



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

JAN 22 2009

CERTIFIED MAIL

Mr. James A. Woodland II
WK Enterprises, Inc.
1865 McKinley Avenue
Columbus, Ohio 43222

**Re: Audit of No Further Action Letter McKinley Avenue Property (99NFA057)
Project Number 125001920002**

Dear Mr. Woodland:

The purpose of this letter is to notify you that the Ohio Environmental Protection Agency (Ohio EPA) has completed an audit of the no further action (NFA) letter issued under the authority of Chapter 3746 of the Ohio Revised Code (ORC) for the McKinley Avenue property, located at 1861-1867 McKinley Avenue, Columbus, Franklin County, Ohio. The audit findings report is enclosed. Ohio EPA has also issued findings of the audit to Dennis A. Smalley, the certified professional (CP). Sietz, Owings, and Delora, Inc., the volunteer who originally requested the covenant not to sue (CNS) for the property, could not be located. As you are aware, Mr. Smalley submitted the NFA letter to the Ohio EPA on April 26, 1999 with a request for a CNS on behalf of the volunteer. Ohio EPA issued the CNS on June 30, 1999.

Ohio Administrative Code (OAC) 3745-300-14(G) directs the Ohio EPA to audit any NFA letters submitted in any of the ten preceding calendar years that meet any of the criteria of the mandatory audit pool. OAC 3745-300-14(A)(3)(d) defines the mandatory audit pool to include NFA letters that were prepared by a CP whose certification was subsequently revoked. The December 22, 2006 revocation of Mr. Smalley's Voluntary Action Program (VAP) CP certification places into the mandatory audit pool all the NFA letters that Mr. Smalley issued and submitted as a CP. For this reason, the NFA letter that Mr. Smalley issued and submitted on April 26, 1999 for the McKinley Avenue property entered the mandatory audit pool as defined by rule. Additionally, OAC 3745-300-14 describes the purposes for conducting audits and the scope of activities that may be conducted by Ohio EPA as part of the audit.

In accordance with the ORC Chapter 3746 and OAC 3745-300-14, the audit was conducted to 1) determine whether the property meets applicable standards established in the VAP rules; 2) review the qualifications and work performed by the CP to determine whether the CPs performance resulted in the issuance of an NFA letter that

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is not consistent with applicable standards; and 3) review the qualifications and work performed by the certified laboratories to determine whether their performance resulted in the issuance of an NFA letter that is not consistent with applicable standards.

Summary of Audit Findings

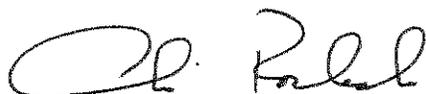
The following summarizes the significant audit findings. For a complete explanation of the audit findings, see the enclosed Tier II audit findings report.

After reviewing the NFA letter and supplemental information, Ohio EPA could not verify that the property met unrestricted potable use standards relied on by the NFA letter and resulting CNS. To verify compliance with the unrestricted potable use standards, Ohio EPA conducted a Tier II audit intrusive investigation. The investigation consisted of the collection and analysis of soil and ground water samples in May 2008 and October 2008. The results demonstrate that the property is in compliance with VAP applicable standards for both ground water and soil.

Although, the overall audit findings demonstrate that the NFA letter was not issued in accordance with the requirements set forth in ORC Chapter 3746 and OAC Chapter 3745-300, the deficiencies of the NFA letter do not affect the property's compliance with VAP applicable standards. The deficiencies concern Mr. Smalley's methods for reaching conclusions that were not supported by reliable demonstrations. As long as the property's use continues to comply with the conditions of the CNS, the release of liability provided by Ohio EPA will remain in good standing.

We appreciate your cooperation and assistance. If you have any questions concerning this letter, or any audit findings made by Ohio EPA, please contact Amy Yersavich, Manager of the VAP, at (614) 644-2285 or Fred Myers at (614) 728-3830.

Sincerely,



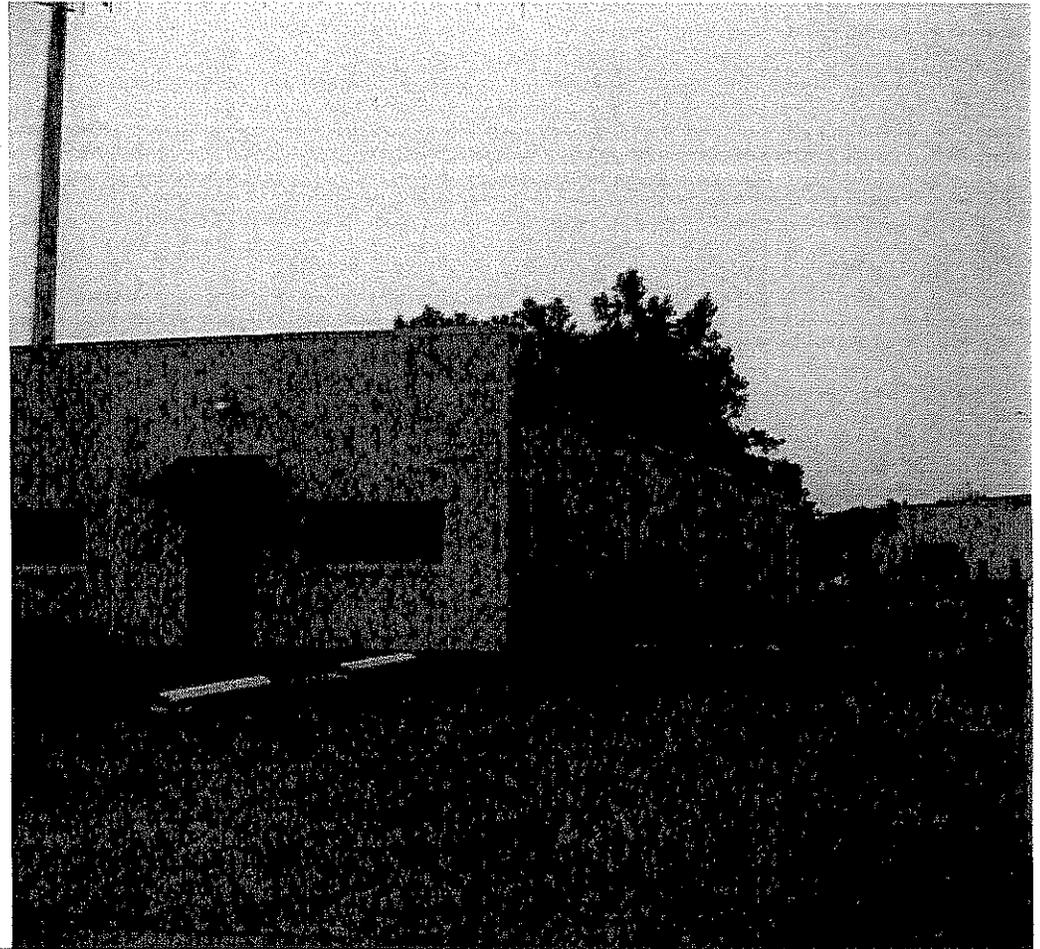
Chris Korleski
Director

Enclosure: Audit Findings Report

cc: Fred Myers, DERR/CDO
Deborah Strayton, DERR/CDO
Amy Yersavich, Manager, VAP
Frank Robertson, DERR/CO/VAP
Sue Kroeger, Legal
CO and District Files (99NFA057)

Division of Emergency and Remedial Response

**McKinley Avenue Property
Voluntary Action Program
No Further Action Letter Tier II Audit Findings**



December 2008

Governor Ted Strickland
Director Chris Korleski

**Ohio Environmental Protection Agency
Ohio Voluntary Action Program
NFA Letter Mandatory Audit**

McKinley Avenue Property, Columbus, Ohio
No Further Action Letter No. 99NFA057
TIER II AUDIT FINDINGS
December 2008

Name and Address of Property: McKinley Avenue Property
1861-1867 McKinley Avenue
Columbus, Ohio

Name and Address of Volunteer: Seitz, Owings, Delora, Inc.
151 North Delaware Street
Suite1645
Indianapolis, Indiana 46204

Certified Professional: Dennis A. Smalley, CP Number 197

Certified Laboratories: EA Group Laboratories, #CL0015

Date NFA Letter Submitted: April 26, 1999

CNS Issued: June 30, 1999

County and Ohio EPA District: Franklin County, CDO

INTRODUCTION

Ohio Administrative Code (OAC) 3745-300-14(G) directs the Ohio Environmental Protection Agency (Ohio EPA) to audit no further action (NFA) letters submitted in any of the ten preceding calendar years that meet any of the criteria of the mandatory audit pool. OAC 3745-300-14(A)(3)(d) defines the mandatory audit pool to include NFA letters that were prepared by a certified professional (CP) whose certification was subsequently revoked. The December 22, 2006 revocation of Dennis A. Smalley's Voluntary Action Program (VAP) CP certification places into the mandatory audit pool all the NFA letters that Mr. Smalley issued and submitted as a CP. For this reason, the NFA letter that Mr. Smalley issued and submitted on April 26, 1999 for the McKinley Avenue property entered the mandatory audit pool as defined by rule. Additionally, OAC 3745-300-14 describes the purposes for conducting audits and the scope of

activities that may be conducted by Ohio EPA as part of an audit.

According to OAC 3745-300-14, NFA letter audits can be conducted for the following purposes: (1) to determine whether the properties comply with VAP applicable standards; (2) to review the qualifications and performance of the CP who issued the NFA letter; and (3) to review the qualifications and performance of the certified laboratories (CL) that performed work to support the NFA letter. The audit rule makes the distinction between Tier I and Tier II audit procedures in describing the variable levels of effort that NFA letter audits may be conducted. Tier I audits may be limited to a review of all pertinent documents that were utilized by the CP in issuing an NFA letter but may also include a site walkover and review of additional records held by the volunteer, the CL, or property owner. Tier II audits involve additional activities including additional site inspections and sampling activities that are needed to determine whether the property complies with VAP applicable standards.

PROPERTY BACKGROUND

The Director of the Ohio EPA issued a covenant not to sue (CNS) for the McKinley Avenue, Columbus, Ohio property effective June 30, 1999. The CNS was issued to Seitz, Owings, and Delora, Inc. (aka Service Supply Company, Inc. of Indiana). There are no restrictions on the land use.

The property is a 1.522 acre parcel that contains two buildings and consists of a large asphalt driveway and parking area that runs between the buildings the length of the property (**Figure 1**). The buildings are placed north and south of each other. The north building is on McKinley Avenue and the south building is located near the center of the property. A landscaped grass area borders the east side of the property. The surrounding land use is commercial/industrial.

The property's current owner is James Woodland II, who uses the facility to operate his business, WK Enterprises. WK Enterprises stores and maintains vending machines at the property.

At the time the NFA letter was submitted, the property was being used by Service Supply Company, Inc. of Indiana, a wholesale distributor of industrial fasteners, and by the Foreign Connection, an automotive parts supply and repair center that leased from Service Supply. Service Supply occupied the south building and the Foreign Connection occupied the north building. The Foreign Connection had an automobile salvage yard south of the north building.

According to the NFA letter, the property has also been used for residential housing, a trucking facility, restaurant, heating and cooling business, woodwork supply, and plastics supply.

Prior Property Assessments

The NFA letter states that two environmental investigations were completed prior to the NFA letter at the property: (1) a site reconnaissance by an unknown entity and (2) an American Society for Testing and Materials (ASTM) Phase II assessment in 1998 by Smalley and Associates.

In October 1998, Smalley and Associates removed a 2000 gallon waste oil underground storage tank (UST) and sent a closure report to the Ohio Fire Marshal, Bureau of Underground Storage Tank Regulations (BUSTR) on March 16, 1999. Benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) concentrations were reported to be below the BUSTR Category 3 action levels for soil per OAC 1301:7-9-13. BUSTR sent its determination of no further action to Seitz, Owings, and Delora, Inc. on April 19, 1999.

NFA Letter Overview

Mr. Smalley submitted the NFA letter to Ohio EPA on April 26, 1999. The NFA letter's Phase I report was completed on April 1, 1999, and the Phase II report was completed on April 20, 1999.

The Phase I assessment identified two areas of concern: (1) the western fence boundary and (2) the automobile salvage yard adjacent to the north building (**Figure 2**). The western fence boundary, including the south building, was listed as Identified Area (IA) #1 because of documented releases at the Phillips Oil Company, Inc. of Ohio, which is located west of the property. The automobile salvage yard was listed as IA #2 because of the UST that was removed and the potential for releases at the automobile salvage yard. The Phase I assessment limited the potential chemicals of concern (COCs) to petroleum-related constituents, namely BTEX and semi-volatile organic compounds (SVOCs). The IAs and ground water were investigated during the Phase II assessment.

The Phase II report stated that the soil samples were biased based on the 1998 ASTM Phase II assessment. The field work for the Phase II soil investigation was conducted on March 16, 1999 and March 22, 1999. One monitoring well (MW-2) was constructed on March 16 and the soil samples were collected on March 22. The soil samples were submitted to EA Group Laboratories (CL0015) on March 23, 1999. EA Group reported the results on March 29, 1999. The ground water samples were collected on April 16, 1999 and were submitted to EA Group on April 19, 1999. The samples were analyzed on April 19, 1999 and reported on April 20, 1999. The analytical results for each IA and ground water are described below

Identified Area #1 VAP Phase II Analytical Results. Five soil samples were collected at three locations in this area. Three samples were collected from 0-2

feet below ground surface (BGS); one sample was collected from 4-6 feet BGS; and one sample was collected from 8-10 feet BGS. The analytical results indicated the presence of TPH and several SVOCs. All COC concentrations were below the generic direct contact soil standards for residential land use. The reporting limit for benzo(a)pyrene exceeded the VAP applicable standard in two of the shallow samples.

Identified Area #2 VAP Phase II Analytical Results. Ten soil samples were collected at eight locations. Eight soil samples were collected from 0-2 feet BGS; one at 8-10 feet BGS; and one at 6-8 feet BGS. Samples were analyzed for TPH, BTEX, and SVOCs. TPH and SVOCs were detected in several of the samples. All COC concentrations were below the generic direct contact soil standards for residential land use. The reporting limit for benzo(a)pyrene exceeded the VAP applicable standard in four of the shallow samples.

VAP Phase II Ground Water Analytical Results. One monitoring well was installed at the south end of the property. Ground water was sampled for BTEX and SVOCs. No COCs were detected in the ground water sample.

TIER I AUDIT FINDINGS

The overall objective of a Tier I audit is to determine whether the NFA letter demonstrates the property's compliance with the VAP applicable standards relied upon for the NFA letter. The Tier I audit for the property consisted of a visual inspection; a review and analysis of the NFA letter documentation; and a review of additional documentation supplied by Mr. Smalley for the audit. From March 2007 to December 2007, Ohio EPA reviewed the Phase I report, Phase II report, NFA letter and supporting documentation. Based on the Tier I audit, Ohio EPA determined that the NFA letter did not adequately demonstrate unrestricted residential land use standards or unrestricted potable use standards (UPUS) for ground water. Ohio EPA's determination is based on the following:

- Incomplete identification of COCs in accordance with OAC 3745-300-07(D)(1)(c) at IA #2.
- Inadequate pathway completeness determination in accordance with OAC 3745-300-07(D)(2) at IA #1, where free phase product was encountered.
- Inadequate demonstration of the property's compliance with UPUS for ground water in accordance with OAC 3745-300-07(D)(3).
- Inadequate demonstration that soil samples were biased to the areas of highest concentrations as required in OAC 3745-300-07(D)(5)(c)(ii) by failing to submit the ASTM Phase II report, from which data was relied upon to bias the VAP Phase II assessment.

- Inadequate demonstration that the ground water sample quality was representative of actual ground water conditions in accordance with OAC 3745-300-07(F)(3).

In response to the February 28, 2007 audit information request, Mr. Smalley submitted supporting documents to Ohio EPA, which were received on April 10, 2007. The supporting information was not sufficient for the audit team to adequately evaluate the NFA letter's demonstration of compliance with VAP applicable standards.

On June 18, 2007, Ohio EPA conducted a visual property inspection. Ohio EPA's inspection revealed that the property is currently being used by WK Enterprises to store and repair vending and gaming machines. Mr. James Woodland II is the current property owner and owner of WK Enterprises. The property appeared well-maintained, with no visible evidence of releases of hazardous substances or petroleum. The condition of the property has significantly improved since the NFA letter was submitted. There is no longer any evidence of the automobile salvage or other prior land uses.

TIER II AUDIT INTRUSIVE INVESTIGATION

Tier II Audit Intrusive Investigation Criteria

OAC 3745-300-14(O) requires the Director of the Ohio EPA to issue NFA letter audit findings. The findings include a determination of whether VAP applicable standards, and all other requirements established under OAC Chapter 3745-300 or ORC Chapter 3746, have been met, and whether or not additional actions are required to attain compliance.

As set forth in OAC 3745-300-14(H)(2)(a), a Tier II audit can be conducted for the following reasons: (1) if the documents produced and reviewed in a Tier I audit are inadequate to substantiate the NFA letter or (2) if the Director has a reasonable belief that the NFA letter has been based on fraudulent or inaccurate information or documentation. Both criteria apply to this NFA letter property and support proceeding to a Tier II audit. OAC 3745-300-14(H)(2)(a) permits the Director to visually inspect and investigate a property, conduct sampling, and inspect conditions, equipment and practices, in order to determine compliance with VAP applicable standards in accordance with OAC Chapter 3745-300 and ORC Chapter 3746.

Justification for Conducting a Tier II Audit Intrusive Investigation

The Tier I audit of the NFA letter resulted in the determination that the information used to support VAP applicable standards on which the CNS is

based is insufficient. Therefore, Ohio EPA concluded that a Tier II audit intrusive investigation was necessary to verify if the property meets the applicable standards relied upon by the NFA letter and the resulting CNS.

Specific compliance issues noted during the Tier I audit of the NFA letter are listed and described below:

- **OAC 3745-300-07(D)(1)(c) - Identification of Potential COCs.** This rule requires the volunteer to evaluate hazardous substances or petroleum commonly used in the commercial and industrial activities at a property in the identification of COCs. Only those COCs related to petroleum releases (TPH, SVOCs, and BTEX) were evaluated during the VAP Phase II assessment. However, COCs commonly related to automobile salvage yards include chlorinated volatile organic compounds (VOCs) and heavy metals. Ohio EPA concluded that these COCs should have been assessed during the Phase II assessment.
- **OAC 3745-300-07(D)(2) - Pathway Completeness Determination.** This rule requires the volunteer to evaluate whether complete exposure pathways exist from off-property sources to on-property receptors. The VAP Phase II report stated that free product was encountered at IA #1. One soil sample was collected in the contaminated zone and analyzed for TPH, SVOCs, and BTEX. Ohio EPA determined that one soil sample with limited analysis is not sufficient to demonstrate complete potential exposure pathways to residential receptors above the point of compliance of 10 feet.
- **OAC 3745-300-07(D)(3) – Provisions for Protecting Ground Water Meeting Unrestricted Potable Use Standards.** This rule requires the volunteer to demonstrate UPUS by sampling ground water downgradient of any potential contaminant source area. One monitoring well (MW-2) was installed during the VAP Phase II assessment. A minimum of three wells is required to evaluate ground water flow direction and the downgradient direction from the IAs. Ohio EPA determined that the ground water flow direction was assumed and not demonstrated.
- **OAC 3745-300-07(D)(5)(c)(ii) – Derive the maximum concentration within the identified area by biasing samples to the areas of highest concentrations.** The rule requires the volunteer to bias the soil samples to the areas of highest COC concentrations based on existing information. Insufficient information was provided to support the demonstration that the soil samples were biased to the areas of highest COC concentrations. The NFA letter relied on the ASTM Phase II assessment to bias the soil sampling. The ASTM Phase II report was not submitted with the NFA letter and was not included in the audit supporting materials submitted by Mr. Smalley. Without the ASTM Phase II report, Ohio EPA could not

verify that soil samples were properly biased.

- **OAC 3745-300-07(F)(3) – Sampling Procedures for Ground Water.** This rule requires the volunteer to collect ground water samples that are representative of the water quality beneath a property. The VAP Phase II report did not contain information that MW-2 was properly developed prior to sampling. The VAP Phase II report states that three well volumes were purged from the well prior to collecting ground water samples; however, no purge logs or depth to water measurements were supplied to indicate how much water was purged or whether field parameters stabilized. Ohio EPA could not verify that ground water met UPUS based on the available information.

Summary of Tier II Audit Field Activities

See **Attachment** , *Tier II Investigation Report*, for a complete description of the field activities and analytical results.

The main objective of the Tier II audit was to verify that the soil meets residential land use standards, and that ground water meets UPUS and will continue to meet UPUS in the future. The quality and quantity of data and the data collection strategy was designed to comply with the minimum requirements of the applicable VAP rules in OAC 3745-300.

Ohio EPA conducted the initial Tier II audit intrusive investigation on May 11, 2008, May 12, 2008, and May 21, 2008. The Tier II audit intrusive investigation was completed in accordance with the approved work plan, dated May 2, 2008. On May 11 and May 12, 2008 Ohio EPA drilled five boreholes to below the upper-most saturated zone using Ohio EPA's Geoprobe™. Four foot long continuous cores were collected to the total depth of each borehole. The soil cores were logged and described by an Ohio EPA geologist. Soil cores were screened with a photo ionization detector. Soil samples collected for laboratory analysis were biased toward zones of observed contamination. If no apparent zones of contamination were observed, a soil sample was collected from the 0-4 foot core and analyzed for VOCs, SVOCs, PCBs/pesticides, and metals. Ohio EPA relinquished the soil samples to Microbac Laboratories, Inc. on May 14, 2008.

Three boreholes were converted to temporary monitoring wells: SB-1 (MW-1), SB-3 (MW-2), and SB-4 (MW-3). The wells were constructed by the placement of a three foot long prepacked well screen at the saturated zone in accordance with Ohio EPA's standard operating procedures (SOPs) for prepacked well construction. After the wells were constructed, Ohio EPA measured the water level in each well and then purged and sealed them with a well cap and evidence tape.

On May 21, 2008, Ohio EPA returned to the property and sampled the ground water for VOC, SVOC, PCB/pesticides and metals analysis. MW-1 had insufficient water volume to properly purge the well prior to sampling or to collect enough water for SVOC and PCB/pesticide analysis. MW-2 and MW-3 were properly purged and field parameters stabilized prior to sample collection. Monitoring well locations were documented using a Trimble Geo XM geographic positioning system and relative top-of-casing elevations were measured using a sight leveler. On May 22, 2008, the samples were relinquished to Microbac for analysis. After Ohio EPA received the ground water results on July 11, 2008, the wells were plugged and sealed with bentonite on July 24, 2008.

On October 15, 2008, Ohio EPA conducted a follow-up investigation of IA #2 because one surface soil sample (0-2 feet) from the May 2008 investigation indicated a lead concentration that exceeded the VAP applicable standard of 400 mg/kg. The objective of the October 2008 investigation was to determine the representative concentration of lead in surface soil at IA #2 in accordance with OAC 3745-300-07(D)(5)(c)(i)[1996]. Ohio EPA determined a sample population of 12 surface soil samples (0-2 feet), randomly located throughout IA #2, would be sufficient for statistical analysis.

Prior to sampling, the locations were laid out in a loose triangular grid that covered IA #2. Ohio EPA documented each sampling location with a Trimble GeoXT Global Positioning System. Soil samples were collected with a dedicated trier in accordance with United States Environmental Protection Agency's Standard Operating Procedure 2012, Section 7.2.3, "Sampling with a Trier." The surface soil samples were collected for lead analysis. The samples were transported directly to VAP certified laboratory Stantec Consulting Services, Inc. (CL0054) and relinquished to the laboratory on the same day as the investigation. The analytical report for this investigation is attached as an addendum to the *Tier II Audit Investigation Report*.

TIER II AUDIT FINDINGS

The findings of the McKinley Avenue Property Tier II audit are divided into three general categories, 1) the property's compliance with VAP applicable standards, 2) the performance of the CP, and 3) the performance of the CLs.

Assessment of Property's Compliance with Applicable Standards

To evaluate the property's compliance with VAP applicable standards, Ohio EPA collected soil and ground water samples and submitted them for VOC, SVOC, PCB/pesticides, and metals analysis. Ohio EPA compared the soil results to the generic direct contact soil standards for residential land-use (OAC 3745-300-08[1996]). Ohio EPA compared the ground water results to UPUS (OAC 3745-300-08[1996]). Listed below is a summary of the analytical results for the COCs,

and a comparison of the concentrations to the generic standards, for soil and ground water.

- One soil sample, SB02 (0-2), collected during the May 2008 investigation, contained lead at a concentration of 1070 mg/kg, which exceeds the applicable standard of 400 mg/kg. SB02 is located at the northwest edge of IA #2, adjacent to the northern building. The sample consisted of a clayey-silt, gravel and sand mix with visible brick fragments. Twelve additional surface soil samples were collected throughout IA #2 in October 2008 to determine the representative lead soil concentration in IA #2 accordance with OAC 3745-300-07(D)(5)(c)(i)[1996]. The 95% UCL determination for the 12-point dataset was calculated to be 75.6 mg/kg. The May 2008 SB-02 sample of 1070 mg/kg was determined to be a statistical outlier, and subsequently eliminated from the sample dataset. Comparing the low lead concentrations to the applicable standard, the surface soil meets the applicable standard for lead.
- One soil sample, SB01 2-4, contained benzo(a)pyrene at a concentration of 3.94 mg/kg, which exceeds the generic direct contact standard for residential land use of 0.55 mg/kg. This sample was collected downslope of the asphalt driveway-parking lot, outside of the identified areas. The sample was collected in fill material.
- The reporting limits for benzo(a)pyrene for two soil samples, SB02 0-2 and SB03 0-2, exceeds the residential generic direct contact standard of 0.55 mg/kg. Benzo(a)pyrene was not detected above the reported method detection limits of 1.89 mg/kg for SB02 and 1.96 mg/kg for SB03, which is still above the applicable standard but indicates the analyte may not be present.
- The MW-01 ground water sample contained arsenic at a concentration of 72.1 ug/l, which exceeds the UPUS concentration of 50 ug/l. MW-01 had low water volume and could not be properly purged before sampling. Therefore, Ohio EPA has determined that the metal results for the MW-01 sample are not representative of actual ground water conditions at the property.
- The sample reporting limit for cadmium exceeded UPUS in all ground water samples. The reporting limits were all 10 ug/l and UPUS is 5 ug/l. The method detection limit for cadmium is 2.5 ug/l. Cadmium was not detected above the method detection limit, which indicates that UPUS is met for cadmium.
- The laboratory reporting limits for several SVOCs in ground water were higher than UPUS. Most reporting limits were 5.0 ug/L. Ohio EPA, Division of Drinking and Ground Waters (DDAGW), evaluated the SVOCs

detected in soil to determine whether there existed a potential for these compounds to leach to ground water. DDAGW applied the partitioning equation from soils to soil pore water. DDAGW determined that most of the COCs would not exceed UPUS in ground water using a dilution factor of 1 (most conservative). The remaining SVOCs would not lead to an exceedence of UPUS using a dilution factor of 10, which would still be very conservative at this property. Therefore, DDAGW concluded that SVOCs would not impact ground water above UPUS.

In summary, Ohio EPA completed a Tier II audit investigation of the property. The purpose of the investigation was to evaluate compliance with VAP applicable standards for the soil and ground water. The analytical data indicates IA #1 and IA #2 meet the applicable standards for soil and ground water.

Certified Professional's Performance

As part of the NFA letter audit, a performance review of the CP, Dennis A. Smalley, was conducted. The following findings were noted:

- Mr. Smalley was certified pursuant to OAC 3734-300-05 to issue and submit the NFA letter for the property.
- The Director has since revoked Mr. Smalley's certification because of performance issues subsequent to the issuance of the McKinley Avenue Property NFA letter.
- It is the obligation of a CP, as described in ORC 3746.11(A) and OAC 3745-300-13(A), to verify that a property complies with applicable standards in order to issue an NFA letter. With respect to the NFA letter for the McKinley Avenue Property, Mr. Smalley's performance was determined to be deficient concerning the demonstration of attaining VAP applicable standards for soil and ground water.
- Mr. Smalley failed to evaluate all potential hazardous substances commonly used in the commercial and industrial activities at the property as required in OAC 3745-300-07(D)(1)(c). Specifically, Mr. Smalley failed to characterize IA #2 for chlorinated VOCs and metals, both of which are associated with automotive salvage yards. Ohio EPA's Tier II audit investigation indicates that lead may be a COC and exceeded the generic standard for residential land use.
- Mr. Smalley failed to determine whether complete exposure pathways existed at IA #1 in accordance with OAC 3745-300-07(D)(2). Mr. Smalley observed free-phase product at this location but failed to completely characterize the potential COCs or the extent of the contamination.

- Mr. Smalley did not adequately characterize ground water per OAC 3745-300-07(D)(3) and OAC 3745-300-07(F)(3). Mr. Smalley installed only one monitoring well and assumed the downgradient direction from the IAs and did not adequately demonstrate that the ground water sample collected from this well was representative of the ground water.
- Mr. Smalley did not provide the information that he used to bias soil samples to the area of highest concentration in accordance with OAC 3745-300-07(D)(5)(c)(ii). The previous ASTM Phase II report was not included in the NFA letter and was not supplied to Ohio EPA for this audit.

OAC 3745-300-05(F) provides standards of conduct that apply to a CP when the CP provides professional services under ORC Chapter 3746 and OAC Chapter 3745-300. In summary, a CP must act with care and diligence and fully apply his knowledge and skill at the time that professional services are provided. For this property, Mr. Smalley did not adequately perform or document field activities during the VAP Phase II assessment using methods consistent with OAC 3745-300-07(D). Accordingly, Mr. Smalley failed to act with care and diligence and fully apply his knowledge and skill at the time that professional services were provided for the voluntary action, including the issuance of the NFA letter. The deficiencies listed above necessitated Ohio EPA to conduct the Tier II audit of the McKinley Avenue property to verify compliance with VAP applicable standards.

Certified Laboratory Performance

EA Group Laboratories (#CL0015) was used to support the NFA letter. EA Group appropriately performed all analyses as required under OAC 3745-300-04(E)(1) and (E)(2). The Tier II audit data compares favorably with the data from the certified laboratory.

CONCLUSIONS AND RECOMMENDATIONS

The overall audit findings demonstrate that the NFA letter was not issued in accordance with the requirements set forth in ORC Chapter 3746 and OAC Chapter 3745-300. The deficiencies concern Mr. Smalley's methods for reaching conclusions that were not supported by Phase II assessment data or by reliable demonstrations.

1. Compliance with Applicable Standards

One soil sample collected during the initial Tier II audit investigation in IA #2 indicated that lead exceeded the generic direct contact soil standard for residential land use. The sample was collected from the 0-2 foot interval in a small landscaped area (approximately 225 square feet) between the north building and the driveway/parking area. Ohio EPA collected

additional samples during the follow-up investigation and found that the representative lead concentration in all surface soil samples was determined to be 75.6 mg/kg based on a 95% UCL calculation. The sample collected in the initial Tier II audit investigation was determined to be a statistical outlier. This indicates that the property meets the VAP applicable standard for lead.

Benzo(a)pyrene was detected in soil at a concentration that exceeded the applicable standard. The benzo(a)pyrene was detected outside of the identified areas, downslope of the asphalt parking lot/driveway. The asphalt is the likely source of the benzo(a)pyrene.

Ohio EPA has no further recommendations.

2. Certified Professional

The audit determined that Mr. Smalley's performance resulted in an NFA letter that was not issued in compliance with the requirements set forth in ORC Chapter 3746 and OAC Chapter 3745-300. Mr. Smalley's performance deficiencies may have impacted the property's compliance with the VAP applicable standards relied upon in the NFA letter and the CNS.

The audit revealed that Mr. Smalley's performance resulted in various deficiencies concerning the NFA letter's demonstration of compliance with applicable standards for soil under OAC 3745-300-07(D). He arbitrarily eliminated potential COCs without justification; did not provide information used to bias soil samples; and did not evaluate complete exposure pathways. In addition, Mr. Smalley did not adequately demonstrate UPUS for ground water. These deficiencies resulted in Ohio EPA's inability to verify that the property met soil applicable standards and would not cause the contamination of ground water (i.e., in violation of UPUS) during the Tier I audit. Mr. Smalley's performance necessitated the Tier II audit.

Mr. Smalley's CP certification was revoked on December 22, 2006. In his settlement with the state of Ohio in a subsequent criminal prosecution, Mr. Smalley also agreed to not apply for any future VAP certification. Because Mr. Smalley's CP certification has already been revoked and he will not seek recertification, the audit team recommends no further disciplinary action as to Mr. Smalley's performance as a CP based on this audit.

3. Certified Laboratory

No recommendation is being made regarding the performance of EA Group Laboratories.

FIGURES

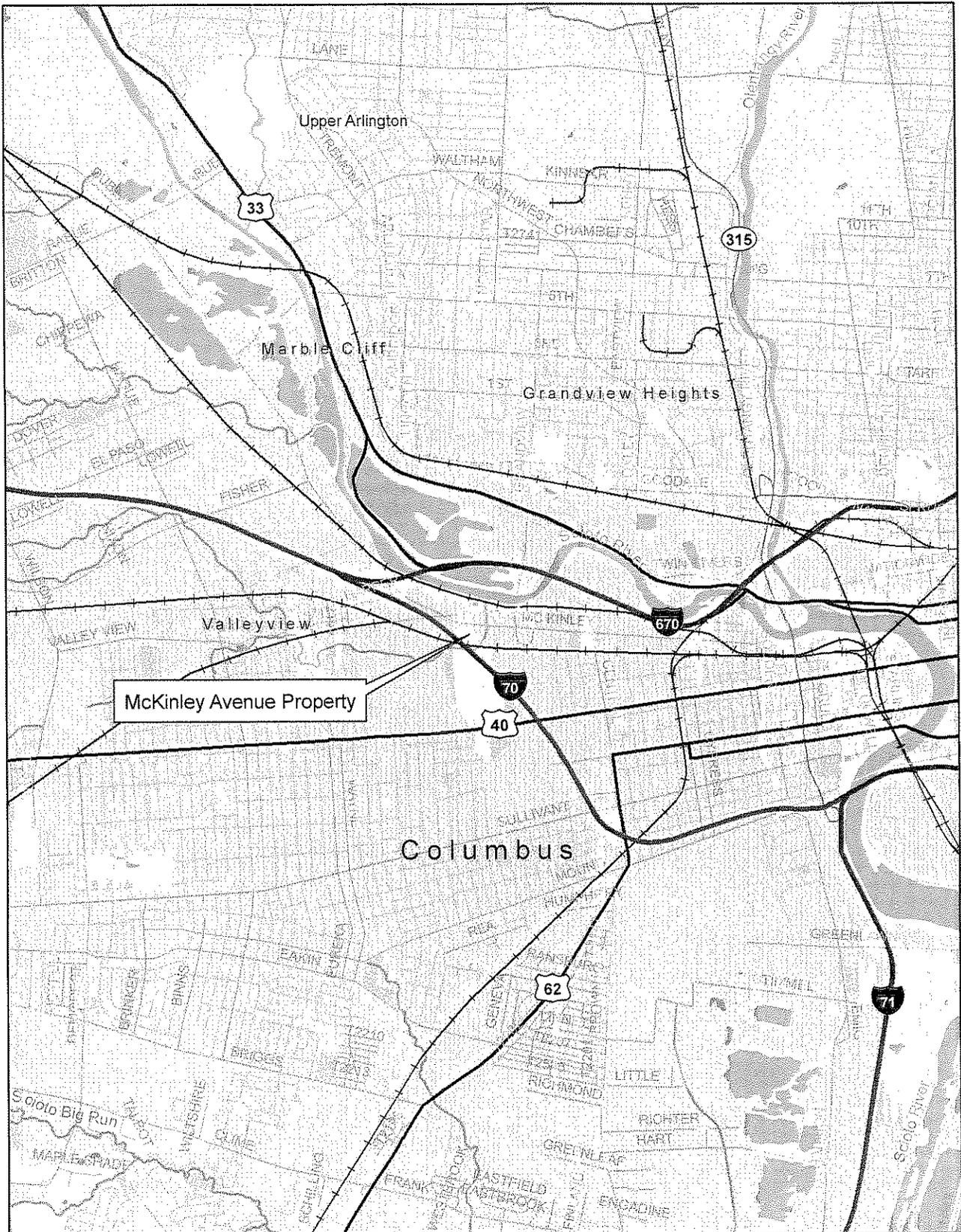
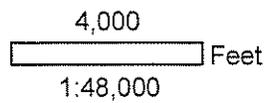


Figure 1
 McKinley Avenue Property
 Property Location Map
 VAP Tier II Audit Findings Report



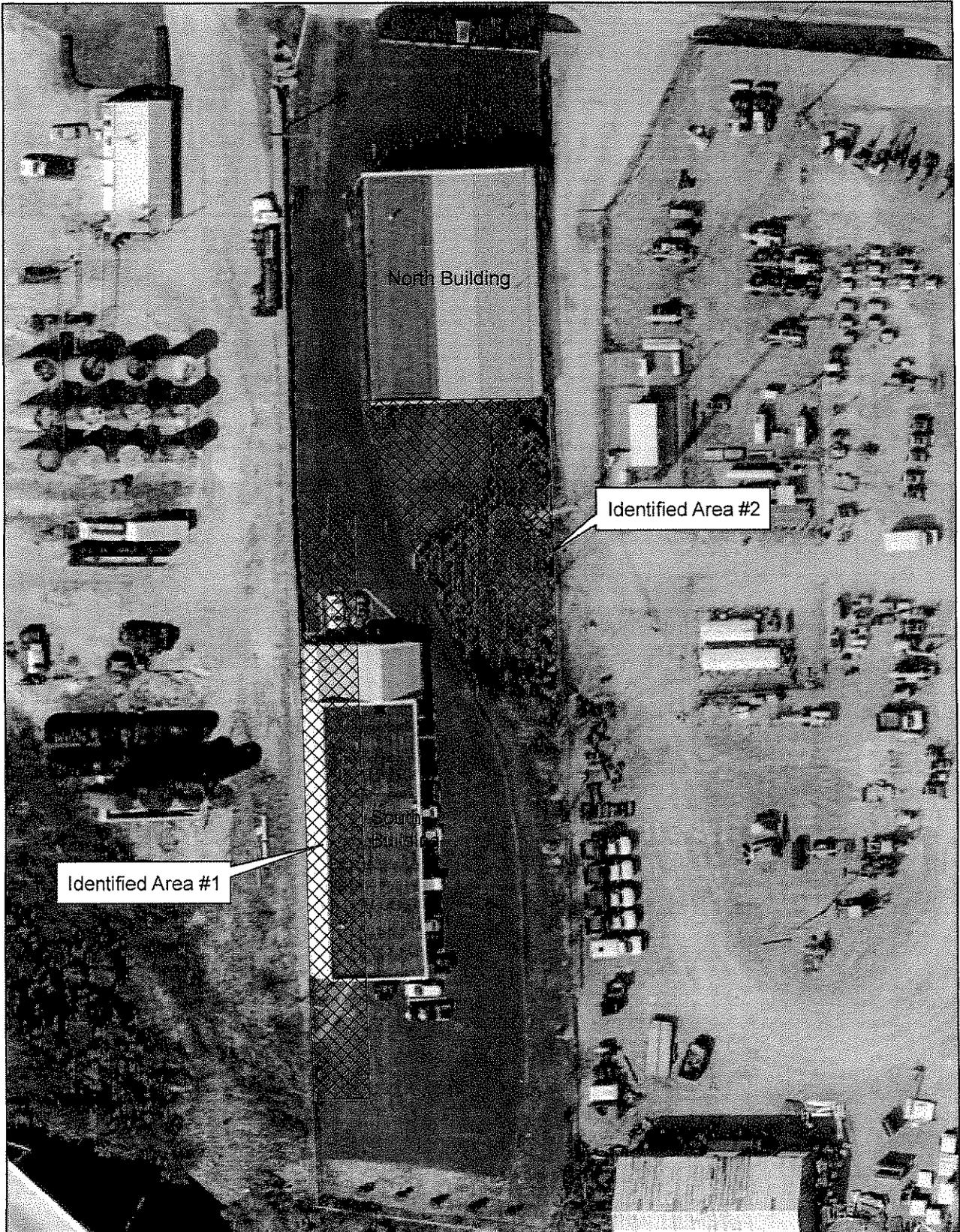


Figure 2
McKinley Avenue Property
Identified Areas (Based on SAI, 1998)
VAP Tier II Audit Findings Report

63
Feet
1:750

 Identified Areas



ATTACHMENT

Tier II Audit Investigation Report

Division of Emergency and Remedial Response

**McKinley Avenue Property
Voluntary Action Program
No Further Action Letter Tier II Audit
Investigation Report**



December 2008

Governor Ted Strickland
Director Chris Korleski

Tier II Audit Investigation Report

**McKinley Avenue Property
99NFA057**

Franklin County

Project ID: 125000192002

December 2008

Tier II Audit Investigation Report

McKinley Avenue Property (99NFA057)
Franklin County
Project ID: 125000192002
December 2008

Introduction

The Ohio Environmental Protection Agency (Ohio EPA) completed a Tier II audit, intrusive investigation, of the McKinley Avenue property, Columbus, Ohio. The audit was conducted in accordance with Ohio Administrative Code (OAC) 3745-300. The purpose of this report is to summarize the investigation and present the data generated during the Tier II audit.

Ohio EPA developed a work plan for the investigation, which was finalized on May 2, 2008. The Tier II investigation followed the standard operating procedures listed in the work plan. The scope of work included the drilling of five boreholes to ground water, and the collection of soil and ground water samples for laboratory analysis.

There were two deviations from the work plan: (1) a planned borehole at the north end of Identified Area #1, adjacent to the west fence boundary, was abandoned due to the presence of an underground natural gas line utility; and (2) a borehole, SB-5, was added at the southwest corner of the property.

Summary of Field Work

The five boreholes were drilled on May 11 and 12, 2008. A map of the boring locations is attached (**Figure 1**). All borings were drilled with Ohio EPA's Geoprobe™ using the direct push dual-tube method. Boreholes were advanced with a 2.25-inch outer diameter stainless steel rod with a plastic sleeve. Four foot long continuous soil cores were collected to total depth at each boring location. The soil cores were logged and described by an Ohio EPA geologist. At each boring location, soil samples were collected for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), PCBs/pesticides and metals. The soil samples were transported in a sealed cooler to Ohio EPA's field facility and stored in a locked room. The samples were relinquished to Microbac on May 14, 2008 for analysis. Samples were analyzed on May 21, 2008.

Three of the borings were converted to temporary monitoring wells (SB-1 (MW-1), SB-3 (MW-2), and SB-4 (MW-3)). The wells were constructed using 0.5 inch diameter 3 foot pre-packed well screens and completed with a sand pack and granular bentonite seal. The wells were developed by purging with a peristaltic pump and then sealed with a cap

and evidence tape pending ground water sampling.

On May 21, 2008, Ohio EPA sampled the ground water. The monitoring wells were inspected and water levels were measured prior to sampling. A peristaltic pump with dedicated LDPE tubing was used to purge and sample each well. During purging temperature, conductivity, pH, oxygen reduction potential were measured with a field meter. Turbidity was measured with a DRT 15CE Turbidimeter. After the parameters stabilized, ground water samples were collected and placed on ice in a cooler. After the samples were collected, water levels were re-measured and the well casings were capped pending laboratory analysis. The well locations were documented using a Trimble Geo XM, and the relative top-of-casing elevations were measured with surveying leveler equipment. Ground water samples were transported in sealed coolers to Ohio EPA's field facility for Microbac laboratory pickup. The samples were relinquished to Microbac on May 22, 2008 and analyzed on May 27, 2008. Ohio EPA received the data on July 11, 2008. (*Note: MW-1 did not have sufficient water volume to measure field parameters before sampling*).

Listed below is a brief description of the subsurface at each borehole, soil sampling depths, and monitoring well construction.

- **SB01/MW-1.** SB01/MW01 was drilled on May 12, 2008. The upper 3 feet consisted of fill and debris. Brown-gray very fine sand to silty clay occurred from 3-12 feet below ground surface (BGS).. From 12 -20.5 feet BGS, a terra rossa residuum was encountered. The terra rossa residuum is the relatively insoluble stiff orange-red dense clay with interbedded chert clasts that formed from the dissolution of the underlying limestone bedrock . The drill string could not be pushed lower than 20.5 feet BGS, which indicates bedrock was encountered. No visible soil contamination was noted during drilling. A soil sample was collected at 2-4 feet BGS for laboratory analysis. A small saturated sandy zone was encountered at 17 feet BGS; therefore, MW-1 was constructed and screened at 15.5-20.5 feet BGS.
- **SB02.** SB02 was drilled on May 13, 2008. Bricks, fill, and miscellaneous rubble were encountered to 12 feet BGS. The drill string could not be pushed further than 12 feet BGS. Two additional attempts to drill below 12 feet failed. A soil sample was collected from the 0-2 foot interval for laboratory analysis. No indications of soil contamination were observed. Ground water was not encountered.
- **SB03/MW-2.** SB03/MW-2 was drilled on May 13, 2008. The upper 6 feet consisted of fill material. Below the fill, a brown clay-silt occurred to 19 feet BGS and terra rossa residuum occurred from 19 feet to 27.5 feet BGS. An 8 inch saturated zone, consisting of chert fragments, was encountered at 17 feet BGS, and a 10 inch saturated zone, consisting of chert fragments, was encountered at 24 feet BGS. The drill string could not be pushed beyond 27.5 feet BGS, which indicates the limestone bedrock surface was encountered. A soil sample was

collected from the 0-2 foot interval for laboratory analysis. No indications of soil contamination were observed. MW-2 was constructed at this location and screened at 22.5-27.5 feet BGS.

- **SB04/MW-3.** SB04/MW-3 was drilled on May 13, 2008. The upper 8 feet was dry fill material. At 9 feet a black odiferous clayey silt was encountered. Free product hydrocarbons mixed with ground water occurred in a sand-gravel zone at 9.5 feet and extended to approximately 15 feet BGS and terminated in the terra rossa residuum. The total depth of the borehole was 16 feet BGS. The highest photoionization detector (PID) reading was 8.1 ppm. The free product and water mix was decanted from the 12-16 foot interval plastic sleeve into sampling containers and sent to the laboratory for analysis. Soil samples were collected for laboratory analysis at the 0-2 foot interval and the 12-14 foot interval. MW-3 was constructed at this location and screened at 11-16 feet BGS.
- **SB05.** SB05 was drilled on May 13, 2008. The objective of this boring was to determine if the hydrocarbons at SB-4 migrated to the southern property boundary. A 2-inch zone of black course sand with a slight hydrocarbon odor was encountered at approximately 9 feet BGS. Soil samples were collected for laboratory analysis at the 8-10 foot interval. The subsurface consisted of moist brown plastic clay-silt to the total depth of 28 feet BGS. Terra rossa residuum was not encountered. A 2-inch saturated zone occurs in a silty sand at 27 feet BGS. The borehole was not converted to a monitoring well.

In general, the subsurface beneath the property consists of 5-10 feet of fill underlain 8-15 feet of clayey silt with discontinuous silt, sand, and gravel. A 7-9 foot thick terra rossa residuum occurs below the clayey silt to the top of the dolomitic limestone bedrock. **Figure 2** depicts a generalized cross-section of the property from north to south. Based on field observations and the relative potentiometric surface elevations, the unconsolidated saturated zones appear to be laterally discontinuous and hydraulically distinct.

Summary of Analytical Results

Soil Analytical Results. Potential COCs detected in soil are summarized in **Table 1**. The concentrations of COCs were compared to the generic direct contact soil standards for carcinogenic and non-carcinogenic COCs – residential land-use category (OAC 3745-300-08[1996]). The results of this comparison are summarized below.

- Lead was detected at a concentration of 1070 mg/kg, at location SB-2 (0-2 feet), which exceeds the residential standard of 400 mg/kg.
- Benzo(a)pyrene was detected at a concentration of 3.98 mg/kg at location SB-1 (2-4 feet), which exceeds the residential standard of 0.55 mg/kg.

- The reporting limit for benzo(a)pyrene was above the residential standard for samples SB-02 (0-2 feet) and SB-03 (0-2 feet). The reported sample quantification limits are 3.78 and 3.92 mg/kg respectively.

Note: Microbac contacted Ohio EPA and stated that VAP protocols were not followed when analyzing the soil samples. Microbac rescinded their affidavit. Ohio EPA independently validated the soil data.

Ground Water Analytical Results. Analytical results are summarized in **Table 2**. Analyte concentrations were compared to the generic unrestricted potable use standards (UPUS) (OAC 3745-3400-08 [1996]). The results of this comparison are summarized below.

- Arsenic was detected at a concentration of 72.1 ug/l in MW-01, which exceeds the UPUS of 50 ug/l. However, MW-01 had low water volume and could not be properly purged before sampling, therefore, the sample is not considered to be representative of ground water.
- The reporting limits for several SVOCs in ground water were higher than the unrestricted use standards or their supplemental unrestricted use standard. Most reporting limits were 5.0 ug/L. Ohio EPA, Division of Drinking and Ground Waters (DDAGW), evaluated SVOCs detected in soil to determine whether a potential exists for these compounds to leach to ground water. DDAGW applied the partitioning equation from soils to soil pore water. DDAGW determined that most of the SVOCs would not exceed the unrestricted use standards in ground water using a dilution factor of 1 (most conservative). The remaining SVOCs would not lead to an exceedence of unrestricted use standards or the supplemental values using a dilution factor of 10, which would still be very conservative at this property. Therefore, DDAGW concluded that regardless of the elevated sample quantification limits for the SVOCs, ground water should not be impacted above the unrestricted use standards or supplemental values.

TABLES

TABLE 1 SOIL RESULTS (mg/kg)
McKinley Avenue Tier II Audit

Analyte (Method)	Standard	Sample Number (depth)					
		SB01 (2-4)	SB02 (0-2)	SB03 (0-2)	SB04 (0-2)	SB04 (12-14)	SB05 (8-10)
Inorganics							
mercury (7471A)	16	0.0193J	0.245J	0.135J	NA	0.0137J	NA
arsenic (6020)	6.9	12.8	13.4	15.4	NA	13.7	NA
Metals (6010B)							
barium	5000	52.3	273	226	NA	25.3	NA
cadmium	32	0.23J	1.2	1.08	NA	0.148J	NA
lead	400	16.8	1070	257	NA	14.6	NA
total chromium	230	9.97	15.8	20.7	NA	11.8	NA
PCBs (8082)							
Aroclor 1260	1	0.0625	0.125	0.0444	0.044	<0.0184	<.0204
Pesticides (8081A)							
4,4 DDT	NONE	<0.0948	0.0357J	0.427	0.00646J	<0.092	<0.409
alpha chlordane	NONE	<0.0948	0.187	<0.396	<0.0175	<0.092	<0.409
gamma chlordane	NONE	<0.0948	0.153	<0.396	<0.0175	<0.092	<0.409
SVOCs (8270C)							
anthracene	9500	1.78J	<3.78	<3.92	0.173	<0.181	<0.200
benzo (a) anthracene	5.5	4.96	<3.78	<3.92	0.182	<0.181	<0.200
benzo (b) fluoranthene	5.5	6.32	1.98J	<3.92	0.191	<0.181	<0.200
benzo (k) fluoranthene	55	1.64J	<3.78	<3.92	<0.180	<0.181	<0.200
benzo (a) pyrene	0.55	3.94	<3.78	<3.92	0.155J	<0.181	<0.200
chrysene	550	4.77	<3.78	<3.92	0.181	<0.181	<0.200
fluoranthene	1300	10.4	2.93J	<3.92	0.406	<0.181	<0.200
phenanthrene	NONE	5.9	<3.78	<3.92	0.234	<0.181	<0.200
pyrene	950	7.87	2.77J	<3.92	0.309	<0.181	<0.200
naphthalene	1800	.00236E	0.00129E	<3.92	0.00108J	<0.181	<0.200
bis(2-ethylhexyl)phthalate	150	<1.940	<3.78	<3.92	<0.180	0.867	<0.200
VOCs (8260A)							
trichloroethene	77	.0038J	.00256J	<0.00625	0.00112J	<0.584	0.00704
tetrachloroethene	94	<0.00587	.000627J	<0.00625	<0.00547	0.00407J	<0.00617
Xylene	1500	<0.00587	<0.00569	<0.00625	<0.00547	0.0792J	<0.00617
acetone	4500	<0.0117	<0.0114	<0.0125	<0.0109	<1.170	0.0242
2-butanone	440	<0.0117	<0.0114	<0.0125	<0.0109	<1.170	0.00345J
cis 1,2 DCE	450	<0.00587	<0.00569	<0.00625	<0.00547	<0.584	0.00572J

J Qualifier: Constituent detected below the quantitation limit

Standard: Unrestricted direct contact soil standards-residential land use (OAC 3745-300-08[1996])

E Qualifier: Estimated Concentration Due to Matrix Interference

NA: Not Analyzed

TABLE 2 GROUND WATER RESULTS (ug/l)
McKinley Avenue Tier II Audit

Analyte (method)	Standard	Well Number			
		MW-01	MW-02	MW-03	MW-03A
Inorganics (7470A)					
Mercury	2	0.106J	<0.2	<0.2	<0.2
Metals (6010B)					
Arsenic	50	72.1	23.3	23.7	22.3
Barium	2000	312	136	127	124
Cadmium	5	<10.0	<10.0	<10.0	<10.0
Chromium	100	90.6	9.67J	2.68J	<20.0
Lead	NONE	76.1	14.2	11.8	11
Silver	NONE	<10.0	<10.0	<10.0	<10.0
Selenium	50	<50.0	<10.0	<50.0	<10.0
VOCs (8260B)					
Acetone	NONE	2.54J	<10	<10	<10
Benzene	5	0.193J	<1.0	<1.0	<1.0
PCE	5	0.503J	<1.0	<1.0	<1.0
1,2 dichlorobenzene	NONE	<1.0	<1.0	0.185J	0.183J
PCBs (80802)					
Pesticides (8081A)					
SVOCs (8270C)					
J Qualifier: constituent detected below the quantitation limit					
NA: not analyzed due to insufficient water volume in MW-01					
ND: not detected					
Standard: Generic unrestricted use potable standards					

FIGURES

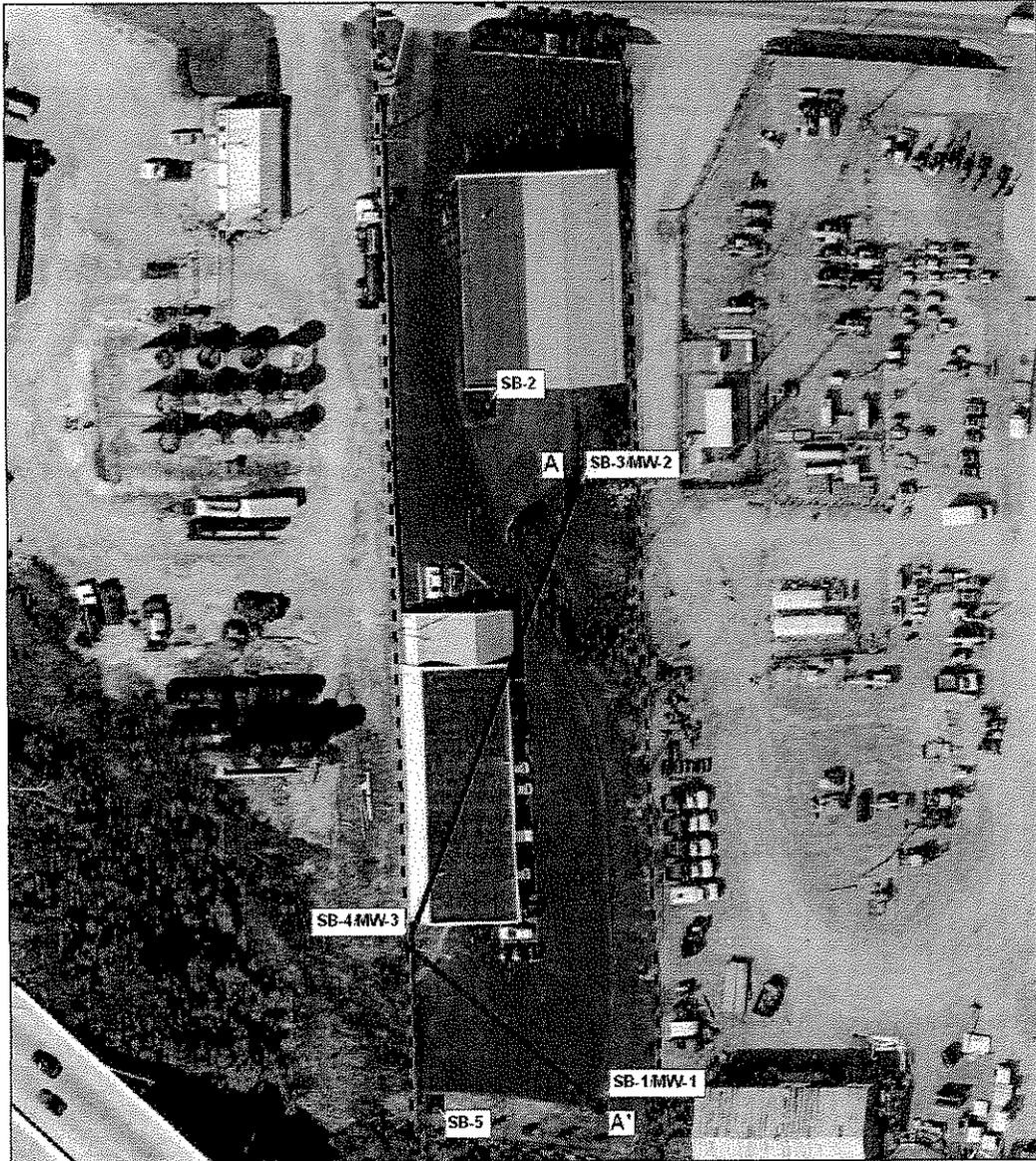
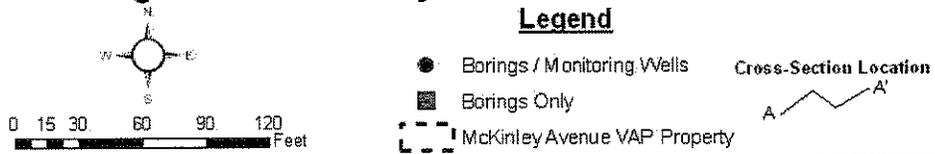
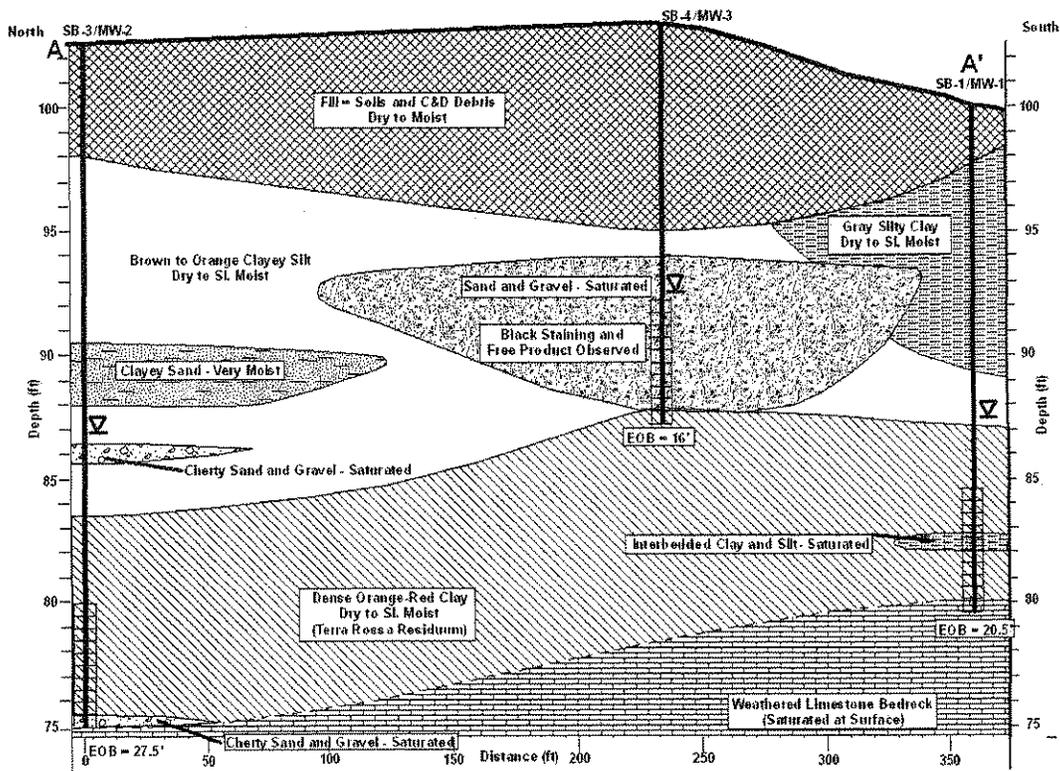


Figure 1. McKinley Avenue VAP Tier II Audit





▽ = Static Water Level
 5/21/2008
 EOB = End Of Borlog

Figure 2. McKinley Avenue VAP Property Cross-Section A-A'

ADDENDUM TO THE MCKINLEY
AVENUE PROPERTY TIER II REPORT

Tier II Audit
Investigation Report Addendum
Identified Area #2 Soil Lead Investigation
McKinley Avenue Property (99NFA057)
Franklin County
Project ID: 125000192002
December 2008

On May 11 and 12, 2008, the Ohio Environmental Protection Agency (Ohio EPA) completed a Tier II audit, intrusive investigation, of the McKinley Avenue property, Columbus, Ohio. The analytical results of that investigation indicated that one soil sample, SB-02, collected in Identified Area #2 (IA #2), had a soil lead concentration of 1070 mg/kg. This sample concentration is 2.7 times the applicable standard of 400 mg/kg (Ohio Administrative Code (OAC) 3745-300-08[1996]). Ohio EPA decided to investigate IA #2 to determine if applicable standards for the property are being met.

The objective of the follow-up investigation was to determine the representative concentration of lead in surface soil at IA #2 in accordance with OAC 3745-300-07(D)(5)(c)(i)[1996]. Ohio EPA determined a sample population of 12 surface samples, randomly located throughout IA #2, would be sufficient for statistical analysis. Ohio EPA developed a work plan for the investigation, which was finalized on October 8, 2008. This investigation followed the standard operating procedures listed in the work plan.

Ohio EPA's Site Investigation Field Unit (SIFU) and Central District Office personnel collected the samples on October 15, 2008. Prior to sampling, 12 sample locations were laid out in a loose triangular grid and each marked with a small flag. SIFU documented each sampling location with a Trimble GeoXT Global Positioning System. The locations are depicted in **Figure 2**. Each soil sample was collected with a dedicated trier in accordance with United States Environmental Protection Agency's Standard Operating Procedure 2012, Section 7.2.3, Sampling with a Trier. Samples were placed in a cooler and Ohio EPA transported them directly to Stantec Consulting Services, Inc. (Stantec), Certified Laboratory CL0054. Samples were relinquished to Stantec on the day of the investigation immediately after they were collected.

Stantec analyzed the soil samples for total lead, EPA Method SW-846 6010B, on November 11, 2008. The results are provided in **Table 1**.

Table 1
McKinley Avenue Property
Identified Area #2 Surface Soil Investigation
Total Lead Concentrations in Soil

SAMPLE NUMBER	RESULT (Mg/Kg)
SB-01	135.0
SB-02	44.7
SB-03	20.8
SB-04	13.9
SB-05	47.7
SB-06	17.2
SB-07	15.4
SB-08	20.4
SB-09	21.1
SB-10	24.0
SB-11	18.6
SB-12	14.0

FIGURES

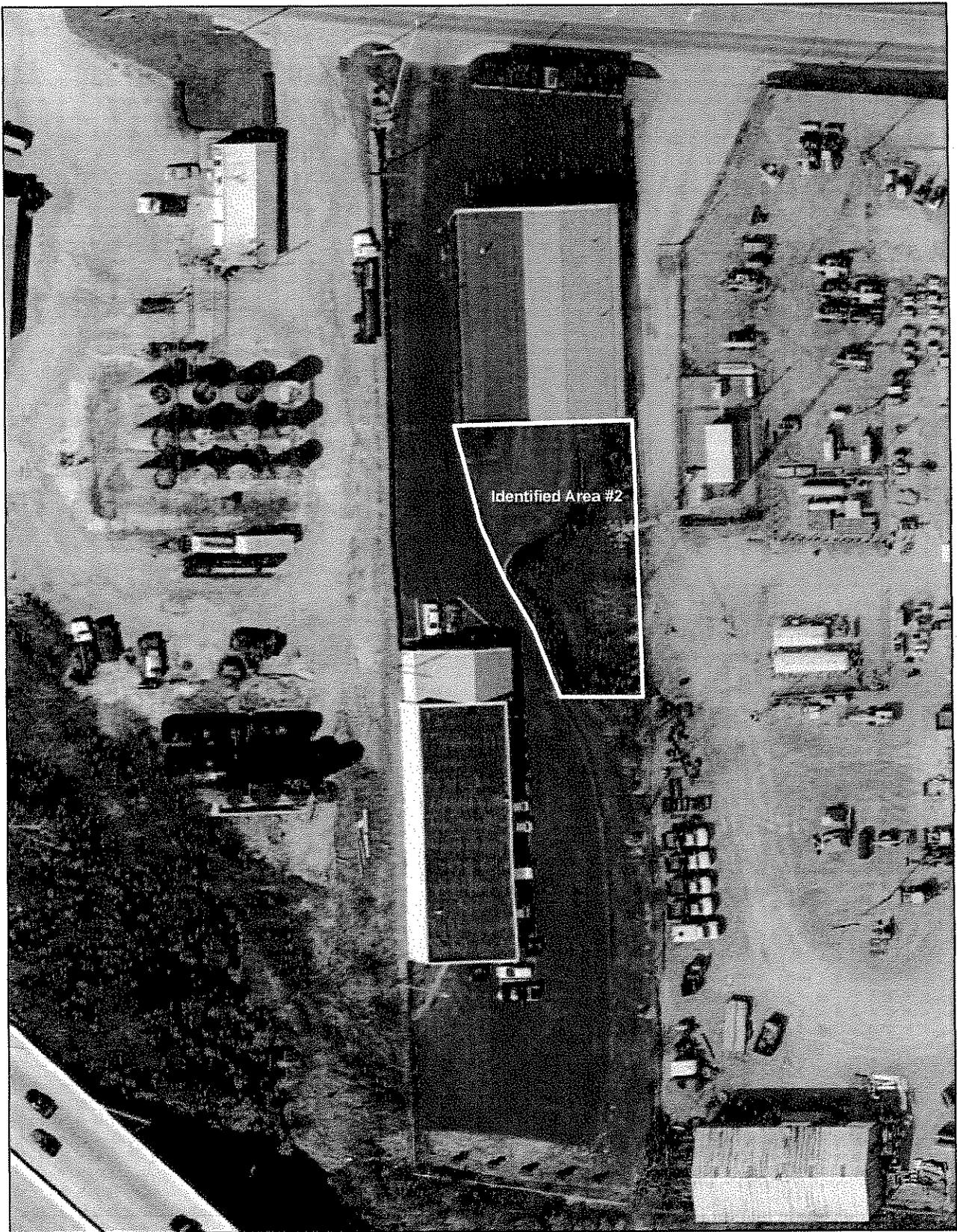


Figure 1
Location of Identified Area #2
McKinley Avenue Property
Soil Lead Investigation Report

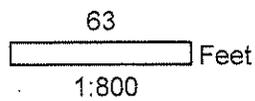
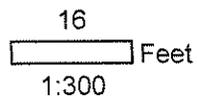




Figure 2
 Sampling Locations
 McKinley Avenue Property
 Soil Lead Investigation Report



⊗ Soil Sample Locations

