitoring wells will be installed in accordance with ASTM D-5092 *Standard Practice for Design and Installation of Ground Water Monitoring Wells*.

Groundwater monitoring wells will be developed using methodologies identified in ASTM D-5521-05 *Standard Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers*.

Groundwater samples will be collected from groundwater monitoring wells using low flow purging and sampling methodologies in accordance with ASTM D-6771-02 *Standard Practice for Low-Flow Purging and Sampling for Wells and Devices Used for Ground-Water Quality Investigations* and/or procedures identified in MDEQ's Operational Memorandum RRD-2.

Strict decontamination procedures will be followed during the completion of investigation activities by AKT Peerless personnel to reduce the potential for cross-contamination. All drilling and down-hole sampling equipment will be decontaminated prior to first use onsite, and thereafter between uses, using a high-temperature, high-pressure spray washer, and/or a vigorous wash in an Alconox solution, followed by a tap water rinse, and a distilled water rinse.

All soil samples will be collected in laboratory supplied containers and stored following United States Environmental Protection Agency (USEPA) Publication SW-846 Method 5035/ASTM D4547-91, final version of March 26, 1998, *Testing Methods for Evaluating Solid Waste*. This publication includes guidelines for the *Soil Sample Collection and Methanol Preservation for Volatile Analysis*. The samples will be transported to a laboratory under chain-of-custody documentation in an ice-cooled container. Groundwater samples will be field filtered (for metals only) and preserved using laboratory supplied containers.

AKT Peerless proposes to collect various QA/QC samples for the purpose verifying that the data obtained as part of this site investigation is representative of actual site conditions. Duplicate and blank samples collected as part of this investigation were obtained using procedures outlined in Attachment No. 5 of MDEQ Operational

Memorandum No. 2 dated October 22, 2204 (and effective February 15, 2005). Based on these requirements, AKT Peerless will collect the following types of QA/QC samples:

Summary of QA/QC Sampling Procedures Employed During Investigation					
Duplicate Samples			Blank Samples		
QA/QC Sample Type	Replicate	MS/MSD	Field	Equipment	Trip
MDEQ Recommended Number of QA/QC Samples	1 per matrix ⁽¹⁾ and analytical group ⁽²⁾ per day.	1 per 20 or fewer samples per matrix and analytical group, at least 1 per day.	1 per 20 or fewer samples per matrix and analytical group, at least 1 per day.	1 per 10 or fewer samples per matrix and analytical group, at least 1 per day.	1 per every volatile organic sample shipping container.
MDEQ Recommended QA/QC Sample Collection Factors	Consists of one sample divided into two or more portions and analyzed by the same laboratory.	Samples were collected at critical locations, but not from field blank sampling points.	Containers filled with deionized water in area where sample handling and preservation occur.	Collected deionized water that was ran through sampling equipment.	Container filled with deionized water before sampling performed and travels to project site.

(1) A sample matrix is defined as soil, groundwater, surface water, sediment, or drinking water, etc.

(2) An analytical group is defined as VOCs, BNAs, PCBs, metals, etc.

3.2.4 Report

After completing the supplemental Phase II site investigation, AKT Peerless will prepare a report that will include a summary of field activities, analytical results, discussion of procedures/methodologies, site map with sampling locations, discussion of results and recommendations.

3.3 ADDITIONAL RESPONSE ACTIVITIES

Until the results of this investigation, the extent of additional response activities cannot be determined at this time. However, based upon the results of this investigation, additional response activities will be submitted as necessary for approval through an addendum to this Work Plan.

4.0 SCHEDULE AND COSTS

The following subsections present the proposed schedule and costs of MDEQ eligible activities required to complete the Hamlin & Adams Properties, LLC development project and the associated costs.

4.1 SCHEDULE OF ACTIVITIES

Project activities will commence upon the Rochester Hills City Council and MDEQ approval of the Act 381 Work Plan. All eligible activities as identified in this Work Plan will be completed by the fourth quarter of 2006 in order to facilitate redevelopment.

4.2 ESTIMATED COSTS

See Section 5.1 below for estimated costs and other project funding details.

5.0 PROJECT COSTS AND FUNDING

The following subsections present the total estimated project costs and the source and uses of funds.

5.1 TOTAL ESTIMATED PROJECT COSTS

The total cost of the Eligible Activities (including revolving fund, admin. costs and contingencies) contained in the Brownfield Plan is approximately \$4.6 million.

The total costs of MDEQ eligible activities included in this Work Plan equal **\$188,890**. Taxes levied for school operating purposes eligible for capture under this Work Plan equal **\$107,944**. See Table 1 for an itemization of MDEQ eligible activity costs

5.2 SOURCES AND USES OF FUNDS

The Developer and future tenants shall invest approximately \$19.3 million in personal and real property improvements on the Property. Redevelopment of the Property is expected to initially generate incremental taxable value in 2007 with the first significant increase in taxable value of approximately \$9.3 million beginning in 2009. It is estimated

that the Authority will capture the 2007 through 2021 tax increment revenues, generated by the increase in taxable value, resulting from redevelopment of the Property.

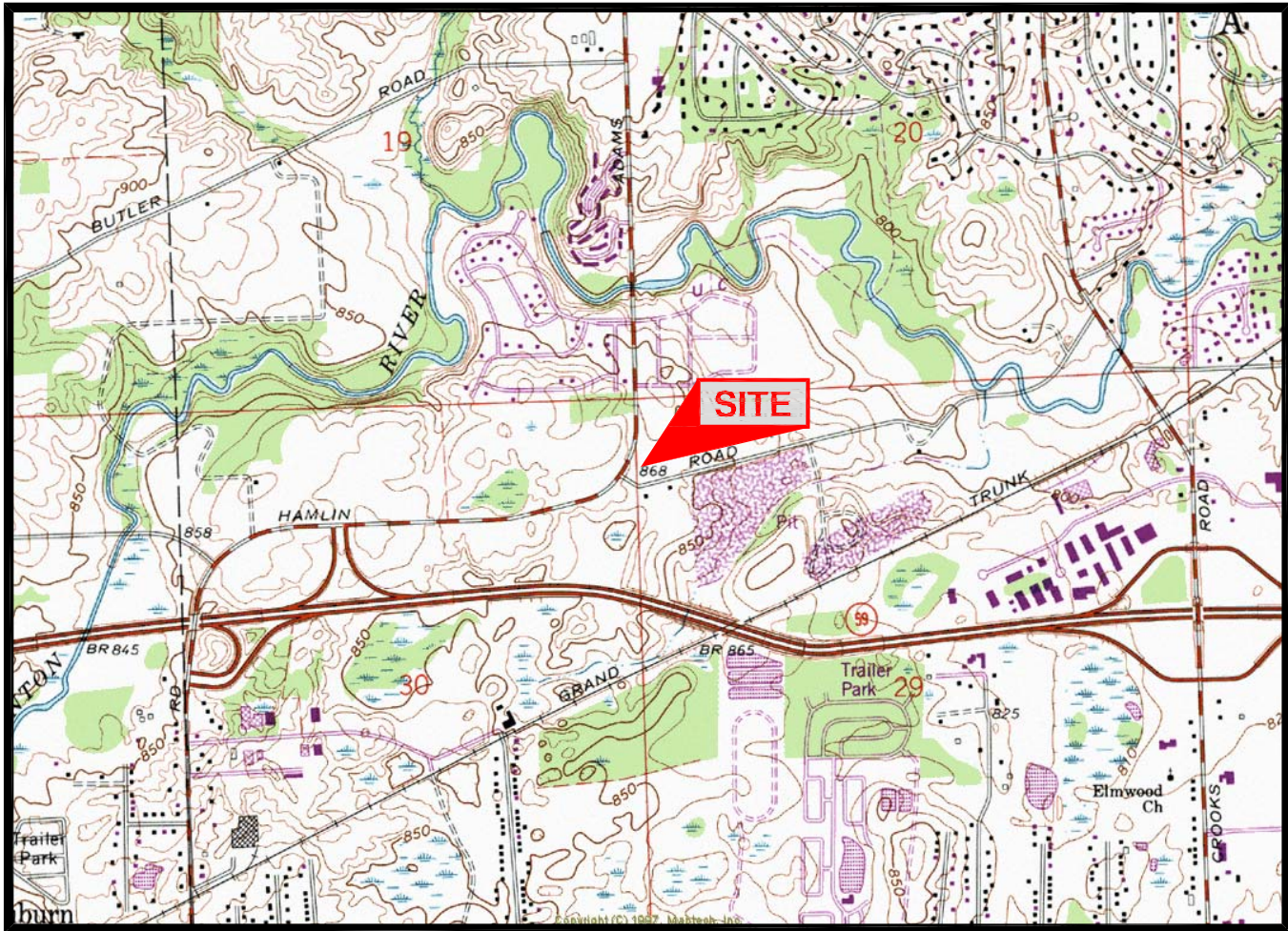
The Developer shall finance all costs of eligible activities contained in the Brownfield Plan. There will be no advances by the City related to this Plan.

6.0 LIMITATIONS

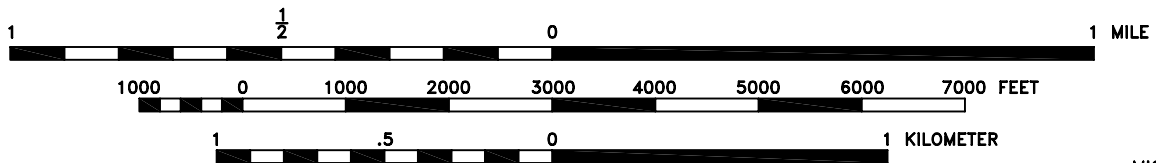
This work plan is based on the previous investigations conducted at the site and the known site conditions at the time of completion of the work plan. It is likely that conditions may vary. The information and opinions obtained in this work plan are for the exclusive use of Hamlin & Adams Road Property, LLC. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without the written consent of Hamlin & Adams Road Property or as required by law or by a Court order. The information and opinions contained in the work plan are given in light of that assignment. The work plan must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties who have been extended the right to rely on the contents of this work plan by AKT Peerless (which is expressly required prior to any third-party release), expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and Hamlin & Adams Road Property, LLC.

FIGURES

ROCHESTER QUADRANGLE
 MICHIGAN – OAKLAND COUNTY
 7.5 MINUTE SERIES (TOPOGRAPHIC)

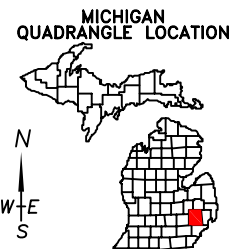


T.3 N. – R.11 E.



CONTOUR INTERVAL 10 FEET
 DATUM IS MEAN SEA LEVEL

IMAGE TAKEN FROM 1975 U.S.G.S. TOPOGRAPHIC MAP
 PHOTOREVISED 1976



AKTPEERLESS
 environmental services

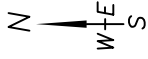
105 E. Michigan Ave., P.O. Box 655, Jackson, MI 49204
 Phone: (517)787-3393 Fax: (517)787-4508

TOPOGRAPHIC SITE LOCATION MAP

HAMLIN & ADAMS PROPERTIES, LLC
 NORTHEAST CORNER OF HAMLIN & ADAMS ROAD
 ROCHESTER HILLS, MICHIGAN
 PROJECT NUMBER : 3679F2

DRAWN BY: JJB
 DATE: 9-2-03

FIGURE 1



- LEGEND**
- PROPERTY LINE
 - - - APPROXIMATE AREAS OF CONTAMINATION
 - WATER LINE
 - GAS LINE
 - PROPOSED LOCATION OF TEST PIT
 - PROPOSED LOCATION OF TEST PIT EXCAVATION
 - BUSINESS PARK PAVED SURFACE
 - PROPOSED GROUNDWATER MONITORING WELL
 - PROPOSED SURFACE METHANE MONITORING WELLS
 - EXISTING MONITORING WELLS

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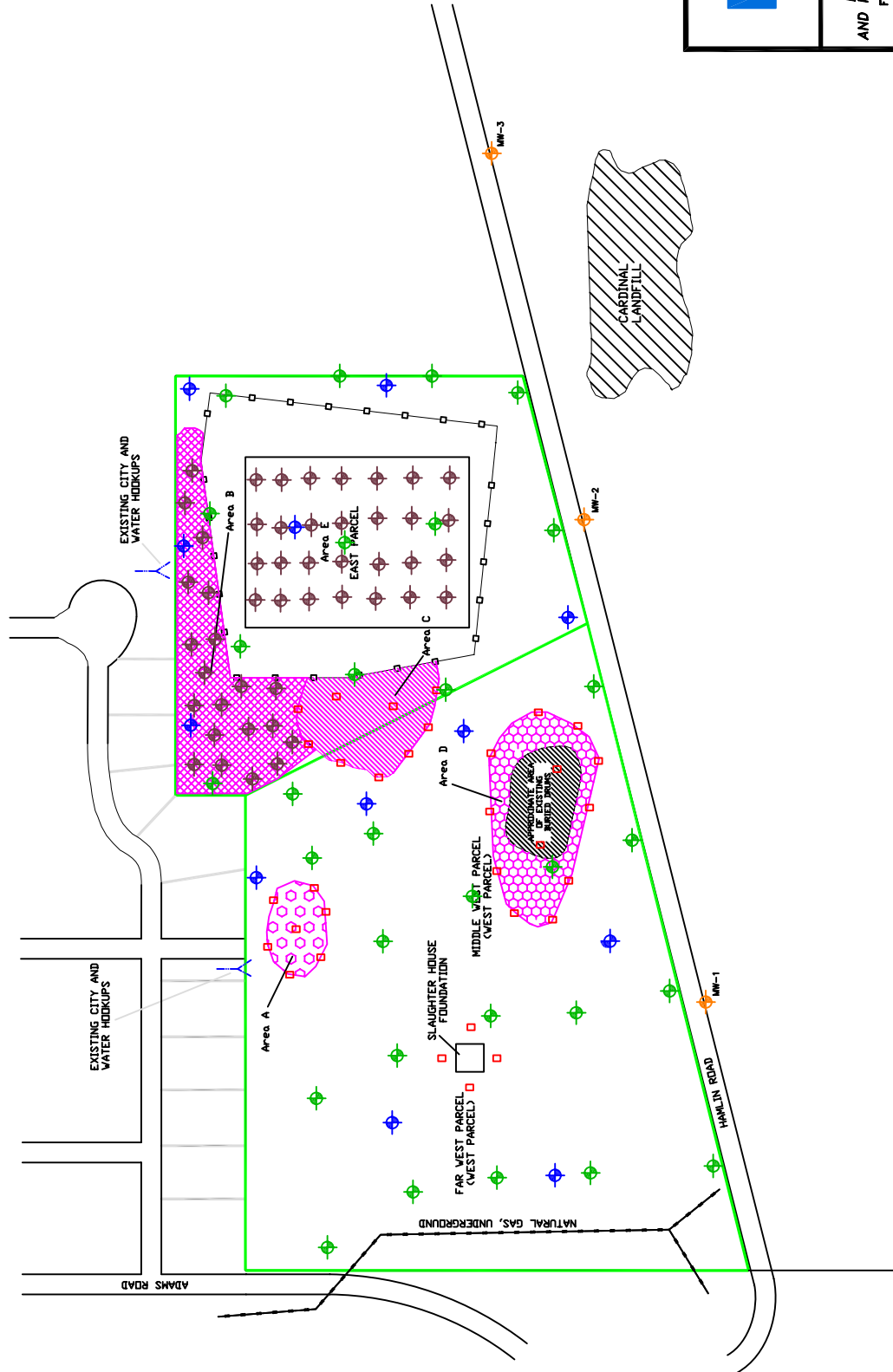
22725 Dr-Charld Lake Road, Farmington, MI 48336
 Phone: (248)615-1334 Fax: (248)615-1334

DRAWN BY: RSP
 DATE: 04-18-08

SITE MAP WITH PROPOSED SOIL BORING AND MONITORING WELL LOCATIONS
 FORMER CHRISTIANSON LANDFILL
 NE CORNER OF HAMLIN & ADAMS ROAD
 ROCHESTER HILLS, MICHIGAN
 PROJECT NUMBER : 3679F2

SCALE: 1" = 200'±

FIGURE 2



TABLES

Table 1.
Estimated Eligible Subsurface Investigation Costs
 28-Acre Vacant Property
 NE Corner of Hamlin Adams Roads
 Rochester Hills, Michigan

<u>TASK</u>	<u>COST</u>
ACT 381 ENVIRONMENTAL WORK PLAN FOR ELIGIBLE ACTIVITIES	\$ 5,000
Subtotal Act 381 Workplan:	\$ 5,000
 AKT PEERLESS PHASE II SUBSURFACE INVESTIGATION	
<i>Professional Services</i>	
Project Management	\$ 6,950
Health and Safety Plan Preparation	\$ 2,000
Field Activities	
- methane assessment	\$ 12,250
- test pit activities	\$ 4,500
- Area B: Delineation of PCB Impacted Soils	\$ 4,750
- Area E (Fenced-in Area) Soil Borings	\$ 6,500
- Groundwater Assessment	\$ 7,500
<i>Subtotal Field Activities:</i>	<i>\$ 35,500</i>
Subsurface Investigation Report Preparation	\$ 5,000
Subtotal Professional Services:	\$ 49,450
<i>Project Costs</i>	
Laboratory Subcontractor	
- methane assessment	\$ 5,200
- test pit activities	\$ 9,775
- Area B: Delineation of PCB Impacted Soils	\$ 5,980
- Area E (Fenced-in Area) Soil Borings	\$ 15,525
- Groundwater Assessment	\$ 10,350
<i>Subtotal Laboratory:</i>	<i>\$ 46,830</i>
Drilling / Excavator Subcontractor	
- methane assessment	\$ 31,700
- test pit activities	\$ 10,100
- Area B: Delineation of PCB Impacted Soils	\$ 9,500
- Area E (Fenced-in Area) Soil Borings	\$ 9,750
- Groundwater Assessment	\$ 16,560
<i>Subtotal Drilling/Excavator Sub.:</i>	<i>\$ 77,610</i>
Surveying Subcontractor	\$ 4,500
Field Supplies and Expenses	\$ 5,500
Subtotal Project Costs:	\$ 134,440
TOTAL:	\$ 188,890

Appendix A
Brownfield Plan

Appendix B
Consent Judgment

Appendix C
Category N BEA