

**EXPEDITED SITE-WIDE RI/FS TASK
BUILDING 1 EAST WING AMMONIA INVESTIGATION
PHASE II SOIL SAMPLING INVESTIGATION**



**HARLEY-DAVIDSON MOTOR COMPANY OPERATIONS, INC.
YORK VEHICLE OPERATIONS
1425 EDEN ROAD
YORK, PENNSYLVANIA 17402**

JANUARY 2006

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YORK VEHICLE OPERATIONS
1425 EDEN ROAD
YORK, PENNSYLVANIA 17402**

BH NO. 72982-48

JANUARY 2006

PREPARED FOR:

**HARLEY-DAVIDSON MOTOR COMPANY OPERATIONS, INC.
YORK VEHICLE OPERATIONS
1425 EDEN ROAD
YORK, PENNSYLVANIA 17402**

PREPARED BY:

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1.0 INTRODUCTION

In August 2004, Harley-Davidson Motor Company Operations, Inc. (Harley-Davidson) encountered airborne concentrations of ammonia gas within the east wing basement of Building 1 following heavy rain events (see Figure 1). Standing water was identified within the building and was subsequently sampled. Analysis indicated that the water contained ammonia at a concentration of 800 milligrams per liter (mg/L).

Historically, it is believed that ammonia had been used and stored within or adjacent to the east wing basement of Building 1. The purpose of this investigation was to determine if ammonia exists within the subsurface soils in proximity to the east wing basement of Building 1. Specifically, the existing sumps within the building were evaluated and water from within the sumps were analyzed for ammonia and related compounds. In addition, samples of soils outside the perimeter of the east wing basement of Building 1 were collected and analyzed for ammonia and related compounds.

Several surrounding monitoring wells were initially inspected and sampled by Buchart-Horn, Inc. (BH) in August 2004. Laboratory analysis indicated that ammonia was identified in all but one of the wells sampled. The well with the highest concentration of ammonia (MW-33) is located along the east wing of Building 1.

In December 2004, Science Applications International Corporation (SAIC) of Harrisburg, PA completed a Work Plan Scoping Document to define further investigation within the area. The Scoping Document recommended characterization of the sumps within Building 1, characterization of soils along the north and northeast perimeters of Building 1, and determining remedial alternatives for any ammonia contamination that may be encountered.

In March 2005, BH completed a Building 1 East Wing Ammonia Investigation. At that time, BH characterized two sumps within the building. In addition, BH sampled soils along the north and northeast perimeters of Building 1. Results of the investigation indicated that minor amounts of ammonia and nitrates exist within the sump waters and soils along the perimeter of the building. Since these findings did not reveal a likely source of the ammonia problem, a Phase II soil sampling investigation was recommended to evaluate conditions immediately below the concrete slab in the basement of Building 1. Also, sampling of a newly identified sump was recommended.

2.0 FIELD INVESTIGATION

The field investigation was divided into two phases: the first phase was an evaluation of a newly identified sump within the East Wing basement of Building 1. The second phase consisted of collecting samples of subsurface soils beneath the basement floor around the perimeter of the basement.

2.1 Sump Investigation

On August 29, 2005, BH personnel mobilized to the site to evaluate the condition of the newly identified sump (Sump B04B) within the basement of the East Wing of Building 1. A water sample from the sump was collected and submitted to Severn-Trent Laboratories (STL) of Edison, New Jersey, following chain-of-custody protocol. One field blank sample was also obtained for quality assurance/quality control (QA/QC) purposes.

An evaluation of the sump appears in the following table:

TABLE 1
SUMP EVALUATION

Sump:	B-04B
Total Depth:	24"
Width:	22" Diameter (round)
Construction Material:	Concrete
Depth to Water:	15" from surface
Volume of Water:	14.81 Gallons
Presence of Solids?	Yes - less than 1/8 inch
Total Amount of Solids?	Less than 10 cubic inches
pH	6.34
PID Readings	0.0 ppm
Ammonia Concentration:	0.0 ppm
Comments:	Solid Bottom/no odors/no sludge at bottom

ppm = parts per million

The sample was obtained using a disposal bailer. The water sample obtained from the sump was analyzed for Nitrate; Nitrite; Ammonia; and Total Kjeldahl Nitrogen (TKN). A photoionization detector (PID) and ammonia detector tubes were used to document the presence of ammonia. Neither the PID nor the ammonia detector tubes indicated the presence of ammonia within the air space of the sump.

2.2 Soil Investigation

Prior to mobilization of the drilling equipment, the boring locations were cleared of utilities by both BH and Harley-Davidson personnel. A Sample Location Plan is included as Figure 2.

On August 29, 2005, BH personnel mobilized to the site to obtain soil samples from beneath the basement floor within the East Wing of Building 1. Concrete was removed by use of a concrete corer. Soil samples were then obtained by use of a hand auger. Concrete and soil sampling services were provided by Bassett Environmental Associates, Inc., Harrisburg, PA. Once the concrete core was removed, soil samples from the 2-3 foot depth interval below ground surface (BGS) were obtained.

A total of eleven (11) soil borings were advanced within the northeastern wing basement of Building 1 (see Figure 2). One soil sample was obtained from each boring at the 2-3' BGS interval. No saturated soils were found in any of the borings. Soil boring logs appear in Appendix A. No unusual odors or staining were encountered. PID readings from each boring location indicated no readings above background levels. Ammonia readings obtained from the air within the borings did not detect the presence of ammonia. The decontamination protocol presented in the QAPP was followed throughout the soil investigation. One duplicate sample was also obtained for QA/QC purposes. Soil samples from the borings were submitted to STL for laboratory analysis following chain-of-custody protocol. The borings were backfilled with native material and the floor patched with concrete.

The soil samples were analyzed for pH, Ammonia, Nitrate, Nitrite, and TKN. Because no unusual odors or staining were observed, additional analysis for volatile organic compounds (VOC's) and Priority Pollutant Metals (PP Metals) were not requested.

Chain-of-Custody documentation for the samples and the laboratory report are included in Appendix B. Site photographs are included in Appendix C.

3.0 ANALYTICAL RESULTS

3.1 Analytical Results - Sump Investigation

Analytical results for the sump water are summarized in the following table. None of the parameters exceeded the Pennsylvania Department of Environmental Protection (PADEP) Medium Specific Concentrations (MSCs) for regulated substances in groundwater. This standard was used as it is the most stringent of the standards available.

Parameter	B-04B	Field Blank	MSC For Regulated Substances In Groundwater	Maximum Contaminant Level (MCL) for Drinking Water
Nitrate	ND	ND	--	10
Nitrite	ND	ND	--	1
Ammonia	10.7	0.95	30	--
TKN	13.3	ND	--	--

All results are expressed in mg/L.

- - = A Statewide Health Standard does not exist for this parameter.

Laboratory results indicated minor concentrations of ammonia and TKN in the sump. In addition, a minor amount of ammonia was identified within the field blank. This water is not potable in nature and does not directly contact Harley-Davidson personnel. As the PID and ammonia detector tubes did not detect the presence of ammonia in the air space above the sump, these minor concentrations are not considered a health risk or concern.

3.2 Analytical Results - Soil Investigation

Analytical results for the soil samples are summarized in Table 2. Minor amounts of ammonia, nitrate, and TKN were detected in the soils however, none of the parameters exceeded the PADEP MSCs for regulated substances in soil. These standards were used as they are the most stringent of the soil standards available. No amplified levels of ammonia, nitrate, or TKN were identified in the samples, which could help identify potential areas of contamination.

A review of the Pennsylvania Contaminant of Indoor Air Concern (COPIAC) list was completed. No standards currently exist with PADEP for these parameters.

TABLE 2
ANALYTICAL RESULTS – SOIL INVESTIGATION

EXPEDITED SITE-WIDE RI/FS TASK
BUILDING 1 EAST WING AMMONIA INVESTIGATION
PHASE II SOIL SAMPLING INVESTIGATION

Sample #	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	Duplicate	MSC For Regulated Substances In Soil
Sample Interval (BGS)	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	2-3'	
pH	7.99	7.9	8.48	8.11	8.25	8.07	7.91	8.15	7.87	8.11	7.11	7.79	--
Ammonia	59.3	61.4	55.9	57.2	55.7	62.7	65.8	59.6	55.1	54.8	62.7	60.1	3000
Nitrate	10.6	22.9	30.6	3.1	ND	10.7	2.7	19.6	43.8	13.5	10.2	4.3	--
Nitrite	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
TKN	398	323	203	240	106	298	139	266	231	116	82.9	126	--

BGS = Below Ground Surface

All results are expressed in mg/kg.

ND= Not Detected

-- = A Statewide Health Standard does not exist for this parameter.

3.3 Non-Conformance Summary

As part of each laboratory report, a non-conformance summary is included to show any condition that existed with each analytical event that may affect laboratory results. No non-conformance issues existed for the submission of these samples.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The purpose of the investigation was to evaluate soils directly beneath the basement within the East Wing of Building 1 for the presence of ammonia and other nitrogen-containing parameters. This investigation was performed in accordance with the Work Plan Scoping Document prepared by BH in July 2005. Water from sump B-04B was collected for laboratory analysis. The sample was analyzed for Nitrate, Nitrite, Ammonia, and TKN. The sample did not exceed applicable Statewide Health Standards or applicable Drinking Water Standards.

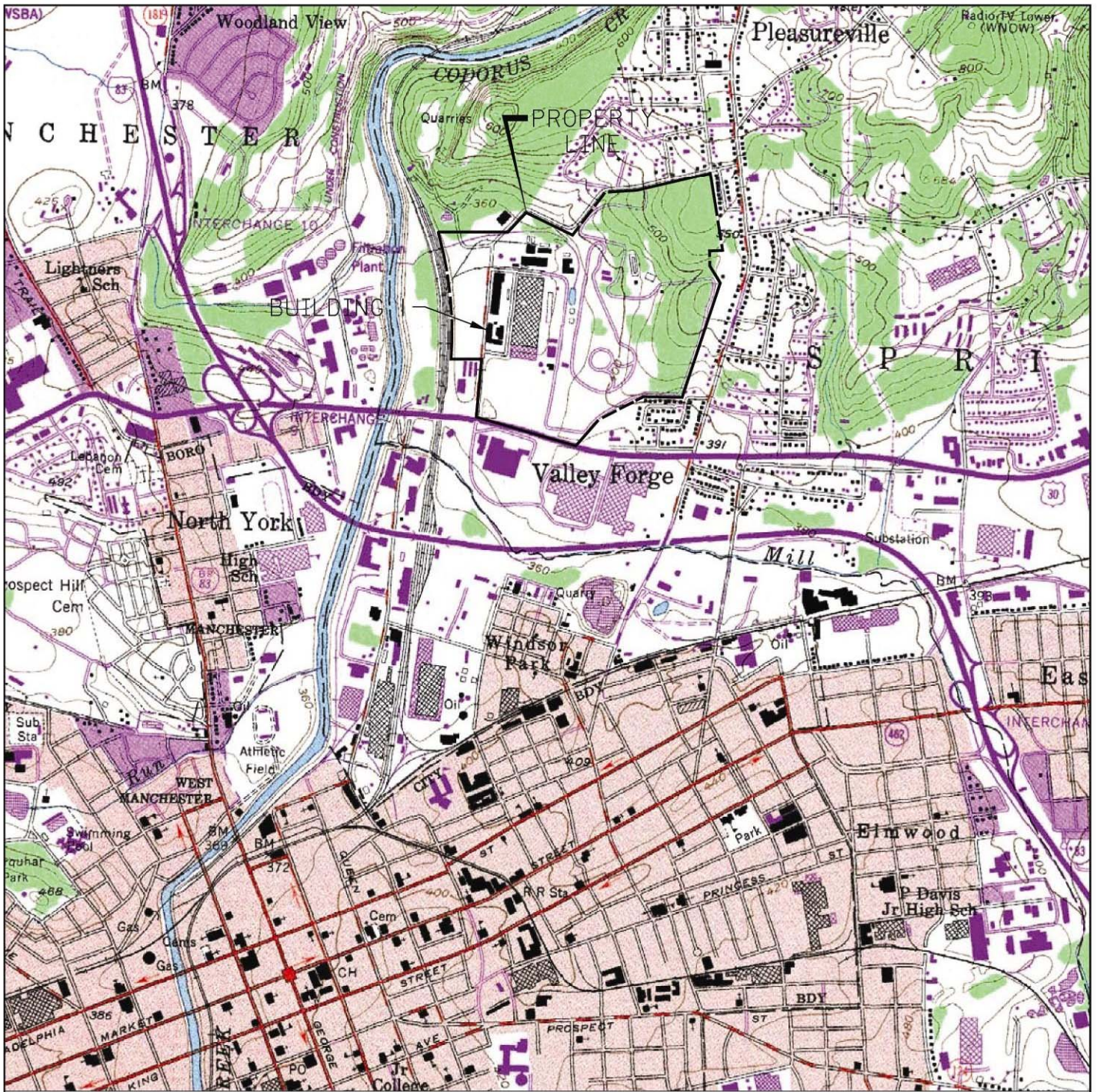
Eleven soil probes (B-1 through B-11) were advanced beneath the east wing basement of Building 1. Samples were analyzed for pH, Ammonia, Nitrate, Nitrite, and TKN. None of the samples exceeded applicable Statewide Health Standards. In addition, none of the samples appeared elevated as compared to other samples.

Based on the results of the recent investigations conducted in the area of the east wing basement of Building 1, it appears that the presence of ammonia in the subsurface is a small scale, localized issue. The storage tank previously used to store ammonia has been removed.

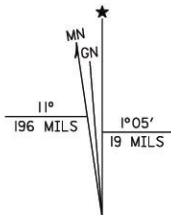
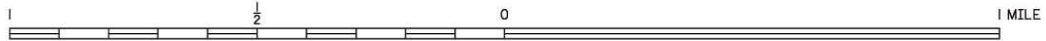
4.2 Recommendations

The east wing basement of Building 1 should be monitored after heavy rainfalls for the presence of ammonia containing water. The ammonia air monitor currently in place should be maintained for the foreseeable future. No further action is recommended to address the presence of ammonia in the shallow subsurface in the area.

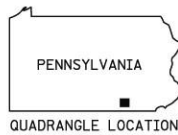
FIGURES



SCALE 1:24000



UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

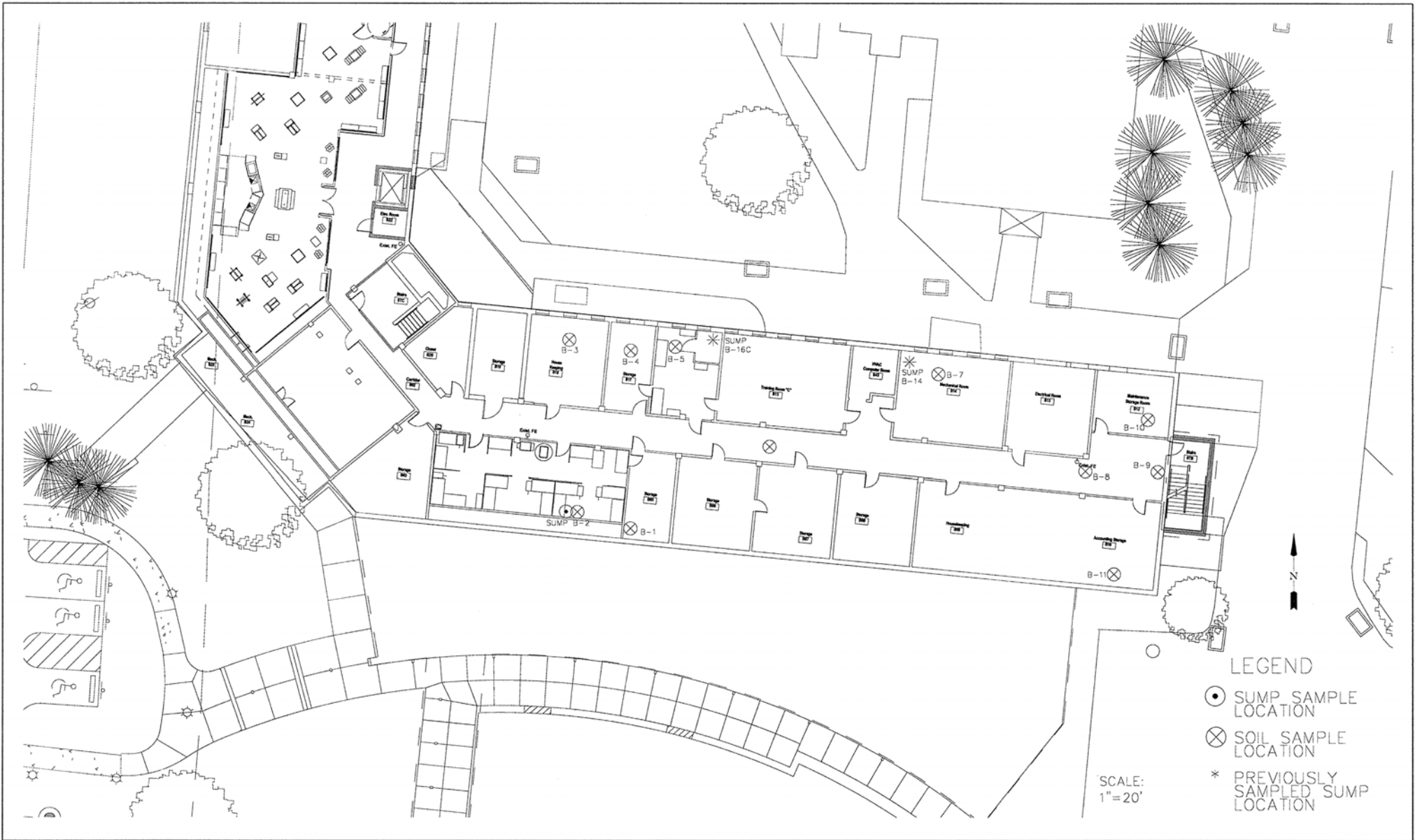


YORK QUADRANGLE
PENNSYLVANIA—YORK CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

ENGR./ARCH.	 BUCHART HORN, INC. Consulting Engineers and Planners
DESIGN BY	
DRAWN BY	
CHECK BY	
DATE	

HARLEY-DAVIDSON
MOTOR COMPANY OPERATIONS, INC.
YORK, PA.

DRAWING NO.	1
SHEET NO.	
PROJECT NO.	72982-48



- LEGEND**
- ⊙ SUMP SAMPLE LOCATION
 - ⊗ SOIL SAMPLE LOCATION
 - * PREVIOUSLY SAMPLED SUMP LOCATION

SCALE:
1"=20'

PROJECT NO.:
ENGR./ARCH.:
DRAWN BY:
DESIGN BY:
CHECKED BY:
CAD FILE:
DATE: 7-12-05

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NO.	REVISION	BY	DATE



BUILDING 1 EAST WING BASEMENT SAMPLE LOCATION PLAN

DRAWING NO. **FIGURE 2**
SHEET NO.
SHEET NO. **72982-48**

APPENDICES

Appendix A

Boring Logs

APPENDIX A

SOIL BORING LOGS EXPEDITED SITE-WIDE RI/FS TASK BUILDING 1 EAST WING AMMONIA INVESTIGATION PHASE II SOIL SAMPLING INVESTIGATION HARLEY-DAVIDSON MOTOR COMPANY OPERATIONS, INC.						
DEPTH (feet)	B-1	B-2	B-3	B-4	B-5	B-6
0.0	0-4" Concrete	0-4" Concrete	0-4.5" Concrete	0-4" Concrete	0-4.5" Concrete	0-5" Concrete
	4"-1.2' Stone and Gravel	4"-1.2' Stone and Gravel	4.5"-1.1' Stone and Gravel	4"-1.0' Quartzite pieces	4.5"-1.1' Sand and Gravel	5"-1.1' Sand and Gravel
2.0	1.2-3.0' Orange Sandy Clay w. some quartz	1.2-3.0' Orange Sandy Clay w. some quartz	1.1-1.8' Quartzite Rock 1.8-3.0' Orange/Tan silty clay	1.0-3.0' Orange/Tan silty clay	1.1-3.0' Orange/Tan silty clay	1.1-3.0' Orange/Tan silty clay
4.0						
	B-7	B-8	B-9	B-10	B-11	
0.0	0-4" Concrete	0-4" Concrete	0-4" Concrete	0-4" Concrete	0-4" Concrete	
	4"-1.0' Sand and Gravel	4"-1.1' Sand and Gravel	4"-1.1' Sand and Gravel	4"-1.1' Sand and Gravel	4"-1.1' Sand and Gravel	
2.0	1.0-3.0' Orange/Brown Clay w. some silt	1.1-3.0' Orange/Brown silty clay w. Quartzite fragments	1.1-3.0' Orange/Brown silty clay w. Quartzite fragments	1.1-3.0' Orange/Brown silty clay w. Quartzite fragments 1.8-3.0' Orange/Tan silty clay	1.1-3.0' Orange/Brown clay w. Quartzite fragments	
4.0						

Appendix B
Laboratory Analytical Results



09/26/2005

Buchart - Horn, Inc.
445 West Philadelphia St.
P.O. Box 15040
York, PA 17404

STL Edison

777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Attention: Mr. Randy Deardorff

Laboratory Results
Job No. E737 - Harley Davidson

Dear Mr. Deardorff:

Enclosed are the results you requested for the following sample(s) received at our laboratory on August 31, 2005.

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
665522	B-1	pH Ammonia Nitrate Nitrite TKN
665523	B-2	pH Ammonia Nitrate Nitrite TKN
665524	B-3	pH Ammonia Nitrate Nitrite TKN
665525	B-4	pH Ammonia Nitrate Nitrite





STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. E737 - Harley Davidson (cont'd)

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
665526	B-5	TKN pH Ammonia Nitrate Nitrite TKN
665527	B-6	pH Ammonia Nitrate Nitrite TKN
665528	B-7	pH Ammonia Nitrate Nitrite TKN
665529	B-8	pH Ammonia Nitrate



STL Edison
777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. E737 - Harley Davidson (cont'd)

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
665530	B-9	Nitrite TKN pH Ammonia Nitrate Nitrite TKN
665531	B-10	pH Ammonia Nitrate Nitrite TKN
665532	B-11	pH Ammonia Nitrate Nitrite TKN
665533	Duplicate	pH Ammonia



STL Edison

777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. E737 - Harley Davidson (cont'd)

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
		Nitrate
		Nitrite
		TKN
665534	Sump-B04B	Nitrate
		Nitrite
		Ammonia
		TKN
665535	Field-Blank	Nitrate
		Nitrite
		Ammonia



STL Edison

777 New Durham Road
Edison, NJ 08817

Tel 732 549 3900 Fax 732 549 3679
www.stl-inc.com

Laboratory Results
Job No. E737 - Harley Davidson (cont'd)

<u>Lab No.</u>	<u>Client ID</u>	<u>Analysis Required</u>
		TKN

If you have any questions please contact your Project Manager, Maria Bliem, at (732) 549-3900.

Very Truly Yours,

A handwritten signature in black ink that reads "Michael J. Urban".

Michael J. Urban
Laboratory Manager

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Analytical Results Summary

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0991

Ammonia

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
--------------------------------------	------------------	-------------------------------	---------------------------------	--------------------------------	----------------------------------	--

665534	Sump-B04B	08/29/05	09/02/05	09/03/05	1.0	10.7
665535	Field-Blank	08/29/05	09/02/05	09/03/05	1.0	0.95

Quantitation Limit for Ammonia is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0992

Ammonia

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/01/05	09/03/05	15.4	1.0	59.3
665523	B-2	08/29/05	09/01/05	09/03/05	15.6	1.0	61.4
665524	B-3	08/29/05	09/01/05	09/03/05	15.5	1.0	55.9
665525	B-4	08/29/05	09/01/05	09/03/05	14.6	1.0	57.2
665526	B-5	08/29/05	09/01/05	09/03/05	17.5	1.0	55.7
665527	B-6	08/29/05	09/01/05	09/03/05	19.7	1.0	62.7
665528	B-7	08/29/05	09/01/05	09/03/05	17.5	1.0	65.8
665529	B-8	08/29/05	09/01/05	09/03/05	17.0	1.0	59.6
665530	B-9	08/29/05	09/01/05	09/03/05	14.8	1.0	55.1
665531	B-10	08/29/05	09/01/05	09/03/05	14.0	1.0	54.8
665532	B-11	08/29/05	09/01/05	09/03/05	17.6	1.0	62.7
665533	Duplicate	08/29/05	09/01/05	09/03/05	18.4	1.0	60.1

Quantitation Limit for Ammonia is 8.0 mg/kg.

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 1456

Nitrate

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
665534	Sump-B04B	08/29/05	08/31/05	1.0	ND
665535	Field-Blank	08/29/05	08/31/05	1.0	ND

Quantitation Limit for Nitrate is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 1460

Nitrate

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/02/05	09/02/05	15.4	20	10.6
665523	B-2	08/29/05	09/02/05	09/02/05	15.6	20	22.9
665524	B-3	08/29/05	09/02/05	09/02/05	15.5	20	30.6
665525	B-4	08/29/05	09/02/05	09/02/05	14.6	20	3.1
665526	B-5	08/29/05	09/02/05	09/02/05	17.5	20	ND
665527	B-6	08/29/05	09/02/05	09/02/05	19.7	20	10.7
665528	B-7	08/29/05	09/02/05	09/02/05	17.5	20	2.7
665529	B-8	08/29/05	09/02/05	09/02/05	17.0	20	19.6
665530	B-9	08/29/05	09/02/05	09/02/05	14.8	20	43.8
665531	B-10	08/29/05	09/02/05	09/02/05	14.0	20	13.5
665532	B-11	08/29/05	09/02/05	09/02/05	17.6	20	10.2
665533	Duplicate	08/29/05	09/02/05	09/02/05	18.4	20	4.3

Quantitation Limit for Nitrate is 0.1 mg/kg.

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0482

Nitrite

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
665534	Sump-B04B	08/29/05	08/31/05	1.0	ND
665535	Field-Blank	08/29/05	08/31/05	1.0	ND

Quantitation Limit for Nitrite is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0484

Nitrite

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/02/05	09/02/05	15.4	20	ND
665523	B-2	08/29/05	09/02/05	09/02/05	15.6	20	ND
665524	B-3	08/29/05	09/02/05	09/02/05	15.5	20	ND
665525	B-4	08/29/05	09/02/05	09/02/05	14.6	20	ND
665526	B-5	08/29/05	09/02/05	09/02/05	17.5	20	ND
665527	B-6	08/29/05	09/02/05	09/02/05	19.7	20	ND
665528	B-7	08/29/05	09/02/05	09/02/05	17.5	20	ND
665529	B-8	08/29/05	09/02/05	09/02/05	17.0	20	ND
665530	B-9	08/29/05	09/02/05	09/02/05	14.8	20	ND
665531	B-10	08/29/05	09/02/05	09/02/05	14.0	20	ND
665532	B-11	08/29/05	09/02/05	09/02/05	17.6	20	ND
665533	Duplicate	08/29/05	09/02/05	09/02/05	18.4	20	ND

Quantitation Limit for Nitrite is 0.1 mg/kg.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 2752

pH

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Analytical</u> <u>Result</u> <u>Units: std</u> <u>unit</u>
665522	B-1	08/29/05	09/02/05	7.99
665523	B-2	08/29/05	09/02/05	7.9
665524	B-3	08/29/05	09/02/05	8.48
665525	B-4	08/29/05	09/02/05	8.11
665526	B-5	08/29/05	09/02/05	8.25
665527	B-6	08/29/05	09/02/05	8.07
665528	B-7	08/29/05	09/02/05	7.91
665529	B-8	08/29/05	09/02/05	8.15
665530	B-9	08/29/05	09/02/05	7.87
665531	B-10	08/29/05	09/02/05	8.11
665532	B-11	08/29/05	09/02/05	7.11
665533	Duplicate	08/29/05	09/02/05	7.79

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0346

Total Kjeldahl Nitrogen

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
--------------------------------------	------------------	-------------------------------	---------------------------------	--------------------------------	----------------------------------	--

665534	Sump-B04B	08/29/05	09/04/05	09/06/05	1.0	13.3
665535	Field-Blank	08/29/05	09/04/05	09/06/05	1.0	ND

Quantitation Limit for Total Kjeldahl Nitrogen is 0.5 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0347

Total Kjeldahl Nitrogen

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/04/05	09/06/05	15.4	1.0	398
665523	B-2	08/29/05	09/04/05	09/06/05	15.6	1.0	323
665524	B-3	08/29/05	09/04/05	09/06/05	15.5	1.0	203
665525	B-4	08/29/05	09/04/05	09/06/05	14.6	1.0	240
665526	B-5	08/29/05	09/04/05	09/06/05	17.5	1.0	106
665527	B-6	08/29/05	09/04/05	09/06/05	19.7	1.0	298
665528	B-7	08/29/05	09/04/05	09/06/05	17.5	1.0	139
665529	B-8	08/29/05	09/04/05	09/06/05	17.0	1.0	266
665530	B-9	08/29/05	09/04/05	09/06/05	14.8	1.0	231
665531	B-10	08/29/05	09/04/05	09/06/05	14.0	1.0	116
665532	B-11	08/29/05	09/04/05	09/06/05	17.6	1.0	82.9
665533	Duplicate	08/29/05	09/04/05	09/06/05	18.4	1.0	126

Quantitation Limit for Total Kjeldahl Nitrogen is 25.0 mg/kg.

General Information

Chain of Custody

STL EDISON

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): **RANDY DEARDORFF**
Company: **BUCHART-HORN, INC.**
Address: **445 W. PHILADELPHIA ST.**
City: **YORK PA** State: **PA** Zip: **17401**
Phone: **717-852-1400** Fax: **717-852-1617**

Samplers Name (Printed): **WILLIAM S. DEMPSEY**
P.O. #: _____
Site/Project Identification: **NARLEY - DAVIDEN BLDG. 1 AMMONIA**
State (Location of site): NJ: NY: Other: **PA**
Regulatory Program: _____

Analysis Turnaround Time:
Standard Rush Charges Authorized For:
2 Week 1 Week Other: **5 DAY**

Sample Identification	Date	Time	Matrix	No. of Cont.	ANALYSIS REQUESTED (ENTER 'X' BELOW TO INDICATE REQUEST)										LAB USE ONLY Project No: Job No: Sample Numbers	
					AMMONIA	TRITATE	NITRATE	TRITATE	NITRATE	AMMONIA	TRITATE	NITRATE	AMMONIA	TRITATE		NITRATE
B-1	8/29/05	1840	SO	1	X											65522
B-2	8/29/05	1950	SO	1	X											523
B-3	8/29/05	2010	SO	1	X											524
B-4	8/29/05	2050	SO	1	X											525
B-5	8/29/05	2140	SO	1	X											526
B-6	8/29/05	2150	SO	1	X											527
B-7	8/29/05	2215	SO	1	X											528
B-8	8/29/05	2320	SO	1	X											529
B-9	8/29/05	2300	SO	1	X											530
B-10	8/29/05	2355	SO	1	X											531

Preservation Used: 1 = ICE, 2 = HCl, 3 = H₂SO₄, 4 = HNO₃, 5 = NaOH
6 = Other _____, 7 = Other _____

Water Metals Filtered (Yes/No)? **N/A** **SC**

Special Instructions

Relinquished by: **WILLIAM S. DEMPSEY** Company: **BUCHART-HORN** Date/Time: **8/30/05 1401** Received by: **COUPLER** Company: **FEDEX**

Relinquished by: **Red Ex** Company: _____ Date/Time: **8/31/05 10:45** Received by: **JL** Company: **STZ**

Relinquished by: _____ Company: _____ Date/Time: _____ Received by: _____ Company: _____

Relinquished by: _____ Company: _____ Date/Time: _____ Received by: _____ Company: _____

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
STL-6003

STL EDISON

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice): **RANDY DEARDORFF**
Company: **BUCHART-HORN, INC.**
Address: **445 W. PHILADELPHIA ST.**
City: **YORK PA 17401**
Phone: **717-852-1408** Fax: **717-852-1617**

Samplers Name (Printed): **WILLIAM G. DEMPSEY**
P.O. #:
Site/Project Identification: **HARLEY-DUNSON BLDG. 1 AMMONIUM**
State (Location of site): NJ: NY: Other: **PA**
Regulatory Program:

Sample Identification	Date	Time	Matrix	No. of Cont.	ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)			LAB USE ONLY Project No: Job No: Sample Numbers
					PH, TEA, AMMONIA NITRATE, NITRITE	TKN, AMMONIA NITRATE, NITRITE	NITRATE, NITRITE	
B-11	8/29/05	2355	SD	1	X			665582
DUPPLICATE	6/29/05	—	SD	1	X			539
SUMP B04B	8/29/05	2325	M20	2	X	X		534
FIELD BLANK	8/29/05	2325	BA	2	X	X		535

Analysis Turnaround Time: Standard Rush Charges Authorized For: 2 Week 1 Week Other **5 DAY**

Preservation Used: 1 = ICE, 2 = HCl, 3 = H₂SO₄, 4 = HNO₃, 5 = NaOH
6 = Other _____ 7 = Other _____
Soil: **1** Water: **3 1**

Water Metals Filtered (Yes/No)? **N/A** **SC**

Special Instructions

Relinquished by: **William G. Dempsey** Company: **BUCHART-HORN** Date / Time: **8/30/05 1410** Received by: **1) COURIER** Company: **FEDEX**

Relinquished by: **FOO Ex** Date / Time: **8/31/05 10:45** Received by: **2) [Signature]** Company: **STL**

Relinquished by: _____ Date / Time: _____ Received by: **3)** Company: _____

Relinquished by: _____ Date / Time: _____ Received by: **4)** Company: _____

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).

Laboratory Chronicles

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

AMMONIA-EXTRACT

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665522	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665523	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665524	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665525	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665526	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665527	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665528	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665529	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665530	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665531	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665532	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992
665533	8/29/2005	8/31/2005	9/1/2005	Galing, Maria	9/3/2005	Kaur, Kuldeep	0992

ASTM LEACHATE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665522	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	-----
665523	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	-----
665524	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	-----
665525	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	-----
665526	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	-----

**INTERNAL CUSTODY RECORD
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STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

ASTM LEACHATE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665527	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665528	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665529	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665530	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665531	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665532	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----
665533	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	----

N EX-NITRATE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665522	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665523	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665524	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665525	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665526	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665527	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665528	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665529	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665530	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665531	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

N EX-NITRATE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
665532	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460
665533	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	1460

N EX-NITRITE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
665522	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665523	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665524	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665525	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665526	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665527	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665528	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665529	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665530	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665531	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665532	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484
665533	8/29/2005	8/31/2005	9/2/2005	Villadarez, Gerson	9/2/2005	Kaur, Kuldeep	0484

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

NITROGEN-AMMONIA

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
665534	8/29/2005	8/31/2005			9/3/2005	Kaur, Kuldeep	0991
665535	8/29/2005	8/31/2005			9/3/2005	Kaur, Kuldeep	0991

NITROGEN-NITRATE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
665534	8/29/2005	8/31/2005			8/31/2005	Kaur, Kuldeep	1456
665535	8/29/2005	8/31/2005			8/31/2005	Kaur, Kuldeep	1456

NITROGEN-NITRITE

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
665534	8/29/2005	8/31/2005			8/31/2005	Kaur, Kuldeep	0482
665535	8/29/2005	8/31/2005			8/31/2005	Kaur, Kuldeep	0482

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

pH

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665522	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665523	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665524	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665525	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665526	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665527	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665528	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665529	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665530	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665531	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665532	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752
665533	8/29/2005	8/31/2005			9/2/2005	Villadarez, Gerson	2752

TKN

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
WATER							
665534	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0346
665535	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0346
SOLID							
665522	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665523	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347

**INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
STL Edison**

**777 New Durham Road, Edison, New Jersey
08817**

Job No: E737

Site: Harley Davidson

Client: Buchart - Horn, Inc.

WET CHEM

TKN

<u>Lab Sample ID</u>	<u>Date Sampled</u>	<u>Date Received</u>	<u>Preparation Date</u>	<u>Technician's Name</u>	<u>Analysis Date</u>	<u>Analyst's Name</u>	<u>QA Batch</u>
SOLID							
665524	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665525	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665526	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665527	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665528	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665529	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665530	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665531	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665532	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347
665533	8/29/2005	8/31/2005			9/6/2005	Raisa, Kamenetskaya	0347

Methodology Review

Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2 Rev 4.1. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method - 200.7/SW846 6010B and for solid matrix - 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1/7470A and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

<u>Element</u>	<u>Water Test Method Furnace</u>	<u>Solid Test Method Furnace</u>
Antimony	200.9	7041
Arsenic	200.9	7060A
Cadmium	200.9	7131A
Lead	200.9	7421
Selenium	200.9	7740
Thallium	200.9	7841

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in water and solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

- Ignitability - Method 1020A
- Corrosivity - Water pH Method 9040B
Soil pH Method 9045C
- Reactivity - Chapter 7, Section 7.3.3 and 7.3.4
respectively for hydrogen cyanide and
hydrogen sulfide release
- Toxicity - TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

Data Reporting Qualifiers

DATA REPORTING QUALIFIERS

- ND - The compound was not detected at the indicated concentration.

- B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

- P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

- * - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

Non-Conformance Summary



Nonconformance Summary

STL Edison Job Number: E737

Client: Buchart - Horn, Inc.

Date: 9/19/2005

Sample Receipt:

Sample delivery conforms with requirements.

Wet Chemistry \ Microbiology:

All data conforms with method requirements.

I certify that the test results contained in this data package meet all requirements of NELAC both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

A handwritten signature in black ink that reads "Michael J. Urban".

Michael J. Urban
Laboratory Manager

General Chemistry Forms

Analytical Results Summary

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0991

Ammonia

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
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665534	Sump-B04B	08/29/05	09/02/05	09/03/05	1.0	10.7
665535	Field-Blank	08/29/05	09/02/05	09/03/05	1.0	0.95

Quantitation Limit for Ammonia is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0992

Ammonia

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/01/05	09/03/05	15.4	1.0	59.3
665523	B-2	08/29/05	09/01/05	09/03/05	15.6	1.0	61.4
665524	B-3	08/29/05	09/01/05	09/03/05	15.5	1.0	55.9
665525	B-4	08/29/05	09/01/05	09/03/05	14.6	1.0	57.2
665526	B-5	08/29/05	09/01/05	09/03/05	17.5	1.0	55.7
665527	B-6	08/29/05	09/01/05	09/03/05	19.7	1.0	62.7
665528	B-7	08/29/05	09/01/05	09/03/05	17.5	1.0	65.8
665529	B-8	08/29/05	09/01/05	09/03/05	17.0	1.0	59.6
665530	B-9	08/29/05	09/01/05	09/03/05	14.8	1.0	55.1
665531	B-10	08/29/05	09/01/05	09/03/05	14.0	1.0	54.8
665532	B-11	08/29/05	09/01/05	09/03/05	17.6	1.0	62.7
665533	Duplicate	08/29/05	09/01/05	09/03/05	18.4	1.0	60.1

Quantitation Limit for Ammonia is 8.0 mg/kg.

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 1456

Nitrate

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
665534	Sump-B04B	08/29/05	08/31/05	1.0	ND
665535	Field-Blank	08/29/05	08/31/05	1.0	ND

Quantitation Limit for Nitrate is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 1460

Nitrate

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/02/05	09/02/05	15.4	20	10.6
665523	B-2	08/29/05	09/02/05	09/02/05	15.6	20	22.9
665524	B-3	08/29/05	09/02/05	09/02/05	15.5	20	30.6
665525	B-4	08/29/05	09/02/05	09/02/05	14.6	20	3.1
665526	B-5	08/29/05	09/02/05	09/02/05	17.5	20	ND
665527	B-6	08/29/05	09/02/05	09/02/05	19.7	20	10.7
665528	B-7	08/29/05	09/02/05	09/02/05	17.5	20	2.7
665529	B-8	08/29/05	09/02/05	09/02/05	17.0	20	19.6
665530	B-9	08/29/05	09/02/05	09/02/05	14.8	20	43.8
665531	B-10	08/29/05	09/02/05	09/02/05	14.0	20	13.5
665532	B-11	08/29/05	09/02/05	09/02/05	17.6	20	10.2
665533	Duplicate	08/29/05	09/02/05	09/02/05	18.4	20	4.3

Quantitation Limit for Nitrate is 0.1 mg/kg.

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0482

Nitrite

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
665534	Sump-B04B	08/29/05	08/31/05	1.0	ND
665535	Field-Blank	08/29/05	08/31/05	1.0	ND

Quantitation Limit for Nitrite is 0.1 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0484

Nitrite

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/02/05	09/02/05	15.4	20	ND
665523	B-2	08/29/05	09/02/05	09/02/05	15.6	20	ND
665524	B-3	08/29/05	09/02/05	09/02/05	15.5	20	ND
665525	B-4	08/29/05	09/02/05	09/02/05	14.6	20	ND
665526	B-5	08/29/05	09/02/05	09/02/05	17.5	20	ND
665527	B-6	08/29/05	09/02/05	09/02/05	19.7	20	ND
665528	B-7	08/29/05	09/02/05	09/02/05	17.5	20	ND
665529	B-8	08/29/05	09/02/05	09/02/05	17.0	20	ND
665530	B-9	08/29/05	09/02/05	09/02/05	14.8	20	ND
665531	B-10	08/29/05	09/02/05	09/02/05	14.0	20	ND
665532	B-11	08/29/05	09/02/05	09/02/05	17.6	20	ND
665533	Duplicate	08/29/05	09/02/05	09/02/05	18.4	20	ND

Quantitation Limit for Nitrite is 0.1 mg/kg.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 2752

pH

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Analyzed</u>	<u>Analytical</u> <u>Result</u> <u>Units: std</u> <u>unit</u>
665522	B-1	08/29/05	09/02/05	7.99
665523	B-2	08/29/05	09/02/05	7.9
665524	B-3	08/29/05	09/02/05	8.48
665525	B-4	08/29/05	09/02/05	8.11
665526	B-5	08/29/05	09/02/05	8.25
665527	B-6	08/29/05	09/02/05	8.07
665528	B-7	08/29/05	09/02/05	7.91
665529	B-8	08/29/05	09/02/05	8.15
665530	B-9	08/29/05	09/02/05	7.87
665531	B-10	08/29/05	09/02/05	8.11
665532	B-11	08/29/05	09/02/05	7.11
665533	Duplicate	08/29/05	09/02/05	7.79

Site: Harley Davidson
Matrix: WATER

Lab Job No: E737
QA Batch: 0346

Total Kjeldahl Nitrogen

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/l</u>
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665534	Sump-B04B	08/29/05	09/04/05	09/06/05	1.0	13.3
665535	Field-Blank	08/29/05	09/04/05	09/06/05	1.0	ND

Quantitation Limit for Total Kjeldahl Nitrogen is 0.5 mg/l.

Site: Harley Davidson
Matrix: SOIL

Lab Job No: E737
QA Batch: 0347

Total Kjeldahl Nitrogen

<u>STL Edison</u> <u>Sample #</u>	<u>Client ID</u>	<u>Date</u> <u>Sampled</u>	<u>Date</u> <u>Extracted</u>	<u>Date</u> <u>Analyzed</u>	<u>Percent</u> <u>Moisture</u>	<u>Dilution</u> <u>Factor</u>	<u>Analytical</u> <u>Result</u> <u>Units: mg/kg</u>
665522	B-1	08/29/05	09/04/05	09/06/05	15.4	1.0	398
665523	B-2	08/29/05	09/04/05	09/06/05	15.6	1.0	323
665524	B-3	08/29/05	09/04/05	09/06/05	15.5	1.0	203
665525	B-4	08/29/05	09/04/05	09/06/05	14.6	1.0	240
665526	B-5	08/29/05	09/04/05	09/06/05	17.5	1.0	106
665527	B-6	08/29/05	09/04/05	09/06/05	19.7	1.0	298
665528	B-7	08/29/05	09/04/05	09/06/05	17.5	1.0	139
665529	B-8	08/29/05	09/04/05	09/06/05	17.0	1.0	266
665530	B-9	08/29/05	09/04/05	09/06/05	14.8	1.0	231
665531	B-10	08/29/05	09/04/05	09/06/05	14.0	1.0	116
665532	B-11	08/29/05	09/04/05	09/06/05	17.6	1.0	82.9
665533	Duplicate	08/29/05	09/04/05	09/06/05	18.4	1.0	126

Quantitation Limit for Total Kjeldahl Nitrogen is 25.0 mg/kg.

QA Summary

NITROGEN-AMMONIA

Matrix: WATER

Lab Sample No.: 665000

QA Batch No.: 0991

Lab Job No.: E621

Laboratory Blank	
Blank Conc (mg/l as N)	Quant Limit (mg/l as N)
ND	0.10

Matrix Spike				
Spike Added (mg/l as N)	Sample Conc (mg/l as N)	MS Conc (mg/l as N)	MS % Rec	QC Limits Rec
1.0	0.99	1.94	95.0	60-126

Matrix Spike Duplicate					
Spike Added (mg/l as N)	MSD Conc (mg/l as N)	MSD % Rec	% RPD	QC LIMITS	
				RPD	REC
1.0	2.04	105	5.0	12.0	60-126

Blank Spike			
Spike Added (mg/l as N)	BS Conc. (mg/l as N)	% Recovery	QC LIMIT BS %REC
1.0	0.937	93.7	90-110

NITROGEN-AMMONIA

Matrix: SOLID

Lab Sample No.: 665522

QA Batch No.: 0992

Lab Job No.: E737

Laboratory Blank	
Blank Conc (mg/l as N)	Quant Limit (mg/kg as N)
ND	8.0

Matrix Spike				
Spike Added (mg/kg as N)	Sample Conc (mg/kg as N)	MS Conc (mg/kg as N)	MS % Rec	QC Limits Rec
59.1	59.3	107	80.7	75-125

Matrix Spike Duplicate					
Spike Added (mg/kg as N)	MSD Conc (mg/kg as N)	MSD % Rec	% RPD	QC LIMITS	
59.1	110	85.8	2.8	RPD	REC
				20.0	75-125

Blank Spike			
Spike Added (mg/l as N)	BS Conc. (mg/l as N)	% Recovery	QC LIMIT BS %REC
1.0	0.956	95.6	90-110

NITROGEN-NITRATE

Matrix: WATER

Lab Sample No.: 665000

QA Batch No.: 1456

Lab Job No.: E621

Laboratory Blank	
Blank Conc (mg/l as N)	Quant Limit (mg/l as N)
ND	0.10

Matrix Spike				
Spike Added (mg/l as N)	Sample Conc (mg/l as N)	MS Conc (mg/l as N)	MS % Rec	QC Limits Rec
1.0	0.30	1.31	101	73-115

Matrix Spike Duplicate					
Spike Added (mg/l as N)	MSD Conc (mg/l as N)	MSD % Rec	% RPD	QC LIMITS	
				RPD	REC
1.0	1	103	1.52	10.0	73-115

Laboratory Control Sample				
Vendor	Lot #	True Value (mg/l as N)	Acceptable Range: mg/l	Measured Value: mg/l
ERA	S092695	1.35	1.21-1.49	1.40

NITROGEN-NITRATE

Matrix: SOLID(ASTM)

Lab Sample No.: 665525

QA Batch No.: 1460

Lab Job No.: E737

Laboratory Blank	
Blank Conc (mg/kg as N)	Quant Limit (mg/kg as N)
ND	0.10

Matrix Spike				
Spike Added (mg/kg as N)	Sample Conc (mg/kg as N)	MS Conc (mg/kg as N)	MS % Rec	QC Limits Rec
23.4	3.1	25.7	96.6	73-115

Matrix Spike Duplicate					
Spike Added (mg/kg as N)	MSD Conc (mg/kg as N)	MSD % Rec	% RPD	QC LIMITS	
23.4	25.7	96.6	0.0	RPD	REC
				10.0	73-115

Laboratory Control Sample				
Vendor	Lot #	True Value (mg/l as N)	Acceptable Range: mg/l	Measured Value: mg/l
ERA	P101505	1.43	1.20-1.60	1.36

NITROGEN-NITRITE

Matrix: WATER

Lab Sample No.: 664081

QA Batch No.: 0482

Lab Job No.: E425

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	0.10

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	QC Limits Rec
2.50	ND	2.56	102	76-123

Matrix Spike Duplicate					
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	QC LIMITS	
				RPD	REC
2.50	2.49	100	2.8	10.0	76-123

Laboratory Control Sample				
Vendor	Lot #	True Value Units: mg/l	Acceptable Range: mg/l	Measured Value: mg/l
ERA	S092695	1.35	1.21-1.49	1.41

NITROGEN-NITRITE

Matrix: SOLID(ASTM)

Lab Sample No.: 665525

QA Batch No.: 0484

Lab Job No.: E737

Laboratory Blank	
Blank Conc (mg/kg as N)	Quant Limit (mg/kg as N)
ND	0.10

Matrix Spike				
Spike Added (mg/kg as N)	Sample Conc (mg/kg as N)	MS Conc (mg/kg as N)	MS % Rec	QC Limits Rec
11.7	nd	12.2	104	75-119

Matrix Spike Duplicate					
Spike Added (mg/kg as N)	MSD Conc (mg/kg as N)	MSD % Rec	% RPD	QC LIMITS	
				RPD	REC
11.7	12.1	103	0.8	10.0	75-119

Laboratory Control Sample				
Vender	Lot#	True Value (mg/l as N)	Acceptable Range: mg/l	Measured Value: mg/l
ERA	S092695	1.35	1.21-1.49	1.41

pH/Corrosivity

Matrix: SOLID

Lab Sample No.: 665217

QA Batch No.: 2752

Lab Job No.: E679

Duplicate			
Sample Conc Units: SU	DUP Conc Units: SU	RPD	Q.C. Limits RPD
10.08	9.98	1.0	5.0

Laboratory Control Sample				
Vendor	Lot #	True Value Units: SU	Acceptable Range: SU	Measured Value: SU
ERA	C026272	8.40	8.15-8.65	8.24

Total Kjeldahl Nitrogen

Matrix: SOLID

Lab Sample No.: 665522

QA Batch No.: 0347

Lab Job No.: E 737

Laboratory Blank	
Blank Conc Units: mg/kg	Quant Limit Units: mg/kg
ND	25.0

Matrix Spike				
Spike Added Units: mg/kg	Sample Conc Units: mg/kg	MS Conc Units: mg/kg	MS % Rec	% Recovery Limits
591	398	922	88.7	75-125

Matrix Spike Duplicate				
Spike Added Units: mg/kg	MSD Conc Units: mg/kg	MSD % Rec	% RPD	RPD Limits
591	967	96.3	4.8	41.0

LCS				
Vendor Name	Lot #	Mean Value Units: mg/l	Range	Measured Units: mg/l
ERA	P095525	23.1	17.5-27.3	22.5

Total Kjeldahl Nitrogen

Matrix: Water

Lab Sample No.: 661557

QA Batch No.: 0346

Lab Job No.: D990

Laboratory Blank	
Blank Conc Units: mg/l	Quant Limit Units: mg/l
ND	0.50

Matrix Spike				
Spike Added Units: mg/l	Sample Conc Units: mg/l	MS Conc Units: mg/l	MS % Rec	% Recovery Limits
10.0	ND	11.2	112	69-151

Matrix Spike Duplicate			RPD	
Spike Added Units: mg/l	MSD Conc Units: mg/l	MSD % Rec	% RPD	Limits
10.0	11.0	110	1.8	10.0

LCS				
Vendor Name	Lot #	Mean Value Units: mg/l	Range	Measured Units: mg/l
ERA	P095525	23.1	17.5-27.3	24.2

Total Kjeldahl Nitrogen

Matrix: SOLID

Lab Sample No.: 665522

QA Batch No.: 0347

Lab Job No.: E 737

Laboratory Blank	
Blank Conc Units: mg/kg	Quant Limit Units: mg/kg
ND	25.0

Matrix Spike				
Spike Added Units: mg/kg	Sample Conc Units: mg/kg	MS Conc Units: mg/kg	MS % Rec	% Recovery Limits
591	398	922	88.7	75-125

Matrix Spike Duplicate				
Spike Added Units: mg/kg	MSD Conc Units: mg/kg	MSD % Rec	% RPD	RPD Limits
591	967	96.3	4.8	41.0

LCS				
Vendor Name	Lot #	Mean Value Units: mg/l	Range	Measured Units: mg/l
ERA	P095525	23.1	17.5-27.3	22.5

This is the Last Page of the Document

Appendix C
Site Photographs



PHOTO 1 – DRILLING AT B-1 WITHIN THE EAST WING BASEMENT OF BUILDING 1.



PHOTO 2 – VIEW OF SUMP B-04B LOOKING WEST, LOCATED WITHIN THE BASEMENT OF BUILDING 1, EAST WING.



PHOTO 3 – CLOSE-UP VIEW OF B04B FROM THE WEST.



PHOTO 4 – DRILLING AT BORING LOCATION B-6 WITHIN THE HALLWAY OF THE EAST WING OF BUILDING 1.



PHOTO 5 – PATCH APPLIED TO BORING B-5, LOCATED WITHIN ROOM B-16, NORTH SIDE OF THE BUILDING 1 EAST WING.



PHOTO 6 – PATCH APPLIED TO BORING B-9, LOCATED AT THE EASTERN END OF THE BUILDING 1 EAST WING HALLWAY.