Expedited Soil Investigation Work Plan for
Eden Road Relocation
(West Parking Lot and Burn Pile Areas)

SAIC Project 01-1633-00-1769-000

Prepared for:

Harley-Davidson Motor Company Operations, Inc.
York, Pennsylvania

January 2004

Science Applications International Corporation
An Employee-Owned Company

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

AMF - American Machine & Foundry Company
ARAR - Applicable or Relevant and Appropriate Requirements
bgs - below ground surface
BPA - Burn Pile Area
CFR - Code of Federal Regulations
DCE - dichloroethene
DOT - United States Department of Transportation
EM - Electromagnetic
EPA - United States Environmental Protection Agency
FS - Feasibility Study
GPS - global positioning system
Harley-Davidson – Harley-Davidson Motor Company Operations, Inc.
HASP - Health and Safety Plan
HAZWOPER- Hazardous Waste Operations and Emergency Response
IDW - investigation-derived wastes
Langan - Langan Engineering and Environmental Services, Inc.
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
MSC - medium specific concentration
OSHA - Occupational Safety and Health Administration
PADEP - Pennsylvania Department of Environmental Protection
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
PCE - tetrachloroethene
PID - photoionization detector
PP - priority pollutant list
PPE - personal protective equipment
ppm - parts per million
PRG - preliminary remediation goal
QA/QC - quality assurance/quality control
QAPP - Quality Assurance Project Plan
RBC - Risk-based Concentration
RCRA - Resource Conservation and Recovery Act
REWAI - R.E. Wright Associates, Inc.
RFA - RCRA Facility Assessment
RI - Remedial Investigation
SAIC - Science Applications International Corporation
SPLP - synthetic precipitation leaching procedure
SSL - Soil Screening Level
STL - Severn Trent Laboratories, Inc.
SVOCs - Semi-volatile Organic Compounds
SWMU - Solid Waste Management Unit
TCE - trichloroethene
TCLP - toxicity characteristic leaching procedure
VOCs - volatile organic compounds
WPL - West Parking Lot
YNOP - York Naval Ordinance Plant

Expedited Soil Investigation Work Plan for Eden Road Relocation (West Parking Lot and Burn Pile Areas)

Harley-Davidson Motor Company Operations, Inc.
York Facility

INTRODUCTION

Springettsbury Township is planning to reroute Eden Road along the western edge of the Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) property at the York, Pennsylvania facility. The new roadway will promote less congestion and safer use of the existing West Parking Lot (WPL) by workers (pedestrians) entering the facility. The planned construction will reroute the existing roadway through two site-wide Remedial Investigation (RI) management areas identified as the Burn Pile Area (BPA) and western portions of the WPL. Both areas are located along the extreme western edge of the Harley-Davidson property. The BPA is located just north of the WPL.

The new roadway will be elevated several feet higher than the existing surface, and will include two ramp areas, allowing entrances to the existing parking lot from the west. In addition to the roadway construction, two storm water detention basins and several storm water related utilities will be installed as part of the roadway relocation. Construction of the basins and utilities will require excavations in several areas below existing ground surface to depths of up to 8 feet into areas of known or suspected contamination. An expedited environmental investigation is needed to complete the required RI characterization work in this area prior to the anticipated construction.

This Work Plan was developed to complete soil environmental investigations in the vicinity of the proposed roadway construction activities, planned to begin in April 2004, and to allow expedited cleanup of areas where feasible. This plan summarizes the historical information known about this area in order to demonstrate data gaps and to support the proposed scope of investigation. Work that can be done after completion of the roadway without major disturbance to the new facilities, was not included in this work plan, and will be included in the Site-Wide Supplemental Work Plan, as part of an ongoing RI program being completed for this property. Specific work items that will be conducted during the site-wide supplemental RI effort in this area will include:

- the addition of a monitoring well in the northwest corner of the BPA,
- groundwater extraction testing near the southwest corner of the WPL, and
- investigations of the black-stained area (from the 1964 aerial photo) to the east of the BPA.

As part of preparations for the Eden Road construction, existing monitoring wells CW-12 and CW-12A will be abandoned, due to their coincidence with a new stormwater basin. In anticipation of the need for future groundwater treatment, existing spare groundwater utilities, located near CW-9, will be extended beneath the new roadway to the southwest corner of the WPL, prior to roadway construction.

Background

The York facility was constructed in 1941 by the York Safe and Lock Company, a U. S. Navy contractor, for the manufacture, assembly and testing of 40 mm twin and quadruple gun mounts, complete with guns. In 1944, the Navy took possession of the York facility. The Navy owned and operated the facility as the York Naval Ordinance Plant (YNOP) until 1964, switching operations after WWII to overhaul of war-service weapons, making rocket launchers, and manufacturing of 3-inch/50 caliber guns, 20 mm aircraft guns and power drive units for 5-inch/54 caliber guns. In 1964, the Navy sold the York facility to American Machine & Foundry Company (AMF), who continued similar manufacturing. In 1969, AMF merged with Harley-Davidson. In 1973, Harley-Davidson moved its motorcycle assembly operations to the York facility. In 1981, AMF sold the York facility to Harley-Davidson. Harley-Davidson has continued motorcycle assembly operations at the York facility since 1981.

According to a 1989 Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) [A.T. Kearney, 1989], the WPL is identified as Solid Waste Management Unit (SWMU) No. 14. The WPL area includes the parking area located between the current Eden Road and the railroad right-of-way. The BPA is not directly identified or addressed in the RFA.

According to several historical aerial photos, significant land filling occurred in the WPL beginning some time after September 1937 and ending some time before March 1968. By 1957, two-thirds of the current WPL area was used for parking, and only the southwest quadrant of the parking lot was unpaved. One aerial photo from 1964 (see Figure 1) shows the extent to which the parking lot was filled and paved (this is the same extent of filling visible in the 1957 photos). It also shows the location of the burn pile located northwest of the WPL, just west of the current electrical substation and the location of a large dark stain (possibly from coal pile runoff) located under the location of the current electrical substation. Figure 2 shows the entire WPL paved in 1974, an expanded area of activity in the BPA, and a fueling facility located between the BPA and the WPL. The fueling facility consisted of three underground storage tanks. Two of these tanks were removed, and the third was closed in place in 1980s.

Harley-Davidson interviewed several former employees of the YNOP and AMF between 1990 and 1991 to identify areas of potential environmental concern on the entire facility. Figure 3 shows the results of those interviews for the western portion of the site, in which numerous interviewees indicated a burn pile area, variously called "burn pile", "west magnesium burn pile", "magnesium burn area" and "paint filter burn area". Also in the WPL area, was an area identified as "N.O.P. (Naval Ordnance Plant) Dump", generally to the south of the BPA; and a "firefighter training area" generally to the east of the BPA and west of the current electrical substation.

A railroad spur, was constructed in the 1940s, in the vicinity of the BPA and WPL. The spur entered the facility from the west and split near the northwest corner of the WPL, one spur leading to the Power House (Building 10) and the other led in a more northeasterly direction, west of the existing substation, and terminated near Building 12, located in the north central portion of the plant. Both of these spurs were abandoned in the late 1980s, and have been paved over.

The West Parking Lot (WPL)

Environmental investigations in the WPL started in 1986, with the installation of three groundwater monitoring wells (MW-6, MW-7, and MW-8). Groundwater monitoring wells installed in the WPL by R.E. Wright Associates, Inc. (REWAI, July 1991) between 1986 and 1990 included MW-8, CW-9, MW-37s, MW-37d, MW-38s, and MW-38d. Analysis of groundwater from these wells indicated that groundwater had been impacted by chlorinated solvents. Volatile organic compound (VOC) concentrations in these wells included 2 mg/l trichloroethene (TCE) and 1 mg/l dichloroethene (DCE) in MW-7, and 0.94 mg/l TCE and 0.75 mg/l tetrachloroethene (PCE) in MW-8.

Subsurface investigations of the WPL continued in 1991 by R.E. Wright Associates (March 1992, REWAI). These investigations included geophysics (Electromagnetic [EM] conductivity), soil gas sampling, soil borings, and backhoe pit excavations. Numerous anomalies were found using the EM-conductivity. Results of the historical soil sampling in the WPL are shown on Tables 1 and 2. The results of the previous studies indicate substantial areas of fill within the WPL. The WPL fill generally consists of up to four feet of black ash and cinders, construction debris and cafeteria waste. Olive-brown to grayish-brown sandy silts and gravels and red clayey silt underlie the waste. Further to the south, the fill consisted of dark-brown to yellowish-brown coarse sand and gravel, black coarse sand with cinders, underlain by naturally occurring orange-brown clayey silts. Fill materials observed in test pits within the WPL consisted of concrete block fragments, brick, wood, electrical wire, conduit, 5-gallon cans, glass containers, 55-gallon drum rings, metallic scrap, oily greasy residue, nails, black sand, and cafeteria waste.

A focused subsurface investigation was conducted by REWAI in the WPL (REWAI, March 1992). It included a detailed review of historical aerial photographs to define the area of investigation. EM conductivity and metal detector surveys were performed to identify conductivity anomalies beneath the asphalt. Soil gas sampling was conducted in those areas identified as anomalous from the geophysical surveys, and in areas identified by employees as disposal sites. Nine split-spoon soil borings (WPLSS-10 through WPLSS-18) were subsequently completed within the southern WPL. The final investigative phase included the trenching of four test pits in the southern WPL, co-located with split-spoon boring locations (WPLTP-11, WPLTP-15, WPLTP-15b, and WPLTP-18) to directly observe and characterize the subsurface materials.

The area surrounding the location marked on Figure 1 as a potential pit area was the subject of further investigation during the site-wide RI (Langan, 2002). These investigations included two EM surveys, a soil gas survey, and soil sampling. Figures 4 and 5 show the results of the EM surveys (pre-RI anomalies in pink, RI anomalies in yellow) and the soil gas survey hot spot (defined as soil gas readings greater than 10 ppm) from the site-wide RI (in blue), and also includes the locations of soil samples collected in the area. Five magnetic anomalies were found in the southern area. Five (5) soil borings and seven (7) test pits were performed in the WPL based on the soil gas and EM surveys. The results of this soil sampling are summarized on Tables 1 and 2. Several polycyclic aromatic hydrocarbons (PAHs) were detected at levels above United States Environmental Protection Agency (EPA) Risk-based concentrations (RBCs) in these samples. Chlorobenzene was elevated in soil boring WPL-SG47. Carbazole was elevated in eight soil samples. Benzene was detected in test pit WPL-TP5 at 0.0728 mg/kg. The constituent, 1,4-Dichlorobenzene, was detected in soil boring WPL-SG47a at 8.82 mg/kg. Vinyl Chloride was detected in test pit WPL-TP1 at 0.33 mg/kg. Thallium was detected up to 210 mg/kg in WPL-SG33b. Test pit excavations showed the geophysical anomalies to be buried metal debris (food cans), metal shavings, nails and other metallic debris. A drum and cinders were found in WPL-TP2. A petroleum odor and oil droplets were observed in WPL-TP4.

Results of laboratory analyses of historical soil samples are summarized in Tables 1 and 2, along with applicable screening standards. The constituents that exceed applicable Pennsylvania Department of Environmental Protection (PADEP) standards included ten metals (antimony, arsenic, cadmium, hexavalent chromium, lead, nickel, selenium, silver, thallium, and zinc); and five VOCs [benzene, chlorobenzene, toluene, TCE, and vinyl chloride]. Arsenic (in most soil samples); two PAHs [dibenzo (a,h) anthracene, and indeno (1,2,3-cd) pyrene]; and two polychlorinated biphenyls (PCBs) [Arochlor-1254 and Arochlor-1260] were also found in WPL soils in concentrations which exceeded EPA risk-based concentrations. WPL sample locations that exceeded applicable PADEP screening standards included:

- WPL-SS-6
- WPL-SS-9
- WPL-SS-11
- WPL-SS-12
- WPL-SS-15
- WPL-SG-33a
- WPL-SG-47a
- WPL-SG-47b
- WPL-TP-1a
- WPL-TP-2
- WPL-TP-3
- WPL-TP-15
- WPL-TP-5
- WPL-TP-6
- WPL-TP-7a
- WPL-TP-11

- WPL-TP-15
- WPL-TP-15b
- ERB-5

The Burn Pile Area (BPA)

The BPA was historically used as a burn area to dispose of combustible waste materials. Historical aerial photographs have identified a general area of disturbance. Figure 1 shows the location of what is probably the Burn Pile Area in 1964, outlined in red. Figure 2 shows the activities in this area somewhat expanded in 1974, outlined in green.

The Draft Interim Site-Wide Remedial Investigation Report (Langan Engineering and Environmental Services, Inc. [Langan], 2002) identified this area as a "burn pit area", and describes historical activities as including firefighter training. This description is not accurate with respect to the interview information, and probably resulted from combining the waste burning activities with the firefighter training activities, that were actually separate. No pit was mentioned or known to exist in this area by any interviews of employees.

Previous investigations (REWAI, 1991, 1992; Langan, 2002) in this management area have included geophysical surveys, soil gas surveys, test pits, and soil borings/sampling. The results of the interim RI have concluded that much of the BPA is covered with up to 3 feet of fill, comprised of various debris such as cinder blocks, wood, metal, concrete, glass and containers. In addition, coal, slag, gray sludge and resinous material were found in this area. The fill and soil material have been found to contain various chemicals including VOCs, semi-volatile organic compounds (SVOCs), and metals (see Tables 3 and 4). The constituents of concern include several PAHs such as benzo-a-pyrene; TCE, PCE; and metals (antimony, cadmium, lead, and nickel). In addition, the resinous material identified in one test pit was found to contain xylenes and PCBs.

Figure 6 shows the results of the active soil gas survey conducted in the general vicinity of the BPA during the Site-Wide RI. Elevated values in the BPA are limited to the southwest corner of the grid area.

Figure 6 also shows geophysical results from pre-RI studies (REWAI,1991), with target areas shown in pink. Also shown in yellow are anomalies from EM-conductivity studies conducted during the RI (Langan, 2002). Also shown are historical sampling locations, all of which are superimposed on the proposed new roadway and storm water pond.

Results of laboratory analyses of historical soil samples are summarized in Tables 3 and 4, along with applicable screening standards. The constituents that exceed applicable PADEP standards included two VOCs (TCE and PCE); three metals (cadmium, lead, and nickel); two PAHs [benzo (a) pyrene, and benzo (b) fluoranthene]; and four SVOCs (hexachloroethane, hexachlorobenzene, carbazole, and pentachlorophenol) [note: PCBs have not been historically tested in the BPA]. With the exception of arsenic, which exceeded EPA risk-based concentrations in most of the samples, the only constituents exceeding EPA direct contact standards were benzo (a) pyrene and pentachorophenol. Sample locations that exceeded any of the applicable DEP or EPA screening standards include:

- BPA-SG2a
- BPA-SG2b
- BPA-SG74a
- BPA-SG74b
- BPA-SG75a
- BPA-SG75b
- TP-1a

Eden Road Relocation Construction Planning

The last investigation was a study for the proposed new Eden Road redirection around the WPL (see 2002, SAIC report). This investigation was conducted in the spring of 2002, and included 24 soil borings along the proposed new roadway, extending from the southern WPL and into the BPA. Combined geotechnical and environmental borings were collected along a proposed route and at proposed storm water facility locations that differ slightly from the current positions. Results of the environmental sampling and analysis from these borings are summarized on Tables 1 through 4.

Samples from this investigation were generally collected at deeper depths than other investigations (up to 20 feet below ground surface [bgs]), and were analyzed for metals and VOCs only. The only detected constituent that exceeded applicable PADEP standards was chlorobenzene, at location ERB-5, located in the southwest area of the WPL.

During planning for the road relocation project, SAIC and others provided input to NuTec Design Associates, Inc. (design engineers for Springettsbury Township) addressing plans to reroute Eden Road through these areas of environmental concern. The final plans for construction indicate that the majority of construction activities will be above the present grade, but that surface water drainage piping and storm water basins will need to be located below existing grade and the present asphalt surface. Highlights of the environmental concerns are synopsized herein:

- Because of the known waste disposal in this area, and the waste material found in the subsurface, excavated wastes or soils with odors or stains do not qualify as Clean Fill (PADEP policy), and should not be used as fill off-site. Disposal would require testing of materials for proper disposal as residual or hazardous waste. In addition, the potential for worker exposure to hazardous chemicals during excavation in the proposed Eden Road relocation area requires that workers and contractor companies meet the criteria of Occupational Safety and Health Administration (OSHA) standards 29 Code of Federal Regulations (CFR) 1910.120, governing hazardous waste operations.

- Groundwater is known to contain chemicals on the EPA's Priority Pollutant List. Recent measurement of groundwater levels (December 2003, considered to be relatively high) indicate that the depth to water table in the Eden Road relocation area was 13 to 16 feet bgs in the southern WPL, and 18 to 20 feet bgs in the northern WPL and BPA. Groundwater level data is not complete enough in the proposed storm water basin area to eliminate the potential that groundwater may discharge to the basin during seasonal high-water table conditions.

- Storm water management facilities planned for this area must be designed to protect against infiltration of groundwater into piping or basins, either by using water-tight pipe, lining the basins, or assuring that the elevation of the facilities are higher than high groundwater table elevations. In addition, storage of storm water in unlined basins that may leak to the groundwater should be avoided, due to regulatory requirements to prevent off-site migration of negatively impacted groundwater. Uncontrolled leakage of storm water to the water table may impede the performance of the groundwater capture system.

During recent discussions (early and mid December 2003) with the EPA the need to minimize infiltration to the WPL was discussed and it is the EPA's position that the asphalt condition of the WPL clearly minimizes infiltration and thus represents an interim remedial measure. Also, given the known history of disposal activities in the WPL, it is likely that an asphalt cover could be part of the final site remedy. Actions taken to minimize infiltration during construction of the new road will likely be part of the final remedy.

PROPOSED WORK PLAN

The overall project objective is to complete an investigation of soil prior to construction of a new roadway to allow future implementation of the feasibility study (FS) and selected final remedy (ies) in portions of the WPL and BPA affected by the planned construction. Excavation of soil is planned at various locations as part of the planned construction. Soil removed as a result of construction will be monitored, evaluated and properly handled. Non-soil material or waste removed as part of the construction will not remain, and will be disposed off-site. If soils at the planned excavation limits are contaminated above preliminary remediation goals (PRGs), consideration will be made for further removal, based on an expedited remedial options assessment.

Procedures for field sampling, chain of custody, laboratory analysis, and reporting of data are described in a separate Quality Assurance Project Plan (QAPP) [SAIC, 2004]. Specific analytical method objectives and sample quality control criteria are provided in the QAPP. General objectives provided by the QAPP include the following:

- Provide data of sufficient quality and quantity to support ongoing supplemental remedial investigation efforts.
- Provide data of sufficient quality and quantity to support area-specific remediation goals (when applicable).
- Provide data of sufficient quality to meet applicable State of Pennsylvania and Federal (EPA, Region III) concerns.
- Ensure samples are collected using approved techniques and are representative of existing site conditions.
- Utilize quality assurance/quality control (QA/QC) procedures for both field and laboratory methods that meet the EPA, PADEP and other applicable guidance document requirements.

The following tasks are planned to complete the investigation of soil. As indicated earlier, this scope does not include additional characterization of groundwater in the immediate vicinity. Supplemental groundwater investigations in this vicinity will not be hampered by the planned construction, and will be addressed in a separate workplan.

Task 1: Preliminary Activities

Prior to starting field work, several preliminary activities will need to be initiated. These preliminary activities include preparing a site-specific Health and Safety Plan (HASP), contacting Pennsylvania One-Call, conducting underground utility checks, procuring subcontractors, abandonment of two wells, extension of groundwater treatment conduit, and the refinement of the project schedule.

Drawings of the proposed Eden Road indicate that wells CW-12 and CW-12A are located within a proposed storm water basin and need to be abandoned. The existing wells are both open rock construction, with six-inch diameter steel casing grouted in-place. The proposed closure method is to fill these wells with a Portland cement grout mixture from the bottom of the well to near the surface. Grout will be pumped into each well until the level is approximately at the proposed invert basin elevation. Any water which is displaced from the wells during abandonment will be containerized. All water will be transported to the on-site groundwater treatment system for processing and proper treatment. The flush-mounted drive-over manholes will be left in-place with the manhole lid bolted on until excavation activities commence. During construction, the well head and casing may be cut off and disposed following excavation of the basin. A Pennsylvania well abandonment form will be completed for wells CW-12 and CW-12A. These wells will not be replaced, but the groundwater in this vicinity will be further evaluated as part of the planned supplemental RI investigation efforts.

Finally, due to anticipated future groundwater investigations, including potential extraction of groundwater in the vicinity of the southwest corner of the WPL, existing groundwater remediation conveyances will be extended to this area of the site prior to the planned roadway construction. This work will be done concurrently with the soil investigation, as part of a separate contract with Harley-Davidson. Groundwater piping, electrical and communication lines will be extended from existing spare lines, previously terminated near WPL extraction well CW-9. These lines will be terminated in a vault to be installed in the vicinity of MW-75S and MW-75D.

Task 2: Investigation of Soil

Once Task 1 is completed, the soil investigation will begin. Sampling and analysis will be conducted in accordance with the QAPP for environmental investigations at Harley-Davidson (SAIC, 2004). All sampling will be conducted by SAIC. Analysis of environmental samples will be conducted by Severn Trent Laboratories, Inc. (STL) at their Edison, NJ laboratory. Additional information about STL can be found at their website (http://www.stl-inc.com/).

<u>Soil Boring Investigation</u>
The supplemental soil boring investigation consists of 46 proposed boring locations in the WPL area. The locations of the WPL sample locations are shown on Figures 7 and 8. The supplemental investigation in the BPA consists of an additional 47 proposed borings (see Figure 9). These locations were selected to fill in data gaps identified as a combined evaluation of previous aerial photographs (i.e. disturbed areas), geophysical surveys, soil gas surveys, soil boring and test pit sampling results (where constituents of concern exceed applicable screening standards), and to confirm the environmental conditions beneath areas of planned excavation (i.e. storm water basins and utility corridors).

A Geoprobe® boring will be completed at each of the proposed sampling locations. A continuous soil core will be collected at each boring location, and advanced into native soil (up to a maximum depth of 16 feet bgs, or refusal, whichever occurs first [advancement beyond 16 feet may occur if contamination is evident, and refusal has not occurred]). Two or three soil samples will be collected from each boring location and analyzed for VOCs, total base-neutral SVOCs, PCBs, total priority pollutant list (PP) metals (plus hexavalent chromium), and cyanide (free and total). Sample depths will generally be from the 0-2 foot depth, a mid-depth location of highest probable contamination, and a native, undisturbed soil sample, believed to be uncontaminated. Actual sample numbers and depths may be adjusted by the sampler, based on visual and photo-ionization detector (PID) evidence. Sampling of waste or fill will be completed during a follow-up test-pit sampling, and will be avoided for sampling during the initial soil borings.

The direct-push technology sample collection method involves a Geoprobe® and a four-foot long stainless-steel sample tube. The stainless-steel sample tube is fitted with a disposable, internal acetate liner and the tube is then equipped with a cutting shoe which is pushed into the ground. The tube is then retrieved from the ground, the cutting shoe is removed, and the internal acetate liner is removed from the stainless-steel tube. The acetate liner is then cut lengthwise with a pre-cleaned stainless-steel knife, allowing evaluation of soil conditions and sampling at discrete depths. By repeating this sequence, a continuous soil core can be retrieved for evaluation and sampling at each boring location.

Each Geoprobe soil core collected will be screened in the field for the relative concentration of total VOCs using a PID. PID readings will be taken from freshly exposed soil surfaces, along each soil core, at approximately 6-inch intervals. Elevated readings are considered any sustained reading greater than 5 parts per million (ppm) above background. A description of each soil core will be recorded on a standard soil boring log along with the results of the PID screening data. Evidence of fill or waste materials will be carefully noted. All borings will be logged and described by a geologist or soil scientist.

The protocols for decontamination of sampling equipment, sample handling, preservation, sample numbering, tracking, and shipping are presented in the project QAPP (SAIC, 2004). Soil samples will be collected at discrete depths as grab samples from the soil borings.

The proposed analytical parameters and test methods for the anticipated soil samples to be collected from borings at the BPA and WPL are shown on Table 5. These samples will be submitted for off-site laboratory analysis at the STL, Edison NJ laboratory. Soil samples from the initial soil borings will be submitted for 5-day turn-around. In addition to the proposed samples, one set of field QC samples will be submitted for every 20 soil samples collected. The field QC samples will include one duplicate sample, one field blank, one rinsate blank (if applicable), and one trip blank (for VOCs only). The field QC samples will be analyzed for the same parameters as the soil samples. The proposed QC samples are also shown on Table 5. Based on the results of these proposed soil samples, additional soil sampling may be required to define the limits of contamination.

During removal of soil from the sampling device, the order of collection for analytical parameters will be VOCs, SVOCs/PCBs, and then metals or other parameters. Each soil sample anticipated for VOC analysis will be collected into four (4) separate Encore™ samplers, in accordance with method 5035. A clean pair of new disposable gloves will be worn each time a different location is sampled and gloves will be donned immediately prior to sampling. Disposable sampling equipment will typically be used. General decontamination procedures for non-disposable sampling equipment are provided in the QAPP.

Following completion of soil sampling, the borehole will be backfilled with uncontaminated cuttings or bentonite chips. Cuttings removed from the boring which are waste-like or appear to be contaminated will be segregated and containerized for handing as investigation-derived waste (IDW). Finally, the location of each boring will be flagged and field located using a global positioning system (GPS) unit.

<u>Test Pit Investigations</u>
A secondary goal of the proposed soil sampling activities is to identify and characterize the extent of fill where present in the investigation area. Previous sampling results and the supplemental soil boring descriptions will be used to select locations for further physical and chemical characterization of the fill material.

Up to thirty test pits will be completed at boring locations where fill is encountered or suspected in the BPA and WPL areas. Each test pit will be advanced into natural in-place soil, and to a minimum depth of 8 feet. The anticipated dimension of each test pit will be approximately 4 feet wide by 8 feet long.

One or two samples of the fill material will be collected from each backhoe test pit location and analyzed for VOCs, total base-neutral SVOCs, PCBs, total priority pollutant metals (plus hexavalent chromium), and cyanide (free and total). Sample depths will be based on the observed depth of the fill material, and will be biased at the location of highest probable contamination.

A description of each test pit will be recorded on a standard form along with the results of PID screening data. The depth, thickness and type of fill or waste materials will be carefully noted. All test pits will be logged and described by a geologist or soil scientist.

The protocols for sample handling, preservation, sample numbering, tracking, and shipping are presented in the project QAPP (SAIC, 2004). Soil samples will be collected at discrete depths as grab samples from the test pits.

The proposed analytical parameters and test methods for the anticipated samples to be collected from test pits at the BPA and WPL are shown on Table 5. These samples will be submitted for off-site laboratory analysis at the STL, Edison NJ laboratory. Soil samples from the initial soil borings will be submitted for 10-day turn-around.

The location of all test pits will be flagged and field located using GPS following sampling. Waste materials removed from the test pit will be segregated from soil and processed for off-site disposal. Test pits will be backfilled with uncontaminated soil or stone and compacted to near original grade. If the test pit location was originally on an asphalt surface, it will be patched with asphalt to match the surrounding surface.

Handling of Investigation-Derived Waste (IDW)

During the performance of field activities at the Harley-Davidson site, IDW will be managed in accordance with RCRA requirements and EPA guidance. The types of IDW anticipated to be generated during field activities are: (1) soil, (2) debris/waste, (3) decontamination fluids, (4) personal protective equipment (PPE), and uncontaminated solids and miscellaneous trash. All waste generated during field activities will be handled in bulk or drummed at the site for disposal, in accordance with Harley-Davidson requirements. Efforts will be made throughout the field program to minimize the volume of waste derived from sampling and decontamination procedures. PPE from workers within contaminated areas will be handled as contaminated waste.

All contaminated soil and non-soil wastes generated during intrusive sampling events will be segregated and drummed (or placed into a roll-off container) at the point of generation. A label will be placed on the container describing its contents and source, and date of generation. Drums and roll-offs will be staged in a designated location. Uncontaminated soil may be returned to the site for use as on-site fill.

Representative samples of contaminated soil and waste materials accumulated during the investigation will be collected and analyzed for waste processing purposes. Testing will include full toxicity characteristic leaching procedure (TCLP) testing, other hazardous waste characteristics and parameters as required by the intended receiving facility. Composite samples will be collected from similar waste types for all parameters except volatiles. Samples for volatile organic compounds will be collected as grab samples and will be biased at the location of highest probable contamination. The protocols for sample handling, preservation, sample numbering, tracking, and shipping are presented in the project QAPP (SAIC, 2004). The proposed analytical parameters and test methods for the anticipated waste characterization samples are also shown on Table 5. These samples will be submitted for off-site laboratory analysis at the STL, Edison NJ laboratory.

IDW will be shipped to a commercial disposal facility, as appropriate. Efforts to dispose of IDW in bulk, along with other wastes that may be generated during soil removal actions, will be encouraged. IDW will be managed, stored, and disposed in accordance with PADEP, EPA, and United States Department of Transportation (DOT) regulations and requirements of the receiving facility and state.

Water derived from decontamination activities will be collected and containerized in polyethylene tanks or other containment vessels. The contents of these containers will be incorporated into the groundwater treatment plant, if possible, or shipped off-site for disposal.

Other waste, which may include trash, wood debris, packing materials, food or lunch wastes, office wastes and other wastes that have not been in contact with contaminated or potentially contaminated material will be handled by a PADEP-licensed waste hauler and will be disposed in a commercial municipal disposal facility.

Task 3: Remedial Alternatives

As described above, the overall project objective is to complete an investigation of soil prior to construction of a new roadway to allow future implementation of the feasibility study (FS) and selected final remedy (ies) in portions of the WPL and BPA affected by the planned construction. Excavation of soil is planned at various locations as part of the planned construction. If the soil requiring removal is found to be above preliminary remediation goals (PRGs), options will be considered for off-site disposal. If soils at the planned excavation limits are contaminated above PRGs, consideration will be made for further removal, or additional characterization may be needed, if it is not feasible to complete its removal during the roadway construction.

Upon completion of the soil investigation, a focused remedial alternatives study will be conducted to plan for remediation of any contaminated soils within defined excavation limits of the roadway construction, and to consider any further remedial action. Applicable or relevant and appropriate requirements (ARARs) will be used to consider potential remedial alternatives. Interim remedial alternatives will be identified based on contaminant type, concentration, location, regulatory requirements, consideration of receptors and risk to public or site workers, technical feasibility, site construction plans, future remediation plans and costs.

Preliminary Remediation Goals

Because the RI/FS has not been completed for the facility, Preliminary Remediation Goals (PRGs) have been identified for the Eden Road relocation area. The PADEP Act 2 “generic” medium specific concentrations (MSCs) for the soil-to-groundwater pathway were selected as PRGs because they best reflect the objectives of the PADEP for remediation activities in Pennsylvania. The method used by the PADEP to derive generic MSCs is functionally equivalent to the method used by the EPA to derive Soil Screening Levels (SSLs) for the soil-to-groundwater pathway presented in the document titled *Soil Screening Guidance: Technical Background* (July, 1996). Where surface soils are present, or are left exposed following construction, PADEP or EPA direct contact criteria (if more stringent) will also apply. The PADEP’s generic MSCs for the soil-to-groundwater pathway and the EPA direct contact MSC’s for industrial soil are provided in Tables 1 through 4.

Alternatively, a site-specific PRG, protective of groundwater, or background may be determined for this area. Site-specific PRGs will be calculated based on correlation with soil leaching data. According to PADEP, an alternate PRG can be established using the results of synthetic precipitation leaching procedure (SPLP) from impacted soil samples collected from the site of concern.

Following analysis of soil during characterization (Task 2), a minimum of ten samples exhibiting elevated concentrations of constituents above PRGs will be selected for SPLP analysis. These samples will be submitted for SPLP analysis only for the constituents which exceeded the PRG. Samples obtained will be representative of the soil type and horizon impacted by the release of the regulated substance. The alternative soil-to-groundwater PRG is calculated as the next lowest total concentration (TC), below that which generates a failing SPLP result (below a constituent's groundwater MSC). The alternative soil-to-groundwater standard will be the next lowest TC.

If all samples result in a passing SPLP level, the alternative soil-to-groundwater standard will be the TC corresponding to the highest SPLP result.

If none of the samples generates a passing SPLP, additional samples may be collected and analyzed for concurrent TC/SPLP analyses to satisfy the above requirements for establishing an alternative soil-to-groundwater standard.

Task 4: Construction Practices for Installation of Storm water Conveyances

Two permanent storm water detention basins and associated piping will be installed during the roadway construction by another contractor. In addition a series of stormwater utility conveyances will be installed beneath the roadway, and into native soil. If soils within these excavation limits are found to be contaminated (i.e. during Task 2), the soil will be removed, segregated and disposed off-site. Soil removed as a result of construction will be monitored, evaluated and properly handled. Non-soil material or waste removed as part of the construction will be disposed off-site. If soils beyond the planned excavation limits are contaminated above PRGs, consideration will be made for further removal, based on the expedited remedial alternatives assessment (Task 3).

During planned excavations, workers and contractors which may contact groundwater, waste or soils above DEP or EPA direct contact MSCs must meet the criteria of OSHA standards 29 CFR 1910.120, governing hazardous waste operations.

Storm water management facilities planned for this area will be designed to protect against infiltration of groundwater into piping or basins, either by using water-tight pipe, lining the basins, or assuring that the elevation of the facilities are higher than high groundwater table elevations. Uncontrolled leakage of storm water to the water table may impede the performance of the groundwater capture system.

During recent discussions (early and mid December 2003) with the EPA the need to minimize infiltration was discussed and it is the EPA's position that the asphalt condition of the WPL clearly minimizes infiltration and thus represents an interim remedial measure. Also, given the known history of disposal activities in the WPL, it is likely that an asphalt cover could be part of the final site remedy. Therefore actions will be taken to maintain or replace the asphalt cover, and to minimize infiltration as part of the new roadway construction.

During excavation and removal of the soil, an environmental inspector (40-hour HAZWOPER- [Hazardous Waste Operations and Emergency Response] trained) will be present to monitor for evidence of contamination, direct segregation of materials, and to collect additional samples, if necessary. A description of the responsibilities for the environmental inspector is provided in Appendix A.

Task 5: Confirmatory Soil Sampling and Analysis

As described above, the overall project objective is to complete an investigation of soil prior to construction of a new roadway to allow future implementation of the FS and selected final remedy (ies) in portions of the WPL and BPA affected by the planned construction. Excavation of soil is planned at various locations as part of the planned construction. If the soil requiring removal is found to be above PRGs, confirmatory sampling will be conducted for that specific impacted volume of soil, at the planned excavation limits. If soils at the planned excavation limits are contaminated above PRGs, consideration will be made for further removal, based an expedited remedial options assessment.

According to current PADEP guidance (PA Title 25 § 250.703), acceptable numbers of soil samples needed for attainment of remedial objectives are based on the volume of soil removed [i.e. 8 samples required for contaminated soil volumes up to 125 cubic yards; 12 samples required for soil volumes between 125 and 3,000 cubic yards; and an additional 12 samples for each additional 3,000 cubic yards thereafter]. Following removal of impacted soils, the appropriate number of confirmatory soil samples (plus QC samples) will be collected. Grab samples will be collected using a scoop or backhoe (depending upon depth of excavation), and will be collected from random locations on the sidewalls and excavation bottom. Each sample will be analyzed only for parameters that exceeded the PRGs.

Task 6: Reporting

A summary report will be prepared following the completion of the tasks described above. The report will document each step of the process using text, tables, and figures, and it will include all analytical results in an appendix. The remedial alternatives study will be included, and the selected alternative will be described.

After construction activities are complete, a scaled drawing of the excavation will be provided, showing the location of all confirmatory samples. In addition, a report will be prepared to provide disposal documentation and other remedial actions. A review draft and final version of the report will be submitted.

PROJECT SCHEDULE

The project schedule is provided as Figure 10.

REFERENCES

Kearney, A. T. Phase II RCRA Facility Assessment of the Harley-Davidson York, Inc. Facility, York, Pennsylvania, EPA ID No. PAD 001 643 691, EPA Contract No. 68-01-7038, January 1989.

Langan Engineering and Environmental Services, Inc. Draft Interim Site-Wide Remedial Investigation Report, Harley-Davidson Motor Company York, Pennsylvania Facility, July 2002.

R. E. Wright Associates, Inc, Groundwater Investigation of the Western Parking Lot & Southern Property Boundary, July 1991.

R. E. Wright Associates, Inc, West Parking Lot Subsurface Investigation at the Harley-Davidson, Inc. York Facility, March 1992.

SAIC, memo prepared to Harley-Davidson, dated July 9, 2001.

SAIC, Letter report to Mr. Tim Debes, NuTec Design Associates, Eden Road Relocation Investigation Summary, June 5, 2002.

SAIC, Quality Assurance Project Plan for Environmental Investigations at the Harley-Davidson Motor Company Operations, Inc., York Facility, June 2003, Revised January 2004.

FIGURES

N
W E
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Legend

- 1964 Burn Pile Outline
- 1974 Burn Pile Outline
- 1964 WPL Liquid Pool
- Monitoring & Collection Wells
- Roads and Curbs - 2003
- Railroad
- Substation
- Proposed Eden Rd

150 75 0 150 Feet

1 inch equals 150 feet

Figure 1

Harley-Davidson
York Facility Vehicle Operations

WPL/Burn Pile Area on 1964 Air Photo

Drawn	Checked
SMS 1/10/04	RGM 1/10/04

Revisions:

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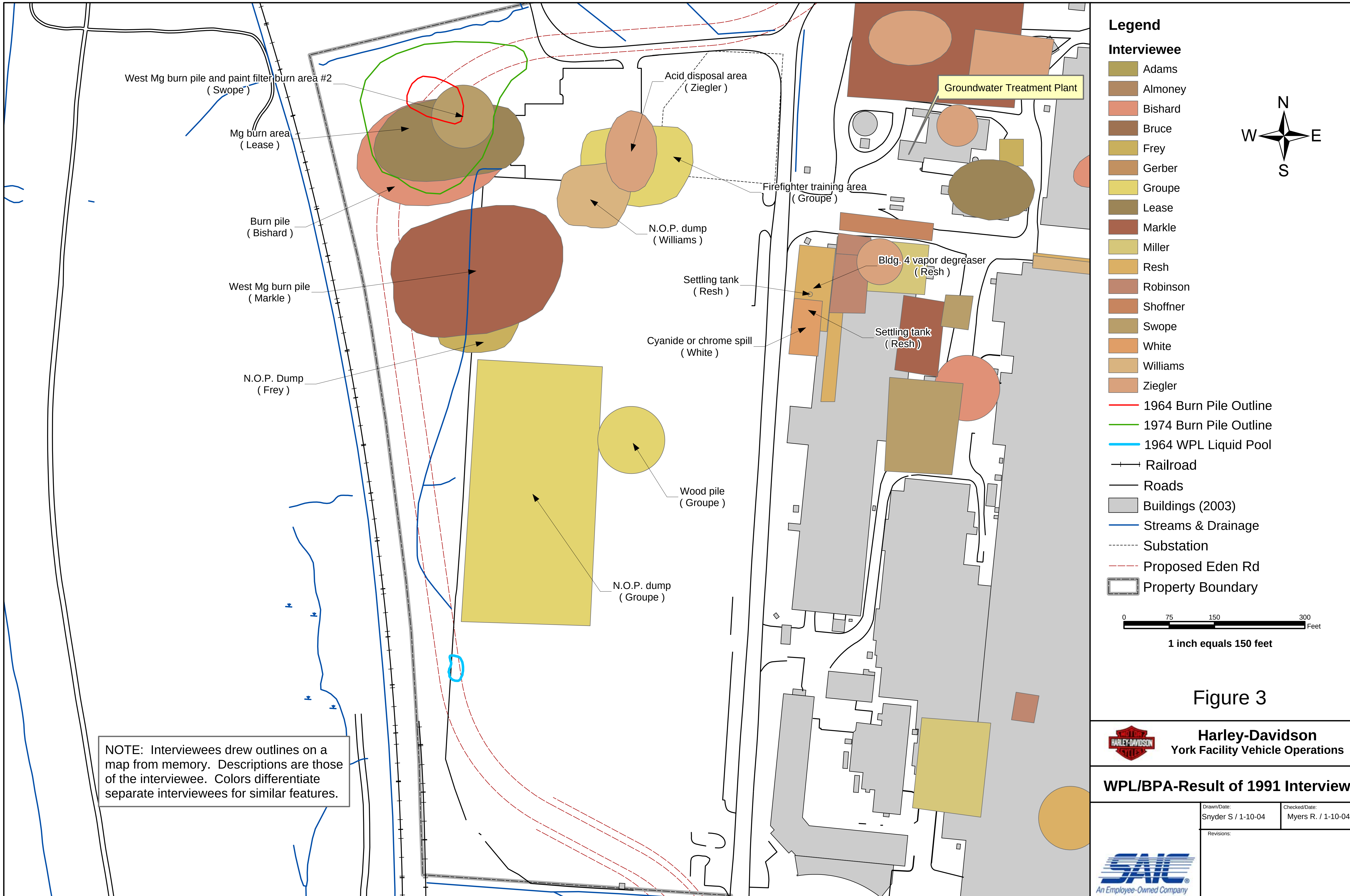

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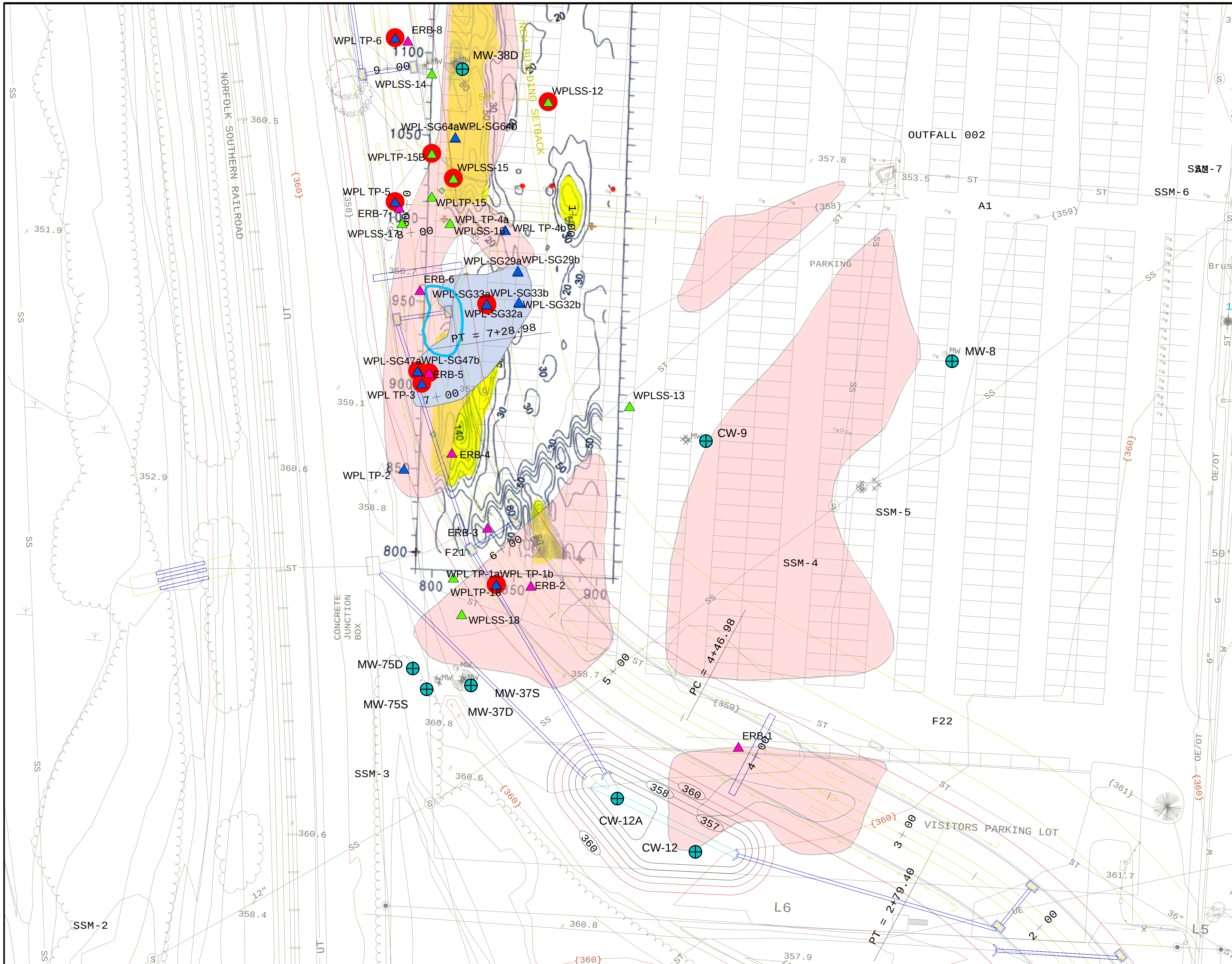

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Legend

- Pre-RI Soil Samples
- RI Soil Samples
- Eden Road Borings
- Exceeds Screening Standard
- 1964 Liquid Pool
- Monitoring & Collection Wells
- >10 PPM Soil Gas
- Pre-RI EM Target Areas
- RI EM Target Areas

60 30 0 60 Feet

1 inch equals 60 feet

Figure 4

Harley-Davidson
York Facility Vehicle Operations

WPL-South Historical Subsurface Data

Drawn	Checked
SMS 01/10/04	RGM 01/10/04

Revisions:

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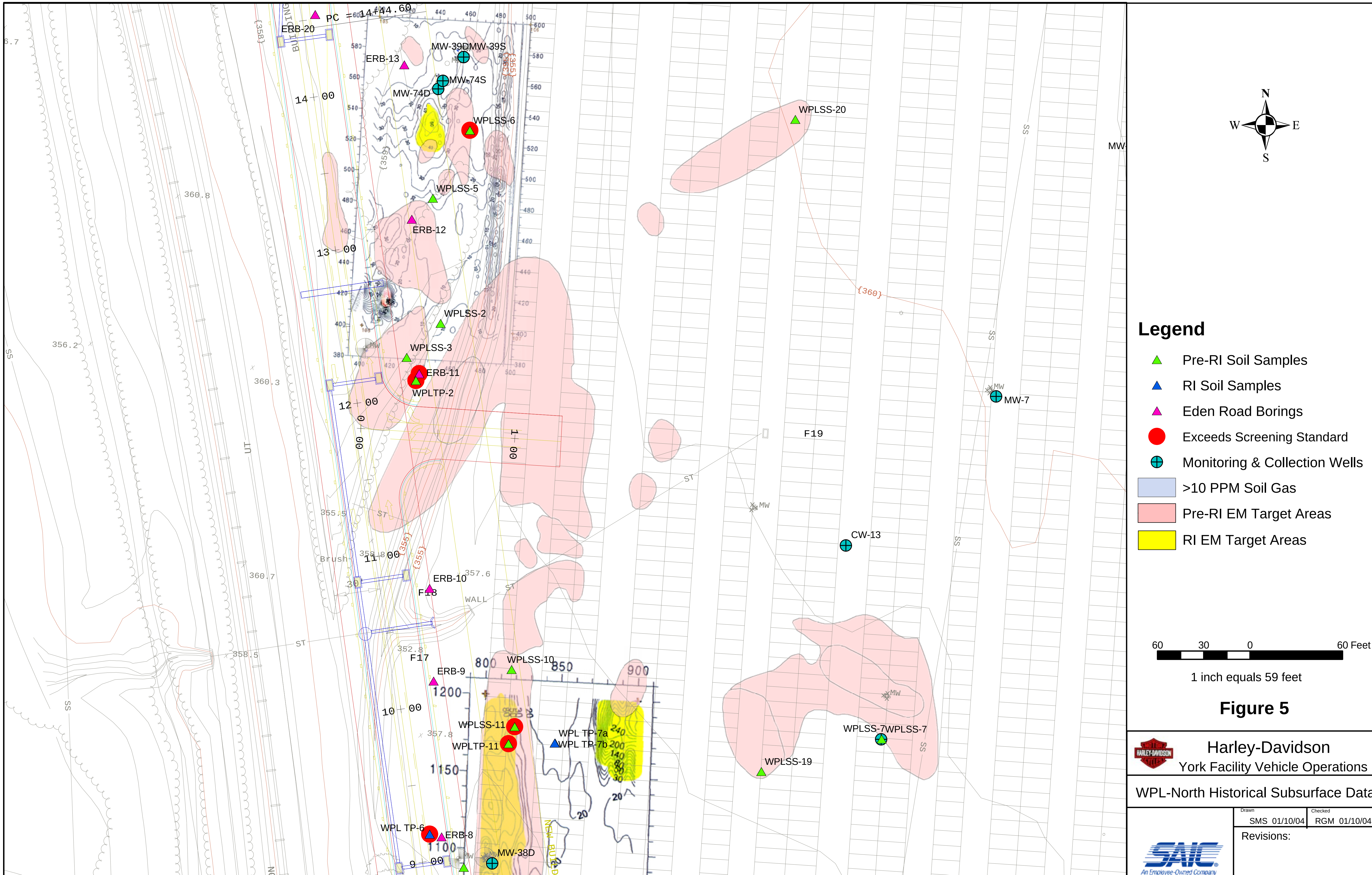

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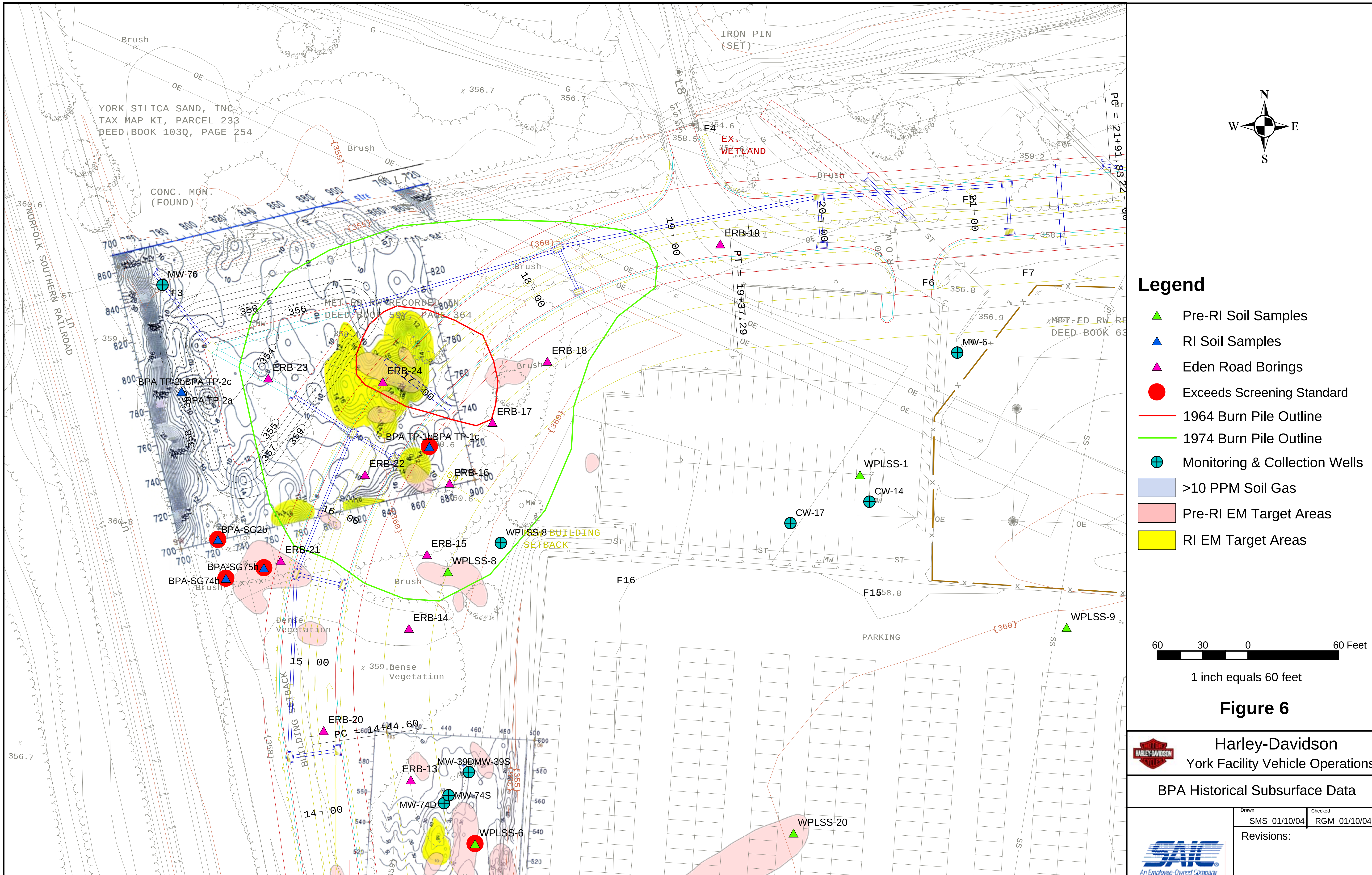

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Legend
Pre-RI Soil Samples
RI Soil Samples
Eden Road Borings
Exceeds Screening Standard
1964 Burn Pile Outline
1974 Burn Pile Outline
Monitoring & Collection Wells
>10 PPM Soil Gas
Pre-RI EM Target Areas
RI EM Target Areas
60 30 0 60 Feet
1 inch equals 60 feet
Figure 6
Harley-Davidson
York Facility Vehicle Operations
BPA Historical Subsurface Data
Drawn SMS 01/10/04
Checked RGM 01/10/04
Revisions:
SAIC An Employee-Owned Company
YORK SILICA SAND, INC.
TAX MAP KI, PARCEL 233
DEED BOOK 103Q, PAGE 254
CONC. MON. (FOUND)
IRON PIN (SET)
EX. WETLAND
NORFOLK SOUTHERN RAILROAD
MET-ED RW RECORDED IN DEED BOOK 59Y, PAGE 364
BUILDING SETBACK
PARKING
Dense Vegetation
Brush
PT = 19+37.29
PC = 14+44.60
PC = 21+91.83
MW-76
MW-6
MW-39D
MW-39S
MW-74S
MW-74D
CW-14
CW-17
WPLSS-1
WPLSS-6
WPLSS-8
WPLSS-9
WPLSS-20
ERB-13
ERB-14
ERB-15
ERB-16
ERB-17
ERB-18
ERB-19
ERB-20
ERB-21
ERB-22
ERB-23
ERB-24
BPA TP-2b
BPA TP-2c
BPA TP-2a
BPA TP-1b
BPA TP-1c
BPA-SG2b
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BPA-SG74b
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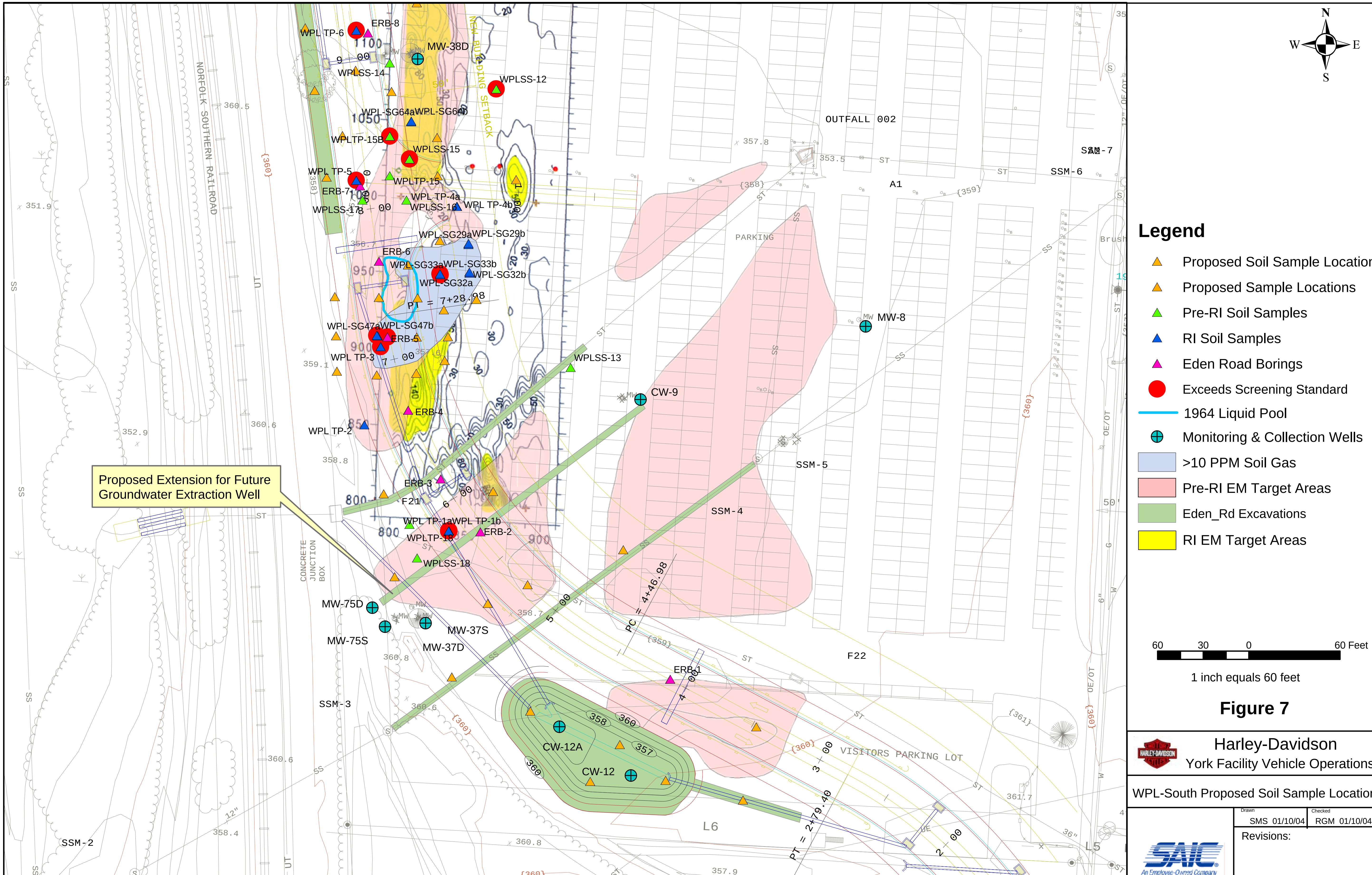

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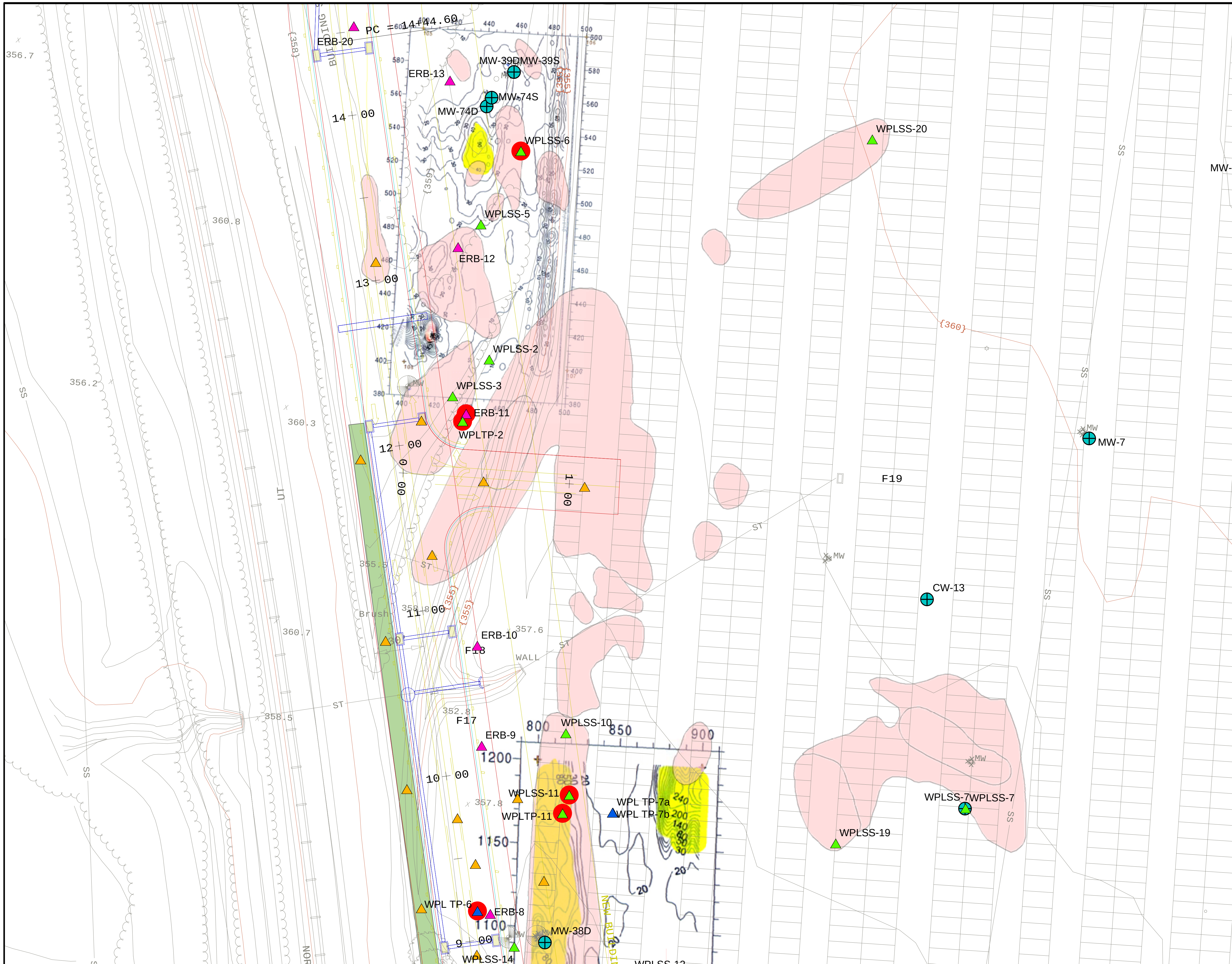

Figure 8

Harley-Davidson
York Facility Vehicle Operations

WPL-North Proposed Soil Sample Locations

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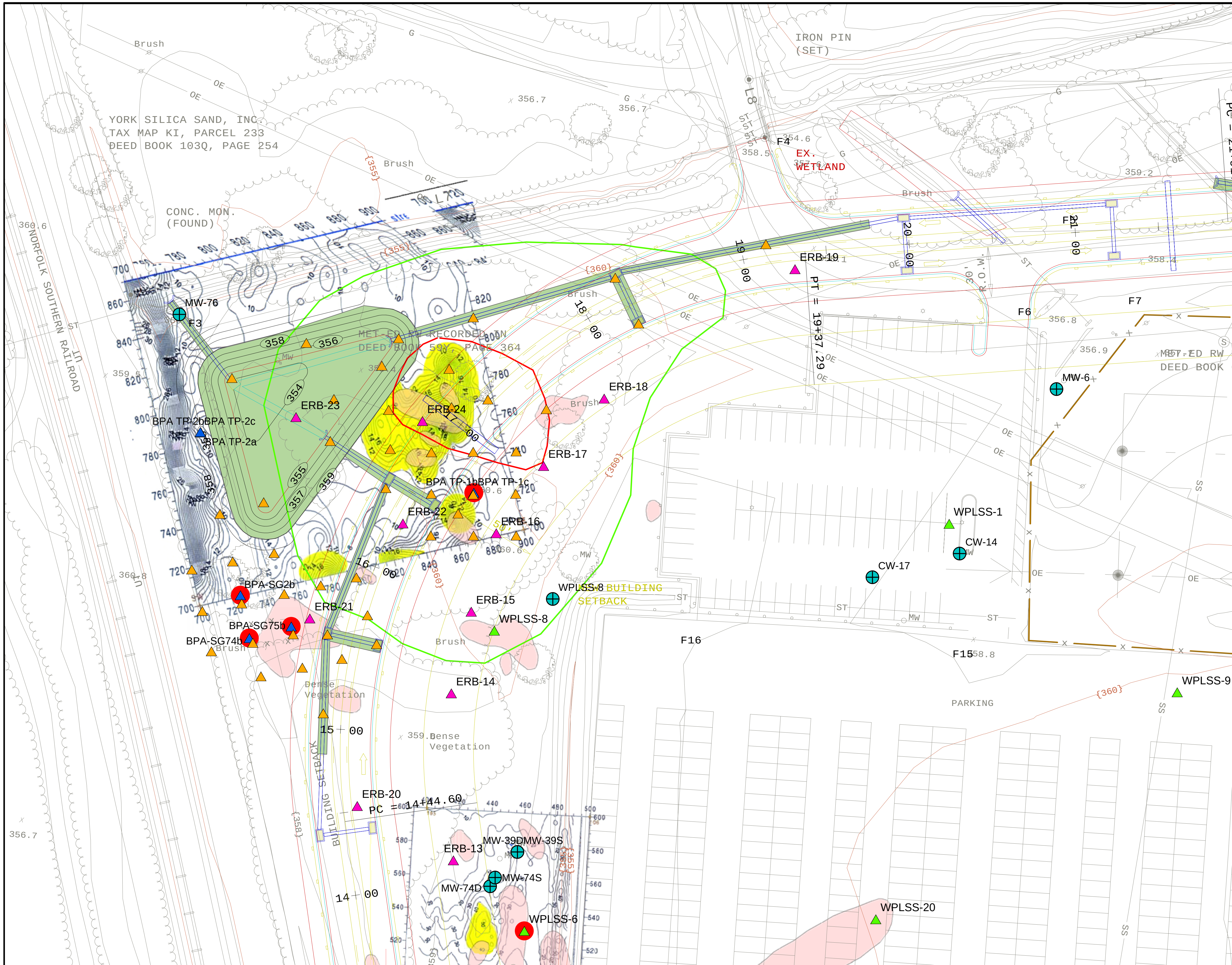

Legend

- Proposed Soil Sample Locations
- Proposed Sample Locations
- Pre-RI Soil Samples
- RI Soil Samples
- Eden Road Borings
- Exceeds Screening Standard
- 1964 Burn Pile Outline
- 1974 Burn Pile Outline
- Monitoring & Collection Wells
- >10 PPM Soil Gas
- Pre-RI EM Target Areas
- Eden_Rd Excavations
- RI EM Target Areas

60 30 0 60 Feet

1 inch equals 60 feet

Figure 9

Harley-Davidson
York Facility Vehicle Operations

BPA Proposed Soil Sample Locations

Drawn	Checked
SMS 01/10/04	RGM 01/10/04

Revisions:

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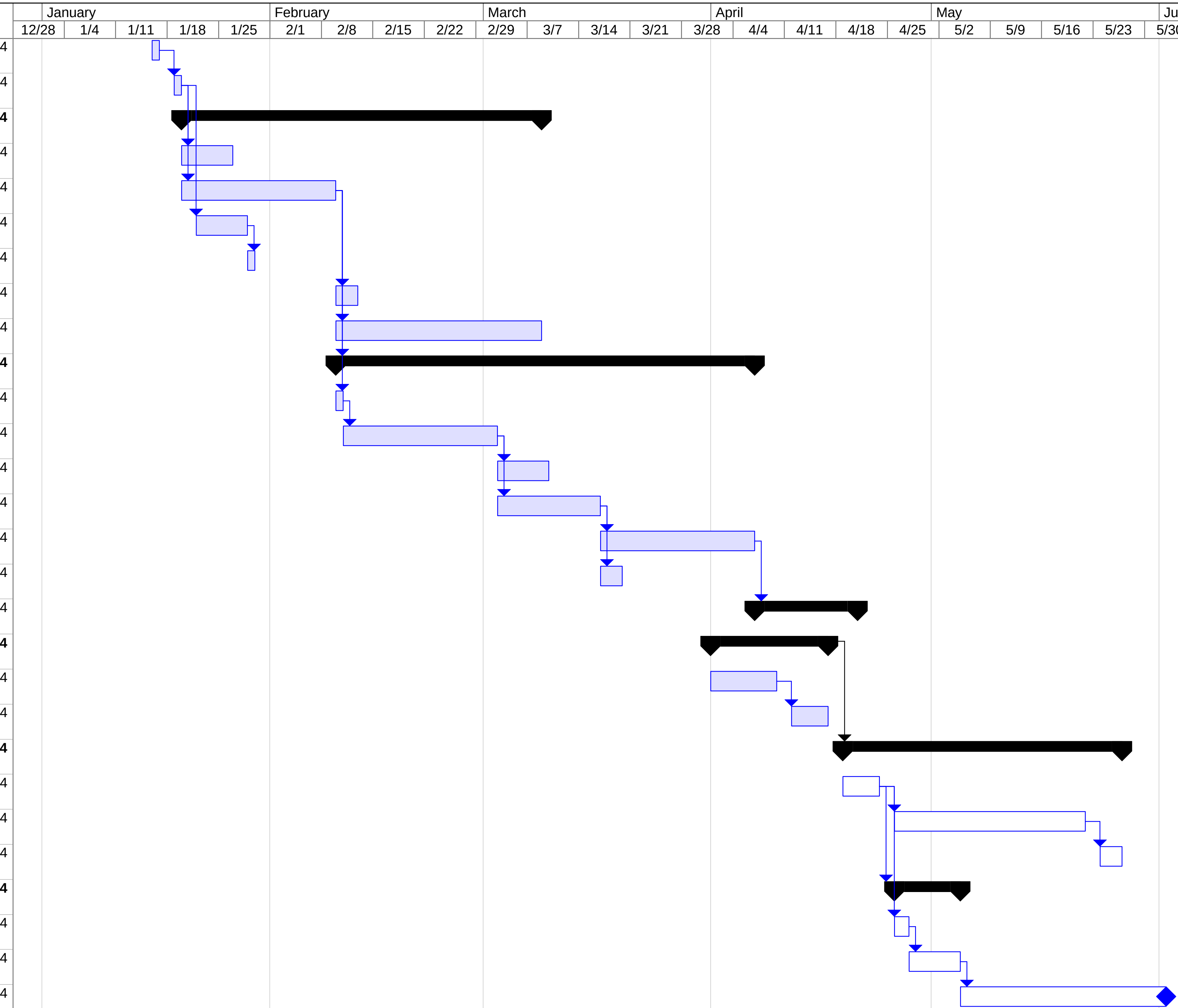
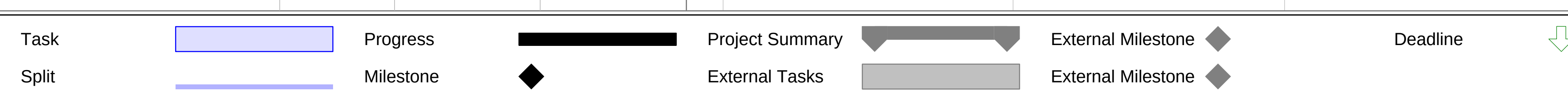
Figure 10. Proposed Project Schedule
Eden Road Relocation - Expedited Soil Investigation Activities

Harley-Davidson Motor Company Operations, Inc.
York, PA

Task Name	Duration	Start	Finish
Workplan approval	1 day?	Fri 1/16/04	Fri 1/16/04
Proposal approval	1 day?	Mon 1/19/04	Mon 1/19/04
Task 1 - Preliminary Activities	**35 days?**	**Tue 1/20/04**	**Mon 3/8/04**
Subcontract Procurement	5 days	Tue 1/20/04	Mon 1/26/04
Outsourcing Approval	15 days	Tue 1/20/04	Mon 2/9/04
Health & Safety Plan	5 days	Thu 1/22/04	Wed 1/28/04
Subsurface Utility Clearances	1 day?	Thu 1/29/04	Thu 1/29/04
Well Abandonment - CW-12 & CW-12A	3 days	Tue 2/10/04	Thu 2/12/04
Groundwater conveyance extension to SW WPL	20 days	Tue 2/10/04	Mon 3/8/04
Task 2 - Investigation of Soil	**41 days**	**Tue 2/10/04**	**Tue 4/6/04**
Pre-excavation clearance	1 day	Tue 2/10/04	Tue 2/10/04
Geoprobe Borings & sampling	15 days	Wed 2/11/04	Tue 3/2/04
Environmental Analyses (STL) - Geoprobe borings	5 days	Wed 3/3/04	Tue 3/9/04
Backhoe Testpit Investigation & sampling	10 days	Wed 3/3/04	Tue 3/16/04
Environmental Analyses (STL) - Testpit sampling	15 days	Wed 3/17/04	Tue 4/6/04
Test Pit Backfill & Asphalt Repair	3 days	Wed 3/17/04	Fri 3/19/04
Task 3 - Remedial Alternatives	10 days	Wed 4/7/04	Tue 4/20/04
Task 4a - Construction of Stormwater Basin and Utilities (by others)	**12 days**	**Thu 4/1/04**	**Fri 4/16/04**
Environmental Inspection and Sampling (TBD)	7 days	Thu 4/1/04	Fri 4/9/04
Confirmatory Analyses (TBD)	5 days	Mon 4/12/04	Fri 4/16/04
Task 4b - Removal/Disposal of Contaminated Soil (TBD)	**28 days?**	**Mon 4/19/04**	**Wed 5/26/04**
Excavation of contaminated soil (TBD)	5 days	Mon 4/19/04	Fri 4/23/04
Waste Processing - Sampling & Analysis (TBD)	20 days	Mon 4/26/04	Fri 5/21/04
Transportation & Disposal	3 days?	Mon 5/24/04	Wed 5/26/04
Task 5 - Confirmatory Soil Sampling & Analysis	**7 days**	**Mon 4/26/04**	**Tue 5/4/04**
Confirmatory Sampling	2 days	Mon 4/26/04	Tue 4/27/04
Confirmatory Analyses	5 days	Wed 4/28/04	Tue 5/4/04
Task 6 - Reporting	20 days	Wed 5/5/04	Tue 6/1/04



Project:
Date: Fri 1/9/04



TABLES

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPLSS-1-3 4.0-6.0 1991	WPLSS-2-2 2.0-4.0 1991	WPLSS-2-3 1991	WPLSS-22-3 Duplicate 1991	WPLSS-3-4 6.0-8.0 1991	WPLSS-5-2 2.0-4.0 1991	WPLSS-6-2 2.0-4.0 1991	WPLSS-7-4 6.0-8.0 1991	WPLSS-9-2 2.0-4.0 1991	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	ND	4.5	2.7	3.6	4.1	ND	ND	9.9	ND	**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	ND	ND	ND	0.6	0.5	0.6	0.6	0.6	0.6	**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	ND	8	2	ND	3	ND	1	ND	ND	**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	17	140	16	21	42	15	110	23	45	**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	**420**	**190,000**	**10**	**190**	**3,100**
Copper	10	990	9	14	78	610	37	14	25	**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	ND	0.14	0.048	ND	0.072	0.056	ND	ND	ND	**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	ND	0.028	ND	ND	ND	ND	ND	ND	ND	**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	ND	320	18	20	170	35	120	23	62	**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	ND	0.4	ND	ND	ND	ND	ND	ND	ND	**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	14	41	8	11	17	12	13	12	27	**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	3	ND	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	ND	ND	ND	24	ND	63	**200**	**190,000**	**0.2**	**14**	**72**
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**4,100,000**
Zinc	36	1,400	53	64	380	88	650	41	76	**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**1,000**	**110**	**100,000**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**	**240**	**0.5**	**0.13**	**52**
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**580**	**110**	**613,200**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**10**	**6.1**	**20,000**
Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**60**	**59**	**92,000**
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**33**	**38**	**0.7**	**0.19**	**10,000**
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,000**	**1,200**	**11**	**2.7**	**102,200**
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,900**	**2,100**	**7**	**1.6**	**10,000**
cis 1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,900**	**2,100**	**7**	**1.6**	**10,000**
trans 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,700**	**4,300**	**10**	**2.3**	**20,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**100**	**44**	**204,400**
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,100**	**190,000**	**7**	**18**	**110**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**20**	**7.2**	**286,160**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**100**	**120**	**0.5**	**0.15**	**50**
Tetrachloroethene (PCE)	ND	0.320	0.012	0.055	ND	ND	ND	ND	ND	**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	ND	0.030	ND	ND	ND	ND	ND	ND	ND	**970**	**1,100**	**0.5**	**0.17**	**7.2**
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**53**	**220**	**0.2**	**0.027**	**4**
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**1,000**	**990**	**200,000**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPLSS-10-2 2.0-4.0 1991	WPLSS-11-1 0.0-2.0 1991	WPLSS-12-4 6.0-8.0 1991	WPLSS-13-3 1991	WPLSS-13-4 6.0-8.0 1991	WPLSS-14-4 6.0-8.0 1991	WPLSS-15-4 6.0-7.0 1991	WPLSS-16-4 6.0-8.0 1991	WPLSS-26-4 Duplicate 1991	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	 Direct Contact, Subsurface Soil (2 - 15 Feet)	 SOIL to GW - USED AQUIFER 100 x GW MSC	 Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	32	ND	NA	ND	ND	ND	ND	ND	**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	ND	42	4.8	NA	ND	ND	7	ND	ND	**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	0.5	2	ND	NA	0.6	ND	ND	0.5	ND	**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	ND	5	1	NA	1	1	14	2	ND	**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	20	2,700	21	NA	26	19	1,100	21	33	**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	**420**	**190,000**	**10**	**190**	**3,100**
Copper	9	1,800	12	NA	22	14	340	9	25	**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	0.036	0.2	0.88	NA	ND	ND	0.4	ND	ND	**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	ND	ND	ND	NA	ND	ND	ND	ND	ND	**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	24	100	19	NA	30	20	480	21	37	**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	ND	0.33	ND	NA	ND	ND	ND	ND	ND	**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	10	900	10	NA	12	12	110	9	24	**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	NA	ND	ND	ND	ND	ND	**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	ND	ND	NA	ND	ND	ND	ND	ND	**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	NA	ND	ND	ND	ND	ND	**200**	**190,000**	**0.2**	**14**	**72**
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**4,100,000**
Zinc	29	1,500	35	NA	51	40	1,500	24	66	**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**1,000**	**110**	**100,000**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**	**240**	**0.5**	**0.13**	**52**
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**580**	**110**	**613,200**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**10**	**6.1**	**20,000**
Dichlorobenzene	NA	NA	1.5	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**60**	**59**	**92,000**
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**33**	**38**	**0.7**	**0.19**	**10,000**
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,000**	**1,200**	**11**	**2.7**	**102,200**
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,900**	**2,100**	**7**	**1.6**	**10,000**
cis 1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,900**	**2,100**	**7**	**1.6**	**10,000**
trans 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,700**	**4,300**	**10**	**2.3**	**20,000**
Ethylbenzene	ND	0.14	ND	ND	ND	ND	0.325	ND	ND	**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	0.02	ND	ND	ND	ND	0.05	ND	ND	**10,000**	**10,000**	**100**	**44**	**204,400**
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,100**	**190,000**	**7**	**18**	**110**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**20**	**7.2**	**286,160**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**100**	**120**	**0.5**	**0.15**	**50**
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	0.014	ND	3.2	ND	ND	ND	ND	ND	ND	**970**	**1,100**	**0.5**	**0.17**	**7.2**
Vinyl Chloride	ND	ND	ND	0.02	ND	ND	ND	ND	ND	**53**	**220**	**0.2**	**0.027**	**4**
Xylenes	NA	1	NA	NA	NA	NA	6	NA	NA	**10,000**	**10,000**	**1,000**	**990**	**200,000**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	WPLSS-17-1	WPLSS-18-3	WPLSS-19-4	WPLSS-20-6	WPLTP-2-1	WPLTP-2-2	WPLTP-2-3	WPLTP-2-4	WPLTP-2-5	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
										Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER		Industrial Soil [Ingestion]
Depth (ft.)	0.0-2.0	4.0-6.0	6.0-8.0	10.0-12.0	3	2.5	1.5	Drum	Drum			100 x GW MSC	Generic	
Sample Date	1991	1991	1991	1991	1991	1991	1991	1991 (Grease)	1991 (Semi-Solid)					
Parameter/Units														
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,100	190,000	0.6	27	410
Arsenic	ND	6.4	ND	2.6	8	3.3	ND	ND	2.5	53	190,000	5	150	1.9
Beryllium	0.7	0.7	0.6	ND	2.1	ND	ND	ND	ND	5,600	190,000	0.4	320	2,000
Cadmium	3	ND	ND	ND	13	7	ND	ND	3	210	190,000	0.5	38	510/1,000
Chromium, total	83	21	24	8	210	87	ND	4	83	190,000	190,000	10	190,000	1,500,000
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	420	190,000	10	190	3,100
Copper	160	17	19	6	3,900	220	7	77	56	100,000	190,000	100	36,000	41,000
Cyanide, total	ND	0.056	ND	ND	0.3	1	ND	NA	NA	NR	NR	NR	NR	NR
Cyanide, free	ND	ND	ND	ND	NA	NA	NA	NA	NA	56,000	190,000	20	200	20,000
Lead	160	28	24	ND	670	370	ND	33	79	1,000	190,000	0.5	450	NR
Mercury	ND	0.13	ND	ND	0.38	0.58	ND	ND	0.25	840	190,000	0.2	10	NR
Nickel	38	16	16	7	48	57	ND	ND	59	56,000	190,000	10	650	20,000
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	5	26	5,100
Silver	62	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	10	84	5,100
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	190,000	0.2	14	72
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	4,100,000
Zinc	190	59	50	25	8,500	91,082	130	300	570	190,000	190,000	200	12,000	310,000
Detected Volatile Organics (mg/kg)														
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	1,000	110	100,000
Benzene	ND	ND	ND	ND	ND	ND	0.025	ND	1.9	210	240	0.5	0.13	52
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	580	110	613,200
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	10	6.1	20,000
Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.025	ND	ND	33	38	0.7	0.19	10,000
1,1-Dichloroethane	ND	0.026	ND	ND	ND	ND	ND	ND	ND	1,000	1,200	11	2.7	102,200
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,900	2,100	7	1.6	10,000
cis 1,2-Dichloroethene	NA	0.127	NA	0.04	ND	ND	ND	ND	ND	1,900	2,100	7	1.6	10,000
trans 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.75	ND	ND	3,700	4,300	10	2.3	20,000
Ethylbenzene	ND	ND	ND	ND	ND	12.5	0.025	0.075	18.75	10,000	10,000	70	46	100,000
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,500	4,000	0.5	0.076	380
Toluene	ND	ND	ND	ND	1.56	ND	0.075	0.325	15.63	10,000	10,000	100	44	204,400
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	2.175	ND	ND	3,100	190,000	7	18	110
1,1,1-Trichloroethane	ND	0.011	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	20	7.2	286,160
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.025	ND	ND	100	120	0.5	0.15	50
Tetrachloroethene (PCE)	ND	0.25	ND	ND	ND	ND	0.125	ND	ND	1,500	3,300	0.5	0.43	140
Trichloroethene (TCE)	0.047	0.111	ND	0.017	0.03	ND	1	0.15	ND	970	1,100	0.5	0.17	7.2
Vinyl Chloride	ND	0.012	ND	ND	ND	ND	4.95	ND	ND	53	220	0.2	0.027	4
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	1,000	990	200,000

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Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	WPLTP-11-1	WPLTP-11-2	WPLTP-11-3	WPLTP-11-4	WPLTP-15-1	WPLTP-15-2	WPLTP-15-3	TP-15-B-1	TP-15-B-3	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
										Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		
Depth (ft.)	3.0	2.0	Waste	Bucket	Orange Waste	Orange Waste	Blue Waste	Bucket	6.0	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Sample Date	1991	1991	1991	1991	1991	1991	1991	1991	1991					
Parameter/Units			(Lard)	(Sludge)	(Semi-Solid)	(Semi-Solid)	(Semi-Solid)	(Sandy Soil)	(Soil)	(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	ND	ND	ND	0.6	ND	1,100	190,000	0.6	27	410
Arsenic	15	13	2.2	26	ND	ND	2.8	6.9	6.1	53	190,000	5	150	1.9
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,600	190,000	0.4	320	2,000
Cadmium	4	2	ND	18	ND	ND	ND	29	11	210	190,000	0.5	38	510/1,000
Chromium, total	15,000	2,500	170	550	31,000	9	25,000	450	8,200	190,000	190,000	10	190,000	1,500,000
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	420	190,000	10	190	3,100
Copper	1,700	1,300	86	2,700	16	9	21	170	120	100,000	190,000	100	36,000	41,000
Cyanide, total	0.64	0.1	NA	20	NA	NA	NA	ND	0.68	NR	NR	NR	NR	NR
Cyanide, free	ND	ND	NA	ND	NA	NA	NA	ND	ND	56,000	190,000	20	200	20,000
Lead	320	710	40	450	95,000	88	110,000	1,000	700	1,000	190,000	0.5	450	NR
Mercury	0.63	0.83	ND	0.98	ND	ND	0.33	1.2	0.65	840	190,000	0.2	10	NR
Nickel	890	630	51	360	6	ND	8	26	10	56,000	190,000	10	650	20,000
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	5	26	5,100
Silver	ND	31	ND	42	ND	ND	ND	ND	10	14,000	190,000	10	84	5,100
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	190,000	0.2	14	72
Titanium	NA	NA	NA	NA	260	140	240	NA	NA	NR	NR	NR	NR	4,100,000
Zinc	1,200	120	1,300	ND	24,000	37	10,000	1,300	37,000	190,000	190,000	200	12,000	310,000
Detected Volatile Organics (mg/kg)														
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	1,000	110	100,000
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	210	240	0.5	0.13	52
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	580	110	613,200
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	10	6.1	20,000
Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	38	0.7	0.19	10,000
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000	1,200	11	2.7	102,200
1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,900	2,100	7	1.6	10,000
cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	NA	1,900	2,100	7	1.6	10,000
trans 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,700	4,300	10	2.3	20,000
Ethylbenzene	0.1	0.037	ND	0.02	35.8	ND	ND	0.63	9.4	10,000	10,000	70	46	100,000
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,500	4,000	0.5	0.076	380
Toluene	0.02	0.01	ND	0.02	ND	ND	ND	8.13	131.3	10,000	10,000	100	44	204,400
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,100	190,000	7	18	110
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	20	7.2	286,160
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120	0.5	0.15	50
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,500	3,300	0.5	0.43	140
Trichloroethene (TCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	970	1,100	0.5	0.17	7.2
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	220	0.2	0.027	4
Xylenes	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	1,000	990	200,000

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Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	TP-15-B-4	WPLTP-18-1	WPL-SG-29a	WPL-SG-29b	WPL-SG-32a	WPL-SG-32b	WPL-SG-33a	WPL-SG-33b	WPL-SG-47a	Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		CONCENTRATIONS
Depth (ft.)	3.5	3.0	2-3	18-20	10-11	20.5-21.5	2-4	8-9	8-9	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Sample Date	1991	1991	12/28/1999	12/28/1999	12/28/1999	12/28/1999	12/29/1999	12/29/1999	12/28/1999					
Parameter/Units	(Sand)									(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	ND	ND	122	ND	ND	**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	4.6	7.8	5.35	2.06	5.45	2.09	221	4.89	6.89	**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	ND	ND	0.421	0.191	0.398	0.315	225	0.537	0.426	**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	3	ND	ND	0.179	0.214	0.232	224	ND	2.86	**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	82	46	16.3	3.32	16.4	6.05	249	16.6	1,230	**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	NA	ND	ND	ND	ND	ND	ND	ND	**420**	**190,000**	**10**	**190**	**3,100**
Copper	58	400	17.3	9.04	11.4	9.28	258	11.2	354	**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	0.048	ND	ND	ND	ND	ND	ND	ND	2.2	**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	ND	ND	NA	NA	NA	NA	NA	NA	NA	**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	57	47	9.27	4.56	14.1	6.69	233	11.1	113	**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	0.13	ND	ND	ND	ND	ND	ND	ND	ND	**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	26	180	11.1	4.23	9.85	6.06	240	7.16	63.8	**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	ND	ND	ND	194	ND	ND	**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	ND	ND	ND	ND	ND	225	ND	3.52	**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	ND	ND	ND	212	ND	ND	**200**	**190,000**	**0.2**	**14**	**72**
Titanium	NA	ND	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**4,100,000**
Zinc	180	3,500	16	17	27.8	18.8	268	23.4	604	**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	NA	NA	0.0162	0.0129	0.0156	0.0165	0.0921	ND	0.0839	**10,000**	**10,000**	**1,000**	**110**	**100,000**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**	**240**	**0.5**	**0.13**	**52**
2-Butanone (MEK)	NA	NA	ND	ND	ND	ND	0.0186	ND	ND	**10,000**	**10,000**	**580**	**110**	**613,200**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	3,630	**10,000**	**10,000**	**10**	**6.1**	**20,000**
Dichlorobenzene	NA	NA	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**60**	**59**	**92,000**
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**33**	**38**	**0.7**	**0.19**	**10,000**
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,000**	**1,200**	**11**	**2.7**	**102,200**
1,2-Dichloroethene	NA	NA	0.00654	0.0179	ND	ND	ND	ND	ND	**1,900**	**2,100**	**7**	**1.6**	**10,000**
cis 1,2-Dichloroethene	NA	0.02	ND	ND	ND	ND	ND	ND	ND	**1,900**	**2,100**	**7**	**1.6**	**10,000**
trans 1,2-Dichloroethene	ND	ND	NA	NA	NA	NA	NA	NA	NA	**3,700**	**4,300**	**10**	**2.3**	**20,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	3.85	0.228	**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	ND	ND	ND	ND	ND	ND	0.381	ND	**10,000**	**10,000**	**100**	**44**	**204,400**
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,100**	**190,000**	**7**	**18**	**110**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**20**	**7.2**	**286,160**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**100**	**120**	**0.5**	**0.15**	**50**
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	ND	0.009	ND	ND	ND	ND	ND	ND	ND	**970**	**1,100**	**0.5**	**0.17**	**7.2**
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**53**	**220**	**0.2**	**0.027**	**4**
Xylenes	NA	NA	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**1,000**	**990**	**200,000**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
Location/ID	WPL-SG-47b	WPL-SG-64a	WPL-SG-64b	WPL TP-1a	WPL TP-1b	WPL TP-2	WPL TP-3	WPL TP-4a	WPL TP-4b	Direct Contact, Surface Soil	Direct Contact, Subsurface Soil	SOIL to GW - USED AQUIFER 100 x GW MSC	SOIL to GW - USED AQUIFER Generic	Industrial Soil
Depth (ft.)	12-13.1	9-10	16-18	4-4.5	6-6.5	6-6.5	4-4.5	4-4.5	5-5.5					
Sample Date	12/28/1999	11/29/1999	11/29/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999					
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	33	ND	ND	6.58	2.07	ND	1,100	190,000	0.6	27	410
Arsenic	4.95	6.79	2.82	7.95	6.06	17.7	13	2.7	4.93	53	190,000	5	150	1.9
Beryllium	0.338	0.44	0.357	0.619	0.825	0.206	0.374	ND	0.544	5,600	190,000	0.4	320	2,000
Cadmium	0.388	ND	0.834	7.52	ND	7.78	15.7	1.27	ND	210	190,000	0.5	38	510/1,000
Chromium, total	20.9	299	141	77.6	13.7	377	535	27.3	21	190,000	190,000	10	190,000	1,500,000
Chromium, hexavalent	ND	ND	NA	ND	ND	ND	ND	ND	ND	420	190,000	10	190	3,100
Copper	20.8	40.8	18.5	414	13.5	531	417	77.7	20.3	100,000	190,000	100	36,000	41,000
Cyanide, total	ND	0.51	NA	1.04	ND	ND	1.39	ND	ND	NR	NR	NR	NR	NR
Cyanide, free	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	20	200	20,000
Lead	21.2	46.9	9.11	905	20.2	122	478	137	10.9	1,000	190,000	0.5	450	NR
Mercury	ND	ND	ND	0.8	ND	6.9	2.29	ND	ND	840	190,000	0.2	10	NR
Nickel	15.8	28.3	7.83	38.8	8.58	205	230	33.2	12.3	56,000	190,000	10	650	20,000
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	5	26	5,100
Silver	ND	ND	ND	ND	ND	ND	4.23	ND	ND	14,000	190,000	10	84	5,100
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	190,000	0.2	14	72
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	4,100,000
Zinc	39.8	40.3	70	983	41.4	555	1,090	662	45	190,000	190,000	200	12,000	310,000
Detected Volatile Organics (mg/kg)														
Acetone	0.0935	0.0518	0.0117	0.238	0.31	0.463	0.0779	0.171	0.252	10,000	10,000	1,000	110	100,000
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	210	240	0.5	0.13	52
2-Butanone (MEK)	ND	0.0127	ND	0.0697	0.084	0.111	ND	ND	0.0416	10,000	10,000	580	110	613,200
Chlorobenzene	3,140	ND	ND	ND	ND	0.0572	ND	ND	ND	10,000	10,000	10	6.1	20,000
Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	60	59	92,000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	38	0.7	0.19	10,000
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000	1,200	11	2.7	102,200
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,900	2,100	7	1.6	10,000
cis 1,2-Dichloroethene	ND	ND	ND	0.144	ND	ND	ND	ND	ND	1,900	2,100	7	1.6	10,000
trans 1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,700	4,300	10	2.3	20,000
Ethylbenzene	0.0671	ND	ND	ND	ND	0.227	ND	ND	ND	10,000	10,000	70	46	100,000
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,500	4,000	0.5	0.076	380
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	100	44	204,400
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,100	190,000	7	18	110
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	20	7.2	286,160
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120	0.5	0.15	50
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,500	3,300	0.5	0.43	140
Trichloroethene (TCE)	ND	ND	ND	ND	ND	ND	ND	ND	ND	970	1,100	0.5	0.17	7.2
Vinyl Chloride	ND	ND	ND	0.327	ND	ND	ND	ND	ND	53	220	0.2	0.027	4
Xylenes	ND	ND	ND	0.109	ND	0.999	0.0829	0.207	0.273	10,000	10,000	1,000	990	200,000

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	WPL TP-5	WPL TP-6	WPL TP-7a	WPL TP-7b	ERB-01	ERB-02	ERB-03	ERB-04	ERB-05	Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		CONCENTRATIONS
Depth (ft.)	3-3.5	5.5-6	4-4.5	4.5-5	16.0	6.0	18.0	14.0	10.0	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Sample Date	11/26/1999	11/26/1999	11/26/1999	11/26/1999	4/17/2002	4/15/2002	4/15/2002	4/15/2002	4/16/2002					
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	5.82	17.3	39.1	ND	ND	ND	ND	ND	ND	1,100	190,000	0.6	27	410
Arsenic	15.3	20.1	36.8	7.14	5.7	4.9	ND	5.8	7.5	53	190,000	5	150	1.9
Beryllium	0.36	0.304	0.276	0.493	ND	ND	ND	ND	ND	5,600	190,000	0.4	320	2,000
Cadmium	3.7	26.2	4.99	ND	ND	ND	ND	ND	ND	210	190,000	0.5	38	510/1,000
Chromium, total	103	3,380	30,200	25.3	18	25	8.4	41	36	190,000	190,000	10	190,000	1,500,000
Chromium, hexavalent	ND	ND	778	ND	NA	NA	NA	NA	NA	420	190,000	10	190	3,100
Copper	819	1,880	ND	40.6	14	45	14	38	19	100,000	190,000	100	36,000	41,000
Cyanide, total	ND	0.553	3.66	2.46	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR
Cyanide, free	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	20	200	20,000
Lead	801	1,180	2,880	17	11	47	15	31	20	1,000	190,000	0.5	450	NR
Mercury	ND	ND	2.51	ND	ND	ND	0.11	1.1	ND	840	190,000	0.2	10	NR
Nickel	152	347	2,210	16.2	21	15	6.3	20	15	56,000	190,000	10	650	20,000
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	5	26	5,100
Silver	ND	4.07	10	ND	ND	ND	ND	ND	ND	14,000	190,000	10	84	5,100
Thallium	ND	ND	ND	ND	5.7	ND	ND	ND	ND	200	190,000	0.2	14	72
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	4,100,000
Zinc	1,790	1,710	3,540	47.8	86	140	41	80	59	190,000	190,000	200	12,000	310,000
Detected Volatile Organics (mg/kg)														
Acetone	0.38	0.813	0.0958	0.2	ND	ND	ND	ND	ND	10,000	10,000	1,000	110	100,000
Benzene	0.0728	ND	ND	ND	ND	ND	ND	0.085	ND	210	240	0.5	0.13	52
2-Butanone (MEK)	0.0535	0.15	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	580	110	613,200
Chlorobenzene	ND	0.2	ND	ND	ND	ND	ND	1.1	32	10,000	10,000	10	6.1	20,000
Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	60	59	92,000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	38	0.7	0.19	10,000
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	0.062	ND	ND	1,000	1,200	11	2.7	102,200
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,900	2,100	7	1.6	10,000
cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	0.012 (J)	ND	ND	ND	1,900	2,100	7	1.6	10,000
trans 1,2-Dichloroethene	NA	NA	NA	NA	ND	ND	ND	ND	ND	3,700	4,300	10	2.3	20,000
Ethylbenzene	0.0699	ND	ND	ND	ND	ND	ND	0.079	0.094	10,000	10,000	70	46	100,000
Methylene Chloride	ND	ND	ND	ND	0.040 (J)	ND	ND	ND	ND	3,500	4,000	0.5	0.076	380
Toluene	0.0397	ND	ND	ND	0.0082 (J)	ND	ND	0.019 (J)	ND	10,000	10,000	100	44	204,400
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,100	190,000	7	18	110
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	20	7.2	286,160
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120	0.5	0.15	50
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	0.14	ND	ND	1,500	3,300	0.5	0.43	140
Trichloroethene (TCE)	ND	ND	ND	ND	ND	ND	0.032 (J)	ND	ND	970	1,100	0.5	0.17	7.2
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	53	220	0.2	0.027	4
Xylenes	0.339	0.101	ND	0.181	ND	ND	ND	ND	ND	10,000	10,000	1,000	990	200,000

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 1
Soil Data Summary - Inorganics & Volatile Organic Compounds
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	ERB-06 15.0 4/16/2002	ERB-07 12.0 4/17/2002	ERB-08 18.0 4/16/2002	ERB-09 11.0 4/16/2002	ERB-10 12.0 4/16/2002	ERB-11 12.0 4/17/2002	ERB-12 20.0 4/18/2002	ERB-13 14.0 4/18/2002	ERB-20 13.0 4/18/2002	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	<0.93	<1.2	<1.0	<1.2	ND	**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	5.8	4.4	ND	4.4	12	3.6	6.2	3.6	8.2	**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	22	15	3	21	29	17	20	14	23	**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	**420**	**190,000**	**10**	**190**	**3,100**
Copper	9.5	13	3	20	31	16	28	13	17	**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	ND	ND	ND	ND	ND	ND	0.29	ND	ND	**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	NA	NA	NA	NA	NA	NA	NA	NA	NA	**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	5.8	8.9	2	14	16	11	28	11	14	**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	ND	ND	ND	ND	ND	ND	0.058	ND	ND	**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	6.7	7.8	ND	19	14	16	37	13	13	**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**200**	**190,000**	**0.2**	**14**	**72**
Titanium	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**4,100,000**
Zinc	19	26	12	55	46	45	95	37	47	**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**1,000**	**110**	**100,000**
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**210**	**240**	**0.5**	**0.13**	**52**
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**580**	**110**	**613,200**
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**10**	**6.1**	**20,000**
Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**60**	**59**	**92,000**
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**33**	**38**	**0.7**	**0.19**	**10,000**
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,000**	**1,200**	**11**	**2.7**	**102,200**
1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,900**	**2,100**	**7**	**1.6**	**10,000**
cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.098	ND	ND	**1,900**	**2,100**	**7**	**1.6**	**10,000**
trans 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,700**	**4,300**	**10**	**2.3**	**20,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	0.060 (J)	ND	ND	ND	0.037 (J)	0.019 (J)	ND	0.017 (J)	**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	0.0082 (J)	ND	ND	ND	0.0096 (J)	ND	ND	ND	**10,000**	**10,000**	**100**	**44**	**204,400**
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,100**	**190,000**	**7**	**18**	**110**
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**20**	**7.2**	**286,160**
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	**100**	**120**	**0.5**	**0.15**	**50**
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	0.10	ND	ND	ND	**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	ND	ND	ND	ND	ND	ND	0.083	0.019 (J)	ND	**970**	**1,100**	**0.5**	**0.17**	**7.2**
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**53**	**220**	**0.2**	**0.027**	**4**
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**1,000**	**990**	**200,000**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	WPLSS-1-3	WPLSS-2-2	WPLSS-2-3	WPLSS-22-3	WPLSS-3-4	WPLSS-5-2	WPLSS-6-2	WPLSS-7-4	WPLSS-9-2	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
Depth (ft.)	4.0-6.0	2.0-4.0		Duplicate	6.0-8.0	2.0-4.0	2.0-4.0	6.0-8.0	2.0-4.0	Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER		Industrial Soil [Ingestion]
Sample Date	1991	1991	1991	1991	1991	1991	1991	1991	1991			100 x GW MSC	Generic	
Parameter/Units														
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	ND	ND	NA	NA	NA	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	ND	ND	NA	NA	NA	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	ND	ND	NA	NA	NA	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	ND	ND	NA	NA	NA	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	ND	ND	NA	NA	NA	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	ND	ND	NA	NA	NA	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	ND	ND	NA	NA	NA	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	WPLSS-10-2	WPLSS-11-1	WPLSS-12-4	WPLSS-13-3	WPLSS-13-4	WPLSS-14-4	WPLSS-15-4	WPLSS-16-4	WPLSS-26-4	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
Depth (ft.)	2.0-4.0	0.0-2.0	6.0-8.0		6.0-8.0	6.0-8.0	6.0-7.0	6.0-8.0	Duplicate	Direct Contact, Surface Soil	Direct Contact, Subsurface Soil	SOIL to GW - USED AQUIFER		Industrial Soil
Sample Date	1991	1991	1991	1991	1991	1991	1991	1991	1991			100 x GW MSC	Generic	
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	ND	NA	NA	NA	ND	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	ND	NA	NA	NA	ND	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	ND	NA	NA	NA	ND	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	ND	NA	NA	NA	ND	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	ND	NA	NA	NA	ND	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	ND	NA	NA	NA	ND	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	5.3	NA	NA	NA	ND	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

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Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPLSS-17-1 0.0-2.0 1991	WPLSS-18-3 4.0-6.0 1991	WPLSS-19-4 6.0-8.0 1991	WPLSS-20-6 10.0-12.0 1991	WPLTP-2-1 3 1991	WPLTP-2-2 2.5 1991	WPLTP-2-3 1.5 1991	WPLTP-2-4 Drum 1991 (Grease)	WPLTP-2-5 Drum 1991 (Semi-Solid)	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	NA	NA	ND	ND	ND	NA	ND	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	NA	NA	ND	ND	ND	NA	ND	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	NA	NA	ND	ND	ND	NA	ND	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	NA	NA	ND	ND	ND	NA	ND	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	NA	NA	ND	ND	ND	NA	ND	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	NA	NA	36	ND	ND	NA	2.2	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	NA	NA	ND	ND	ND	NA	ND	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPLTP-11-1 3.0 1991	WPLTP-11-2 2.0 1991	WPLTP-11-3 Waste 1991 (Lard)	WPLTP-11-4 Bucket 1991 (Sludge)	WPLTP-15-1 Orange Waste 1991 (Semi-Solid)	WPLTP-15-2 Orange Waste 1991 (Semi-Solid)	WPLTP-15-3 Blue Waste 1991 (Semi-Solid)	TP-15-B-1 Bucket 1991 (Sandy Soil)	TP-15-B-3 6.0 1991 (Soil)	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	ND	ND	NA	ND	NA	NA	NA	ND	ND	200	10,000	0.72	200	41
Arochlor-1221	ND	ND	NA	ND	NA	NA	NA	ND	ND	160	10,000	0.52	3	1.4
Arochlor-1232	ND	ND	NA	ND	NA	NA	NA	ND	ND	160	10,000	0.52	2	1.4
Arochlor-1242	ND	ND	NA	ND	NA	NA	NA	ND	ND	160	10,000	0.52	62	1.4
Arochlor-1248	ND	ND	NA	ND	NA	NA	NA	ND	ND	44	10,000	0.14	67	1.4
Arochlor-1254	1.5	12	NA	14	NA	NA	NA	7.2	ND	44	10,000	0.14	280	1.4
Arochlor-1260	ND	ND	NA	ND	NA	NA	NA	ND	ND	130	190,000	0.43	1,900	1.4

ND = Not detected
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Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	TP-15-B-4	WPLTP-18-1	WPL-SG-29a	WPL-SG-29b	WPL-SG-32a	WPL-SG-32b	WPL-SG-33a	WPL-SG-33b	WPL-SG-47a	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
										Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		
Depth (ft.)	3.5	3.0	2-3	18-20	10-11	20.5-21.5	2-4	8-9	8-9	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Sample Date	1991	1991	12/28/1999	12/28/1999	12/28/1999	12/28/1999	12/29/1999	12/29/1999	12/28/1999					
Parameter/Units	(Sand)									(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	ND	ND	ND	ND	ND	ND	0.475	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	ND	ND	ND	ND	ND	ND	1.93	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	ND	ND	ND	ND	ND	ND	8.82	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	ND	ND	ND	ND	ND	ND	0.502	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	ND	ND	ND	ND	ND	1.32	0.409	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	ND	ND	ND	ND	ND	ND	0.707	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	ND	ND	ND	ND	ND	ND	ND	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	ND	ND	ND	ND	ND	ND	ND	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	ND	ND	ND	ND	ND	ND	ND	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	ND	ND	ND	ND	ND	ND	ND	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	ND	ND	ND	ND	ND	ND	ND	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	ND	ND	ND	ND	ND	ND	ND	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	ND	ND	ND	ND	ND	ND	ND	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	ND	ND	ND	ND	ND	ND	ND	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	ND	ND	ND	ND	ND	1.91	8.29	5,700	10,000	0.6	130	200
Carbazole	NA	NA	ND	ND	ND	ND	ND	ND	ND	4,000	190,000	13	83	140
Chrysene	NA	NA	ND	ND	ND	ND	ND	ND	ND	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	ND	ND	ND	ND	ND	ND	6.86	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	ND	ND	ND	ND	ND	ND	ND	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	ND	ND	ND	ND	ND	ND	0.719	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	ND	ND	ND	ND	ND	ND	ND	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	ND	ND	ND	ND	ND	ND	ND	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	ND	ND	ND	ND	ND	1.23	0.792	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	ND	ND	ND	ND	ND	ND	0.513	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	ND	ND	ND	ND	ND	ND	0.736	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	ND	ND	NA	NA	NA	NA	NA	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	ND	ND	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	ND	ND	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	ND	ND	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	ND	ND	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	ND	ND	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	ND	1.6	NA	NA	NA	NA	NA	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	WPL-SG-47b	WPL-SG-64a	WPL-SG-64b	WPL TP-1a	WPL TP-1b	WPL TP-2	WPL TP-3	WPL TP-4a	WPL TP-4b	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
										Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		
Depth (ft.)	12-13.1	9-10	16-18	4-4.5	6-6.5	6-6.5	4-4.5	4-4.5	5-5.5	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Sample Date	12/28/1999	11/29/1999	11/29/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999	11/26/1999					
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	ND	ND	ND	1.42	ND	ND	ND	ND	ND	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	ND	ND	ND	3.97	ND	2.3	ND	4.64	1.12	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	ND	ND	ND	0.898	ND	0.62	ND	ND	ND	10,000	10,000	7	27	10,000
Acenaphthene	ND	ND	ND	12.5	ND	1.5	2.4	8.02	0.623	170,000	190,000	380	4,700	61,000
Acenaphthylene	ND	ND	ND	1.84	ND	ND	ND	ND	ND	170,000	190,000	610	6,900	NR
Anthracene	ND	ND	ND	16.8	ND	1.6	4.2	8.44	ND	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	ND	ND	ND	19.5	ND	3	5	28.5	ND	110	190,000	0.36	320	100,000
Benzo (a) pyrene	ND	ND	ND	10.5	ND	1.4	3.1	28.5	ND	11	190,000	0.02	46	52
Benzo (b) fluoranthene	ND	ND	ND	14	ND	2.9	4.2	39.1	ND	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	ND	ND	ND	11	ND	0.88	1.8	18.8	ND	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	ND	ND	ND	8.91	ND	0.86	1.8	13.9	ND	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	ND	0.55	ND	9.11	ND	6.7	8.4	1.23	1.48	5,700	10,000	0.6	130	200
Carbazole	ND	0.788	ND	4.64	1.1	1.8	ND	6.16	1.47	4,000	190,000	13	83	140
Chrysene	ND	ND	ND	15.8	ND	3.8	5.4	29.5	ND	11,000	190,000	0.19	230	390
Di-n-octylphthalate	ND	ND	ND	ND	ND	1.9	ND	ND	ND	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	ND	ND	ND	3.08	ND	0.57	ND	5.14	ND	11	190,000	0.036	160	0.390
Dibenzofuran	ND	ND	ND	4.08	ND	1.3	1.3	1.8	ND	NR	NR	NR	NR	2,000
Fluoranthene	ND	0.778	ND	60.9	ND	8.3	15	49.6	2.33	110,000	190,000	26	3,200	41,000
Fluorene	ND	ND	ND	14.4	ND	2.4	3.7	8.03	0.876	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	ND	ND	ND	13.1	ND	1.2	2.3	22	ND	110	190,000	0.36	28,000	3.90
Naphthalene	ND	ND	ND	6.6	ND	2	ND	2.46	0.729	56,000	190,000	10	25	10,000
Phenanthrene	ND	0.563	ND	66.2	ND	6.6	13	35.5	3.97	190,000	190,000	110	10,000	NR
Pyrene	ND	0.565	ND	44.8	ND	6.6	12	42.8	1.55	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPL TP-5 3-3.5 11/26/1999	WPL TP-6 5.5-6 11/26/1999	WPL TP-7a 4-4.5 11/26/1999	WPL TP-7b 4.5-5 11/26/1999	ERB-01 16.0 4/17/2002	ERB-02 6.0 4/15/2002	ERB-03 18.0 4/15/2002	ERB-04 14.0 4/15/2002	ERB-05 10.0 4/16/2002	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	ND	ND	ND	ND	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	ND	ND	ND	ND	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	ND	ND	ND	ND	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	ND	ND	ND	ND	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	1.2	ND	ND	ND	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	ND	ND	ND	ND	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	8.2	ND	1.44	ND	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	2.6	ND	ND	ND	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	13	0.674	2.61	ND	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	54	2.99	6.87	ND	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	74	1.59	2.45	ND	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	95	3.07	5.26	ND	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	43	1.21	1.72	ND	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	16	0.877	2.08	ND	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	ND	7.04	2.94	0.61	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	9.6	1.4	ND	ND	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	54	3.25	7.64	ND	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	ND	ND	ND	ND	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	15	ND	ND	ND	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	4.4	ND	1.01	ND	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	110	6.45	12.5	ND	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	12	0.736	2.83	ND	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	43	1.41	2.33	ND	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	2.1	ND	ND	ND	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	61	4.95	10.4	0.84	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	120	7.24	10.4	ND	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed
NR = Not Reported

Table 2
Soil Data Summary - Semi-Volatile Organic Compounds & PCBs
West Parking Lot Area
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	ERB-06 15.0 4/16/2002	ERB-07 12.0 4/17/2002	ERB-08 18.0 4/16/2002	ERB-09 11.0 4/16/2002	ERB-10 12.0 4/16/2002	ERB-11 12.0 4/17/2002	ERB-12 20.0 4/18/2002	ERB-13 14.0 4/18/2002	ERB-20 13.0 4/18/2002	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
1,2-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	59	92,000
1,3-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	60	61	31,000
1,4-Dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,000	3,300	7.5	10	120
2,4-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	190,000	0.84	0.2	2,000
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	8,000	20,000
1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	7	27	10,000
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	380	4,700	61,000
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	610	6,900	NR
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	6.6	350	310,000
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	320	100,000
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.02	46	52
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.12	170	613,200
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	170,000	190,000	0.026	180	NR
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,100	190,000	0.055	610	39
Bis(2-Ethylhexyl)phthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,700	10,000	0.6	130	200
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,000	190,000	13	83	140
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,000	190,000	0.19	230	390
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,000	10,000	200	10,000	NR
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	11	190,000	0.036	160	0.390
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR	NR	2,000
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	26	3,200	41,000
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110,000	190,000	190	3,800	41,000
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	110	190,000	0.36	28,000	3.90
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	10	25	10,000
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	190,000	190,000	110	10,000	NR
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	84,000	190,000	13	2,200	NR
PCBs (mg/kg)														
Arochlor-1016	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	10,000	0.72	200	41
Arochlor-1221	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	3	1.4
Arochlor-1232	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	2	1.4
Arochlor-1242	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	10,000	0.52	62	1.4
Arochlor-1248	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	67	1.4
Arochlor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA	44	10,000	0.14	280	1.4
Arochlor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA	130	190,000	0.43	1,900	1.4

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 3
Soil Data Summary - Inorganics and Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID Depth (ft.) Sample Date Parameter/Units	WPLSS-8-3 4-6 6/17/1991	BPA-SG2a 1.5-2 12/2/1999	BPA-SG2b 2-2.5 12/2/1999	BPA-SG11 0-2 12/2/1999	BPA-SG73 0-2 12/2/1999	BPA-SG74a 1.5-2 12/2/1999	BPA-SG74b 2.5-3 12/2/1999	BPA-SG75a 1.5-2 12/2/1999	BPA-SG75b 3-3.5 12/2/1999	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS Direct Contact, Surface Soil (0 - 2 Feet)	Direct Contact, Subsurface Soil (2 - 15 Feet)	SOIL to GW - USED AQUIFER 100 x GW MSC	Generic	EPA RISK-BASED CONCENTRATIONS Industrial Soil [Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	141	1.17	1.03	ND	7.49	ND	42.1	ND	**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	ND	4.89	5.25	5.74	16.6	21.6	6.95	8.87	6.77	**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	0.7	0.296	0.563	0.623	0.918	0.39	0.671	0.507	0.685	**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	ND	1.89	0.424	0.695	0.936	14.8	0.576	164	0.394	**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	25	13.7	7.92	14	14	312	21.9	4,200	14.3	**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	ND	ND	ND	ND	17.7	ND	41	ND	**420**	**190,000**	**10**	**190**	**3,100**
Copper	16	169	12	59.2	39.1	590	15	541	14.2	**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	ND	ND	ND	ND	0.858	ND	ND	1.08	0.193	**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	ND	NA	NA	NA	NA	NA	NA	NA	NA	**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	23	114	17	251	21.2	428	20	6,230	18	**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	ND	ND	ND	ND	ND	4.68	ND	5.98	ND	**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	16	18.1	3.61	9.57	30.5	742	13.2	125	10.6	**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	0.914	ND	ND	ND	ND	ND	ND	ND	**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	**200**	**190,000**	**0.2**	**14**	**72**
Zinc	50	203	21.2	81.3	89.9	3,160	73	3,430	42.1	**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	NA	0.015	0.0222	0.0211	0.0139	0.0775	0.0684	0.0846	0.0697	**10,000**	**10,000**	**1,000**	**110**	**100,000**
cis 1,2-Dichloroethene	NA	ND	ND	ND	ND	ND	0.0516	ND	ND	**1,900**	**2,100**	**7**	**1.6**	**10,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**100**	**44**	**204,400**
Tetrachloroethene (PCE)	ND	0.0141	ND	0.0103	ND	3.04	2.81	1.08	0.638	**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	ND	0.0286	ND	0.0178	0.00831	1.5	1.73	1.06	0.633	**970**	**1,100**	**0.5**	**0.17**	**7.2**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 3
Soil Data Summary - Inorganics and Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	BPA TP-1a	BPA TP-1a	BPA TP-1b	BPA TP-1c	BPA TP-2a	BPA TP-2b	BPA TP-2c			ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
Depth (ft.)	1-1.5	1.5-2	2-2.5	12-12.5	2.5-3	3-3.5	11.5-12			Direct Contact, Surface Soil	Direct Contact, Subsurface Soil	SOIL to GW - USED AQUIFER 100 x GW MSC	SOIL to GW - USED AQUIFER Generic	Industrial Soil
Sample Date	12/7/1999	12/7/1999	12/7/1999	12/7/1999	12/7/1999	12/7/1999	12/7/1999							
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND	ND	ND	ND	ND			**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	11.5	13.2	5.83	4.86	1.37	6.72	5.75			**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	0.595	0.478	0.564	0.453	0.348	0.826	0.655			**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	25.2	50	ND	0.233	1.26	0.305	ND			**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	205	235	11.9	18.5	8.53	13.7	18.8			**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	ND	ND	ND	ND	ND	ND	ND			**420**	**190,000**	**10**	**190**	**3,100**
Copper	957	511	8.66	22.7	5.39	18.9	15.9			**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	ND	0.727	0.119	ND	ND	ND	ND			**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	NA	NA	NA	NA	NA	NA	NA			**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	307	317	10.7	11.6	10.9	21.6	12.3			**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	0.293	0.153	ND	ND	ND	ND	ND			**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	49.2	57.9	5.32	12	3.27	8.9	11.4			**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND	ND	ND	ND	ND			**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	ND	ND	ND	ND	ND	ND			**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND	ND	ND	ND	ND			**200**	**190,000**	**0.2**	**14**	**72**
Zinc	834	732	21.5	39.8	45.6	51.9	39.5			**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	0.0154	0.0169	0.0234	0.0453	0.0175	0.0171	0.0122			**10,000**	**10,000**	**1,000**	**110**	**100,000**
cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND			**1,900**	**2,100**	**7**	**1.6**	**10,000**
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND			**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND			**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	ND	ND	ND	ND	ND	ND			**10,000**	**10,000**	**100**	**44**	**204,400**
Tetrachloroethene (PCE)	0.0248	0.0393	ND	ND	ND	ND	ND			**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	0.131	0.179	ND	ND	ND	0.0156	ND			**970**	**1,100**	**0.5**	**0.17**	**7.2**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 3
Soil Data Summary - Inorganics and Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

Location/ID	ERB-14	ERB-15	ERB-16	ERB-17	ERB-18	ERB-19	ERB-20	ERB-21	ERB-21 (DUP)	ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
Depth (ft.)	13.5	14.0	18.0	18.0	16.0	16.0	13.0	5.0	5.0 (DUP)	Direct Contact, Surface Soil	Direct Contact, Subsurface Soil	SOIL to GW - USED AQUIFER		Industrial Soil
Sample Date	4/18/2002	4/19/2002	4/18/2002	4/18/2002	4/19/2002	4/19/2002	4/18/2002	4/24/2002	4/24/2002			100 x GW MSC	Generic	
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Metals/Inorganics (mg/kg)														
Antimony	<1.1	<1.1	<1.1	<1.0	<1.1	ND	ND	ND	ND	1,100	190,000	0.6	27	410
Arsenic	3.2	7.6	5.6	6.3	ND	ND	8.2	6.4	7.1	53	190,000	5	150	1.9
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	5,600	190,000	0.4	320	2,000
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	210	190,000	0.5	38	510/1,000
Chromium, total	20	25	21	19	29	11	23	27	27	190,000	190,000	10	190,000	1,500,000
Chromium, hexavalent	NA	NA	NA	NA	NA	NA	NA	NA	NA	420	190,000	10	190	3,100
Copper	17	14	17	15	11	6.3	17	23	25	100,000	190,000	100	36,000	41,000
Cyanide, total	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	NR	NR	NR	NR
Cyanide, free	NA	NA	NA	NA	NA	NA	NA	NA	NA	56,000	190,000	20	200	20,000
Lead	11	14	12	12	13	9.5	14	15	13	1,000	190,000	0.5	450	NR
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	840	190,000	0.2	10	NR
Nickel	17	14	17	13	11	6.3	13	17	18	56,000	190,000	10	650	20,000
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	14,000	190,000	5	26	5,100
Silver	ND	ND	ND	ND	ND	ND	ND	ND	1.2	14,000	190,000	10	84	5,100
Thallium	ND	ND	3.4	3.1	ND	ND	ND	ND	ND	200	190,000	0.2	14	72
Zinc	54	42	47	41	29	23	47	51	52	190,000	190,000	200	12,000	310,000
Detected Volatile Organics (mg/kg)														
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	1,000	110	100,000
cis 1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,900	2,100	7	1.6	10,000
Ethylbenzene	ND	ND	ND	ND	ND	0.0098 (J)	ND	ND	ND	10,000	10,000	70	46	100,000
Methylene Chloride	ND	ND	ND	ND	ND	ND	0.017 (J)	ND	ND	3,500	4,000	0.5	0.076	380
Toluene	ND	0.0086 (J)	ND	ND	0.012 (J)	0.024 (J)	ND	ND	ND	10,000	10,000	100	44	204,400
Tetrachloroethene (PCE)	ND	ND	ND	ND	ND	ND	ND	0.041(J)	0.053 (J)	1,500	3,300	0.5	0.43	140
Trichloroethene (TCE)	ND	ND	ND	ND	ND	ND	ND	0.064	0.034 (J)	970	1,100	0.5	0.17	7.2

ND = Not detected
NA = Not Analyzed
NR = Not Reported

Table 3
Soil Data Summary - Inorganics and Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED CONCENTRATIONS
										Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		
Location/ID	**ERB-22**	**ERB-23**	**ERB-24**							**Surface Soil**	**Subsurface Soil**	**100 x GW MSC**	**Generic**	**Industrial Soil**
Depth (ft.)	**7.0**	**9.0**	**3.0**											
Sample Date	**4/24/2002**	**4/24/2002**	**4/24/2002**											
Parameter/Units										**(0 - 2 Feet)**	**(2 - 15 Feet)**			**[Ingestion]**
Metals/Inorganics (mg/kg)														
Antimony	ND	ND	ND							**1,100**	**190,000**	**0.6**	**27**	**410**
Arsenic	7.2	5.5	4.8							**53**	**190,000**	**5**	**150**	**1.9**
Beryllium	ND	ND	ND							**5,600**	**190,000**	**0.4**	**320**	**2,000**
Cadmium	ND	ND	ND							**210**	**190,000**	**0.5**	**38**	**510/1,000**
Chromium, total	30	20	13							**190,000**	**190,000**	**10**	**190,000**	**1,500,000**
Chromium, hexavalent	NA	NA	NA							**420**	**190,000**	**10**	**190**	**3,100**
Copper	25	19	7							**100,000**	**190,000**	**100**	**36,000**	**41,000**
Cyanide, total	ND	ND	ND							**NR**	**NR**	**NR**	**NR**	**NR**
Cyanide, free	NA	NA	NA							**56,000**	**190,000**	**20**	**200**	**20,000**
Lead	15	9.9	9.4							**1,000**	**190,000**	**0.5**	**450**	**NR**
Mercury	ND	ND	ND							**840**	**190,000**	**0.2**	**10**	**NR**
Nickel	18	16	4.8							**56,000**	**190,000**	**10**	**650**	**20,000**
Selenium	ND	ND	ND							**14,000**	**190,000**	**5**	**26**	**5,100**
Silver	ND	0.55	ND							**14,000**	**190,000**	**10**	**84**	**5,100**
Thallium	ND	ND	ND							**200**	**190,000**	**0.2**	**14**	**72**
Zinc	57	48	18							**190,000**	**190,000**	**200**	**12,000**	**310,000**
Detected Volatile Organics (mg/kg)														
Acetone	ND	ND	ND							**10,000**	**10,000**	**1,000**	**110**	**100,000**
cis 1,2-Dichloroethene	ND	ND	ND							**1,900**	**2,100**	**7**	**1.6**	**10,000**
Ethylbenzene	ND	ND	ND							**10,000**	**10,000**	**70**	**46**	**100,000**
Methylene Chloride	ND	ND	ND							**3,500**	**4,000**	**0.5**	**0.076**	**380**
Toluene	ND	ND	ND							**10,000**	**10,000**	**100**	**44**	**204,400**
Tetrachloroethene (PCE)	ND	ND	ND							**1,500**	**3,300**	**0.5**	**0.43**	**140**
Trichloroethene (TCE)	ND	ND	0.035 (J)							**970**	**1,100**	**0.5**	**0.17**	**7.2**

ND = Not detected
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NR = Not Reported

Table 4
Soil Data Summary - Semi-Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	**WPLSS-8-3**	**BPA-SG2a**	**BPA-SG2b**	**BPA-SG11**	**BPA-SG73**	**BPA-SG74a**	**BPA-SG74b**	**BPA-SG75a**	**BPA-SG75b**	**Direct Contact,**	**Direct Contact,**	**SOIL to GW - USED AQUIFER**		**CONCENTRATIONS**
Depth (ft.)	**4-6**	**1.5-2**	**2-2.5**	**0-2**	**0-2**	**1.5-2**	**2.5-3**	**1.5-2**	**3-3.5**	**Surface Soil**	**Subsurface Soil**	**100 x GW MSC**	**Generic**	**Industrial Soil**
Sample Date	**6/17/1991**	**12/2/1999**	**12/2/1999**	**12/2/1999**	**12/2/1999**	**12/2/1999**	**12/2/1999**	**12/2/1999**	**12/2/1999**					
Parameter/Units										**(0 - 2 Feet)**	**(2 - 15 Feet)**			**[Ingestion]**
Detected Semi-Volatile Organics (mg/kg)														
2,6-Dinitrotoluene	NA	ND	ND	ND	ND	ND	ND	ND	ND	**2,800**	**190,000**	**10**	**3**	**1,000**
2-Methylnaphthalene	NA	6.08	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**200**	**8,000**	**20,000**
Acenaphthene	NA	24.7	0.441	ND	ND	ND	ND	ND	ND	**170,000**	**190,000**	**380**	**4,700**	**61,000**
Acenaphthylene	NA	2.14	ND	ND	ND	ND	ND	ND	ND	**170,000**	**190,000**	**610**	**6,900**	**NR**
Anthracene	NA	33.8	0.899	ND	ND	ND	ND	ND	ND	**190,000**	**190,000**	**6.6**	**350**	**310,000**
Benzo (a) anthracene	NA	107	2.81	ND	ND	ND	ND	ND	ND	**110**	**190,000**	**0.36**	**320**	**100,000**
Benzo (a) pyrene	NA	89.9	2.3	ND	ND	ND	ND	ND	ND	**11**	**190,000**	**0.02**	**46**	**52**
Benzo (b) fluoranthene	NA	115	3.16	ND	ND	0.716	ND	0.732	ND	**110**	**190,000**	**0.12**	**170**	**613,200**
Benzo (g,h,i) perylene	NA	53.8	1.37	ND	ND	0.541	ND	ND	ND	**170,000**	**190,000**	**0.026**	**180**	**NR**
Benzo (k) fluoranthene	NA	47.8	1.42	ND	ND	ND	ND	ND	ND	**1,100**	**190,000**	**0.055**	**610**	**39**
Carbazole	NA	98.7	2.71	ND	ND	ND	ND	ND	ND	**4,000**	**190,000**	**13**	**83**	**140**
Chrysene	NA	ND	ND	ND	ND	ND	ND	ND	ND	**11,000**	**190,000**	**0.19**	**230**	**390**
Di-n-octylphthalate	NA	11	ND	ND	ND	ND	ND	ND	ND	**10,000**	**10,000**	**200**	**10,000**	**NR**
Dibenzo (a,h) anthracene	NA	7.78	ND	ND	ND	ND	ND	ND	ND	**11**	**190,000**	**0.036**	**160**	**0.390**
Dibenzofuran	NA	7.8	ND	ND	ND	ND	ND	ND	ND	**NR**	**NR**	**NR**	**NR**	**2,000**
Dimethylphthalate	NA	182	5.79	ND	ND	0.866	ND	0.863	ND	**NR**	**NR**	**NR**	**NR**	**NR**
Fluoranthene	NA	22.3	ND	ND	ND	ND	ND	ND	ND	**110,000**	**190,000**	**26**	**3,200**	**41,000**
Hexachlorobenzene	NA	ND	ND	ND	ND	ND	ND	ND	ND	**50**	**190,000**	**0.1**	**0.96**	**200**
Hexachloroethane	NA	59.4	1.61	ND	ND	ND	ND	ND	ND	**2,800**	**190,000**	**0.1**	**0.56**	**102,200**
Indeno (1,2,3-cd) pyrene	NA	ND	ND	ND	ND	ND	ND	ND	ND	**110**	**190,000**	**0.36**	**28,000**	**3.90**
Naphthalene	NA	6.63	ND	ND	ND	ND	ND	ND	ND	**56,000**	**190,000**	**10**	**25**	**10,000**
Pentachlorophenol	NA	ND	ND	ND	ND	77.2	ND	ND	ND	**660**	**190,000**	**0.1**	**5**	**24**
Phenanthrene	NA	146	3.47	ND	ND	ND	ND	ND	ND	**190,000**	**190,000**	**110**	**10,000**	**NR**
Pyrene	NA	169	4.68	ND	ND	0.702	ND	ND	ND	**84,000**	**190,000**	**13**	**2,200**	**NR**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 4
Soil Data Summary - Semi-Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	**BPA TP-1a**	**BPA TP-1a**	**BPA TP-1b**	**BPA TP-1c**	**BPA TP-2a**	**BPA TP-2b**	**BPA TP-2c**			**Direct Contact,**	**Direct Contact,**	**SOIL to GW - USED AQUIFER**		**CONCENTRATIONS**
Depth (ft.)	**1-1.5**	**1.5-2**	**2-2.5**	**12-12.5**	**2.5-3**	**3-3.5**	**11.5-12**			**Surface Soil**	**Subsurface Soil**	**100 x GW MSC**	**Generic**	**Industrial Soil**
Sample Date	**12/7/1999**	**12/7/1999**	**12/7/1999**	**12/7/1999**	**12/7/1999**	**12/7/1999**	**12/7/1999**							
Parameter/Units										**(0 - 2 Feet)**	**(2 - 15 Feet)**			**[Ingestion]**
Detected Semi-Volatile Organics (mg/kg)														
2,6-Dinitrotoluene	1.53	ND	ND	ND	ND	ND	ND			**2,800**	**190,000**	**10**	**3**	**1,000**
2-Methylnaphthalene	0.97	ND	ND	ND	ND	ND	ND			**10,000**	**10,000**	**200**	**8,000**	**20,000**
Acenaphthene	3.74	ND	ND	ND	ND	ND	ND			**170,000**	**190,000**	**380**	**4,700**	**61,000**
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND			**170,000**	**190,000**	**610**	**6,900**	**NR**
Anthracene	7.66	ND	ND	ND	ND	ND	ND			**190,000**	**190,000**	**6.6**	**350**	**310,000**
Benzo (a) anthracene	20.7	17.2	ND	ND	ND	ND	ND			**110**	**190,000**	**0.36**	**320**	**100,000**
Benzo (a) pyrene	17.5	21.3	ND	ND	ND	ND	ND			**11**	**190,000**	**0.02**	**46**	**52**
Benzo (b) fluoranthene	24.6	31	ND	ND	ND	ND	ND			**110**	**190,000**	**0.12**	**170**	**613,200**
Benzo (g,h,i) perylene	7.09	12.5	ND	ND	ND	ND	ND			**170,000**	**190,000**	**0.026**	**180**	**NR**
Benzo (k) fluoranthene	8.58	27.2	ND	ND	ND	ND	ND			**1,100**	**190,000**	**0.055**	**610**	**39**
Carbazole	7.78	ND	ND	ND	ND	ND	ND			**4,000**	**190,000**	**13**	**83**	**140**
Chrysene	19.1	18.2	ND	ND	ND	ND	ND			**11,000**	**190,000**	**0.19**	**230**	**390**
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND			**10,000**	**10,000**	**200**	**10,000**	**NR**
Dibenzo (a,h) anthracene	1.62	ND	ND	ND	ND	ND	ND			**11**	**190,000**	**0.036**	**160**	**0.390**
Dibenzofuran	1.61	ND	ND	ND	ND	ND	ND			**NR**	**NR**	**NR**	**NR**	**2,000**
Dimethylphthalate	ND	ND	ND	ND	ND	ND	ND			**NR**	**NR**	**NR**	**NR**	**NR**
Fluoranthene	46.5	42.9	ND	ND	0.515	ND	ND			**110,000**	**190,000**	**26**	**3,200**	**41,000**
Hexachlorobenzene	4.36	ND	ND	ND	ND	ND	ND			**50**	**190,000**	**0.1**	**0.96**	**200**
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND			**2,800**	**190,000**	**0.1**	**0.56**	**102,200**
Indeno (1,2,3-cd) pyrene	ND	13.7	ND	ND	ND	ND	ND			**110**	**190,000**	**0.36**	**28,000**	**3.90**
Naphthalene	0.81	ND	ND	ND	ND	ND	ND			**56,000**	**190,000**	**10**	**25**	**10,000**
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND			**660**	**190,000**	**0.1**	**5**	**24**
Phenanthrene	43.9	27.2	ND	ND	0.469	ND	ND			**190,000**	**190,000**	**110**	**10,000**	**NR**
Pyrene	44.6	41.6	ND	ND	0.669	ND	ND			**84,000**	**190,000**	**13**	**2,200**	**NR**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 4
Soil Data Summary - Semi-Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	ERB-14	ERB-15	ERB-16	ERB-17	ERB-18	ERB-19	ERB-20	ERB-21	ERB-21 (DUP)	Direct Contact,	Direct Contact,	SOIL to GW - USED AQUIFER		CONCENTRATIONS
Sample Date	13.5	14.0	18.0	18.0	16.0	16.0	13.0	5.0	5.0 (DUP)	Surface Soil	Subsurface Soil	100 x GW MSC	Generic	Industrial Soil
Lab ID	4/18/2002	4/19/2002	4/18/2002	4/18/2002	4/19/2002	4/19/2002	4/18/2002	4/24/2002	4/24/2002					
Parameter/Units										(0 - 2 Feet)	(2 - 15 Feet)			[Ingestion]
Detected Semi-Volatile Organics (mg/kg)														
2,6-Dinitrotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2,800**	**190,000**	**10**	**3**	**1,000**
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**200**	**8,000**	**20,000**
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**170,000**	**190,000**	**380**	**4,700**	**61,000**
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**170,000**	**190,000**	**610**	**6,900**	**NR**
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**190,000**	**190,000**	**6.6**	**350**	**310,000**
Benzo (a) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**110**	**190,000**	**0.36**	**320**	**100,000**
Benzo (a) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11**	**190,000**	**0.02**	**46**	**52**
Benzo (b) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**110**	**190,000**	**0.12**	**170**	**613,200**
Benzo (g,h,i) perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**170,000**	**190,000**	**0.026**	**180**	**NR**
Benzo (k) fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1,100**	**190,000**	**0.055**	**610**	**39**
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4,000**	**190,000**	**13**	**83**	**140**
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11,000**	**190,000**	**0.19**	**230**	**390**
Di-n-octylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	**10,000**	**10,000**	**200**	**10,000**	**NR**
Dibenzo (a,h) anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**11**	**190,000**	**0.036**	**160**	**0.390**
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**2,000**
Dimethylphthalate	NA	NA	NA	NA	NA	NA	NA	NA	NA	**NR**	**NR**	**NR**	**NR**	**NR**
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**110,000**	**190,000**	**26**	**3,200**	**41,000**
Hexachlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**50**	**190,000**	**0.1**	**0.96**	**200**
Hexachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2,800**	**190,000**	**0.1**	**0.56**	**102,200**
Indeno (1,2,3-cd) pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**110**	**190,000**	**0.36**	**28,000**	**3.90**
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**56,000**	**190,000**	**10**	**25**	**10,000**
Pentachlorophenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	**660**	**190,000**	**0.1**	**5**	**24**
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**190,000**	**190,000**	**110**	**10,000**	**NR**
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	**84,000**	**190,000**	**13**	**2,200**	**NR**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 4
Soil Data Summary - Semi-Volatile Organic Compounds
Burn Pile Area Soil Chemistry Data
Harley-Davidson Motor Company Operations, Inc. - York, PA

										ACT 2 NON-RESIDENTIAL MEDIUM-SPECIFIC CONCENTRATIONS				EPA RISK-BASED
Location/ID	**ERB-22**	**ERB-23**	**ERB-24**							**Direct Contact,**	**Direct Contact,**	**SOIL to GW - USED AQUIFER**		**CONCENTRATIONS**
Sample Date	**7.0**	**9.0**	**3.0**							**Surface Soil**	**Subsurface Soil**	**100 x GW MSC**	**Generic**	**Industrial Soil**
Lab ID	**4/24/2002**	**4/24/2002**	**4/24/2002**											
Parameter/Units										**(0 - 2 Feet)**	**(2 - 15 Feet)**			**[Ingestion]**
Detected Semi-Volatile Organics (mg/kg)														
2,6-Dinitrotoluene	NA	NA	NA							**2,800**	**190,000**	**10**	**3**	**1,000**
2-Methylnaphthalene	NA	NA	NA							**10,000**	**10,000**	**200**	**8,000**	**20,000**
Acenaphthene	NA	NA	NA							**170,000**	**190,000**	**380**	**4,700**	**61,000**
Acenaphthylene	NA	NA	NA							**170,000**	**190,000**	**610**	**6,900**	**NR**
Anthracene	NA	NA	NA							**190,000**	**190,000**	**6.6**	**350**	**310,000**
Benzo (a) anthracene	NA	NA	NA							**110**	**190,000**	**0.36**	**320**	**100,000**
Benzo (a) pyrene	NA	NA	NA							**11**	**190,000**	**0.02**	**46**	**52**
Benzo (b) fluoranthene	NA	NA	NA							**110**	**190,000**	**0.12**	**170**	**613,200**
Benzo (g,h,i) perylene	NA	NA	NA							**170,000**	**190,000**	**0.026**	**180**	**NR**
Benzo (k) fluoranthene	NA	NA	NA							**1,100**	**190,000**	**0.055**	**610**	**39**
Carbazole	NA	NA	NA							**4,000**	**190,000**	**13**	**83**	**140**
Chrysene	NA	NA	NA							**11,000**	**190,000**	**0.19**	**230**	**390**
Di-n-octylphthalate	NA	NA	NA							**10,000**	**10,000**	**200**	**10,000**	**NR**
Dibenzo (a,h) anthracene	NA	NA	NA							**11**	**190,000**	**0.036**	**160**	**0.390**
Dibenzofuran	NA	NA	NA							**NR**	**NR**	**NR**	**NR**	**2,000**
Dimethylphthalate	NA	NA	NA							**NR**	**NR**	**NR**	**NR**	**NR**
Fluoranthene	NA	NA	NA							**110,000**	**190,000**	**26**	**3,200**	**41,000**
Hexachlorobenzene	NA	NA	NA							**50**	**190,000**	**0.1**	**0.96**	**200**
Hexachloroethane	NA	NA	NA							**2,800**	**190,000**	**0.1**	**0.56**	**102,200**
Indeno (1,2,3-cd) pyrene	NA	NA	NA							**110**	**190,000**	**0.36**	**28,000**	**3.90**
Naphthalene	NA	NA	NA							**56,000**	**190,000**	**10**	**25**	**10,000**
Pentachlorophenol	NA	NA	NA							**660**	**190,000**	**0.1**	**5**	**24**
Phenanthrene	NA	NA	NA							**190,000**	**190,000**	**110**	**10,000**	**NR**
Pyrene	NA	NA	NA							**84,000**	**190,000**	**13**	**2,200**	**NR**

ND = Not detected
NA = Not Analyzed

NR = Not Reported

Table 5
Analytical Matrix
Eden Road Relocation (WPL/BPA) Expedited Soil Investigation
Harley-Davidson Motor Company Operations, Inc.

Task and Analytical Description	Method	No. of samples*	QC Duplicate[1]	Matrix spike[1]	Matrix spike duplicate[1]	Equipment rinsate blank[2]	Trip blank[3]	Total no.
1. West Parking Lot (WPL) Soil Investigation								
Field analysis								
Field screening (PID)	field meter	continuous	-	-	-	-	-	continuous
46 Soil Borings (Offsite analysis)								
VOC	5035/8260B	138	7	7	7	-	10	169
SVOCs - Base/Neutral Cmpds	8270C	138	7	7	7	-	-	159
PCBs	8082	138	7	7	7	-	-	159
PP metals (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	6010B/7471 (Hg)	138	7	7	7	-	-	159
Hexavalent Chromium	7196A	138	7	7	7	-	-	159
Total Cyanide	9012A	138	7	7	7	-	-	159
Free Cyanide	SM4500	138	7	7	7	-	-	159
SPLP-?	SW 846-1312	TBD	-	-	-	-	-	0
Up to 15 Test Pit sampling (Offsite analysis)								
VOC	5035/8260B	30	2	2	2	-	5	41
SVOCs - Base/Neutral Cmpds	8270C	30	2	2	2	-	-	36
PCBs	8082	30	2	2	2	-	-	36
PP metals (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	6010B/7471 (Hg)	30	2	2	2	-	-	36
Hexavalent Chromium	7196A	30	2	2	2	-	-	36
Total Cyanide	9012A	30	2	2	2	-	-	36
Free Cyanide	SM4500	30	2	2	2	-	-	36
SPLP-?	SW 846-1312	TBD	-	-	-	-	-	0
2. Burn Pile Area (BPA) Soil Investigation								
Field analysis								
Field screening (PID)	field meter	continuous	-	-	-	-	-	continuous
47 Soil Borings (Offsite analysis)								
VOCs	5035/8260B	141	7	7	7	-	10	172
SVOCs - Base/Neutral Cmpds	8270C	141	7	7	7	-	-	162
PCBs	8082	141	7	7	7	-	-	162
PP metals (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	6010B/7471 (Hg)	141	7	7	7	-	-	162
Hexavalent Chromium	7196A	141	7	7	7	-	-	162
Total Cyanide	9012A	141	7	7	7	-	-	162
Free Cyanide	SM4500	141	7	7	7	-	-	162
SPLP-?	SW 846-1312	TBD	-	-	-	-	-	0
Up to 15 Test Pit/Soil sampling (Offsite analysis)								
VOC	5035/8260B	30	2	2	2	-	5	41
SVOCs - Base/Neutral Cmpds	8270C	30	2	2	2	-	-	36
PCBs	8082	30	2	2	2	-	-	36
PP metals (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	6010B/7471 (Hg)	30	2	2	2	-	-	36
Hexavalent Chromium	7196A	30	2	2	2	-	-	36
Total Cyanide	9012A	30	2	2	2	-	-	36
Free Cyanide	SM4500	30	2	2	2	-	-	36
SPLP-?	SW 846-1312	TBD	-	-	-	-	-	0
3. Waste Characterization								
TCLP-VOCs	SW 846-1311/8260B	5	-	-	-	-	-	5
TCLP-SVOCs	SW 846-1311/8270C	5	-	-	-	-	-	5
TCLP-Pesticides	SW 846-1311/8081	5	-	-	-	-	-	5
TCLP-Herbicides	SW 846-1311/8150	5	-	-	-	-	-	5
TCLP-Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag + Cu, Ni, Zn)	SW 846-1311/6010B & 7471 (Hg)	5	-	-	-	-	-	5
Reactivity - Cyanide & Sulfide	SW 846-Chapter 7	5	-	-	-	-	-	5
TPH	418.1	5	-	-	-	-	-	5
PCBs	8082	5	-	-	-	-	-	5
Corrosivity/pH	SW 846-9045	5	-	-	-	-	-	5
Ignitability	SW 846-1010	5	-	-	-	-	-	5
Free Liquids/Total Solids		TBD						
Total Volatile Solids		TBD						
Water Leaching Procedure (COD, Total solids, O&G, amonia-N)		TBD						

* anticipated maximum number of samples
1: 1 per 20 field samples.
2: 5% per method per matrix per sampling event for non-dedicated equipment
3: 1 per shipping cooler containing VOC samples (water matrix)

Appendix A

Environmental Subsurface Protocol

ENVIRONMENTAL SUBSURFACE PROTOCOL

A. Environmental Inspector

An Environmental Inspector, employed by Harley-Davidson, may be present during grubbing and excavations. No excavation of in-situ soil or rock may occur if it is suspected of being contaminated, except in the presence of the Environmental Inspector. Contractor is responsible to communicate with the Environmental Inspector to schedule all excavation work. A one-week notice must be provided to the Environmental Inspector, if possible, prior to initiating excavation. Previously excavated material that has been screened by the Environmental Inspector is exempt from this requirement.

The Environmental Inspector will inspect newly uncovered subsurface material for indications of contamination. The primary responsibility of the Environmental Inspector with respect to the Work is to identify potentially contaminated areas, to exclude access to suspected contaminated areas by personnel not covered by the site specific health and safety plan, to notify Contractor of the results of laboratory testing and to direct the handling and disposition of excavated materials suspected of being contaminated.

The Environmental Inspector will have the authority to stop all work in any area suspected of being contaminated, to specify the handling of excavated material suspected of being contaminated and to exclude access to the suspected area until sampling and analysis is completed or until appropriate procedures are activated.

The Contractor is responsible to report to the Environmental Inspector all suspected areas of contamination, unusual odor in the subsurface, liquid, discoloration, and buried materials. Areas where groundwater is encountered or where water seeps from an excavation or excavated area must be brought to the attention of the Environmental Inspector.

B. Management of Contaminated Materials

Contaminated materials that may be encountered on site are ground or surface water, buried waste, or soils. The materials may be contaminated with metals (e.g., lead, chromium, nickel, copper, zinc, volatile organic compounds (chlorinated solvents like TCE and PCE, petroleum distillates like xylene, toluene and benzene), and cyanide. In the event that potentially contaminated materials are encountered, the Environmental Inspector shall inspect, and conduct appropriate screening in a timely manner and the contractor shall be prepared to handle the materials as specified in this section in a timely manner, so as not to impede progress of the project. Equipment that comes in contact with contaminated materials must be decontaminated prior to working in uncontaminated areas of the site, or prior to leaving the site.

1) Soil and Rock

In the event that soil and rock are encountered that are suspected of being contaminated, the contractor will immediately restrict access to the area. The contractor will not conduct work in that area until a plan is developed and agreed to by the Environmental Inspector and the contractor. Contractor shall be prepared in a timely manner to upgrade personnel protection, to conduct exploratory excavations, to assist in collecting samples, and to excavate and haul the potentially contaminated soil and rock to a temporary stockpile area provided by Owner. Sample analysis costs will be the responsibility of Owner. The parties acknowledge and agree that Contractor's only obligation is to haul potentially contaminated soil and rock to a temporary stockpile area and that Owner shall have complete responsibility for the temporary stockpile area, including screening and determining soil and rock to be stored in such area, and Owner shall indemnify Contractor against any and all claims relating to the temporary stockpile area.

2) Solid Waste, Containers or Sludges (Buried Wastes)

In the event that buried wastes are encountered; Contractor will immediately restrict access to the area. Contractor will not conduct work in `that area until a plan is developed and agreed to by the Environmental Inspector and Contractor. Contractor shall be prepared to upgrade personnel protection, to conduct exploratory excavations, and to assist in collecting samples.

3) Groundwater and Springs

a) In the event that groundwater is encountered in excavations or excavated areas, in the form of seeps or springs, Contractor will immediately restrict access to the area. Contractor will not conduct work in that area until a plan is developed and agreed to by the Environmental Inspector and Contractor. Contractor shall be prepared to upgrade personnel protection, to conduct exploratory excavations, to temporarily contain the groundwater with grading, and to assist in collecting samples.

b) Contractor shall provide personnel and equipment, at Owner's expense, to contain and collect contaminated water, and transport it to the on-site groundwater treatment plant. Owner assumes responsibility for the water after it is delivered to on-site groundwater treatment plant.

c) Contractor shall take care to minimize the mixing of surface water with the identified contaminated groundwater. In addition, Contractor shall use its best efforts to minimize the turbidity and solids content of the contaminated water while pumping.

C. Contractor Health and Safety Plan (CHASP)

Contractor shall prepare a Site specific CHASP in a timely manner, so as not to impede the progress of the Project, that addresses the potential that hazardous waste, contaminated soil, and contaminated groundwater may be encountered during construction. At a minimum, the Contractor Health and Safety Plan must incorporate the following:

1. The CHASP must address all applicable components of C.F.R. Title 29 Part 1910.120, dealing with hazardous waste operations and emergency response, and Harley-Davidson's Work Instructions – Contractor Safety Rules and Practices.

2. All personnel that have the potential to come in contact or close proximity to waste or contaminated soil or contaminated groundwater, must have HAZWOPER 40-hour training and up-to-date refresher training. Qualifications and training certificates of Contractor or any Subcontractors must be submitted for approval. These personnel must also be participating in a medical monitoring program, required by OSHA for hazardous operations. This requirement is in addition to the regulatory requirement to provide a safe work place and is not intended to relieve the Contractor of any legal liabilities.

3. The CHASP will incorporate an acceptable procedure for excavating and handling soils identified by the Environmental Inspector as potentially contaminated, without significant delay. The CHASP will include a procedure for upgrading personnel protection levels, and decontamination of equipment and personnel.

4. Contractor must provide PPE (Personal Protective Equipment) and onsite monitoring.

5. A Spill and Discharge Control Plan shall be prepared for Owner review.

6. The CHASP will be submitted to Owner for review but not approval before grubbing or excavation may commence.

7. Dust Control - Contractor shall maintain all work areas within confirmed or potentially contaminated areas free from dust, which may contribute to air pollution or migration of chemical hazards. Approved methods of dust control or suppression will include water sprinkling. Dust control shall be performed as the work proceeds whenever a dust nuisance or hazard occurs or at the direction of the Environmental Inspector.