Addendum #1 to
Field Sample Plan for Part 2 of the Supplemental Groundwater Remedial Investigation
Former York Naval Ordnance Plant
1425 Eden Road, Springettsbury Township
York, Pennsylvania

Prepared for Harley-Davidson Motor Company Operations, Inc.
June, 2012

Prepared by:

Groundwater Sciences Corporation
2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9340

Compound Analysis for Initial Sampling of Newly Installed Wells

The Field Sampling Plan for Part 2 of the Supplemental Groundwater Remedial Investigation (GSC, April 2012) specifies that water from all newly installed wells will be sampled and analyzed shortly after construction and development in order that the results can be used to direct remaining portions of the work. **Table 1** specifies the proposed wells and the analytical method to be analyzed for each well also **Figure 1** identifies the locations of these proposed wells. In general, the parameters listed for testing have been analyzed on the first round of all fYNOP groundwater samples, with the exception of 1,4 Dioxane, and are detailed in the Quality Assurance Project Plan (QAPP) (GSC, June 2012). While 1,4 Dioxane is analyzed by method 8260B, it's detection limit using that method is too high to meet the data quality objective of meeting the PADEP medium specific concentration, and therefore requires a specific analysis by method 8270C SIM. Since that compound is a stabilizer for 1,1,1 Trichloroethane (TCA), analysis for that compound using low level is only necessary where concentrations of TCA are expected. Sufficient characterization has been completed to eliminate analysis for 1,4 Dioxane for off-site wells and wells along the northern, eastern and southeastern boundaries and offsite. If concentrations of TCA above the medium specific concentration (MSC) were detected in the initial sampling, analysis for 1,4 Dioxane would be reconsidered for the second sampling.

Summarizing the results of **Table 1**, the analysis for the initial sampling of the newly installed wells for the Source Area Investigations, Vertical Extent/DNAPL Investigation (excluding MW-

141A and MW-141B), and the stratigraphic borings (if wells are constructed in the stratigraphic borings) will be analyzed for the following via TestAmerica Laboratories Inc.:

- VOCs via 8260B
- SVOCs via 8270C
- 1,4 Dioxane via 8270C SIM
- Dissolved and Total Metals via SW-846 6020/7470A
- Free Cyanide via EPA OIA-1677
- Total Cyanide via EPA 335.4
- Total and Dissolved hexavalent chromium (Cr+6) via 7169A

Newly installed wells in the following categories: North Property Boundary Area (NPBA), West of Site, South of Site, Shallow Wells Along Streams/Wetlands, and Vertical Extent Wells MW-141A and MW-141B will be analyzed for the following:

- VOCs via 8260B
- SVOCs via 8270C
- Dissolved and Total Metals via SW-846 6020/7470A
- Free Cyanide via EPA OIA-1677
- Total Cyanide via EPA 335.4
- Total and Dissolved hexavalent chromium (Cr+6) via 7169A

For a complete list of compounds analyzed for each method, refer to Tables A-6 through A-9 in the Quality Assurance Project Plan (QAPP, GSC June 2012) and for a detailed list of analyses per well please see **Table 1** of this addendum.

Once all newly installed wells have been sampled there will be a site wide sampling event currently planned for November 2012. A complete list of parameters for the site wide sampling event will be determined based on results of the initial sampling of the newly installed wells as well as the site wide historical results. For specific sampling procedures please refer to section 4.2.4.7 of the FSP and to section B.1.1, B.1.2, B.1.4 and Table B-1 of the QAAP.

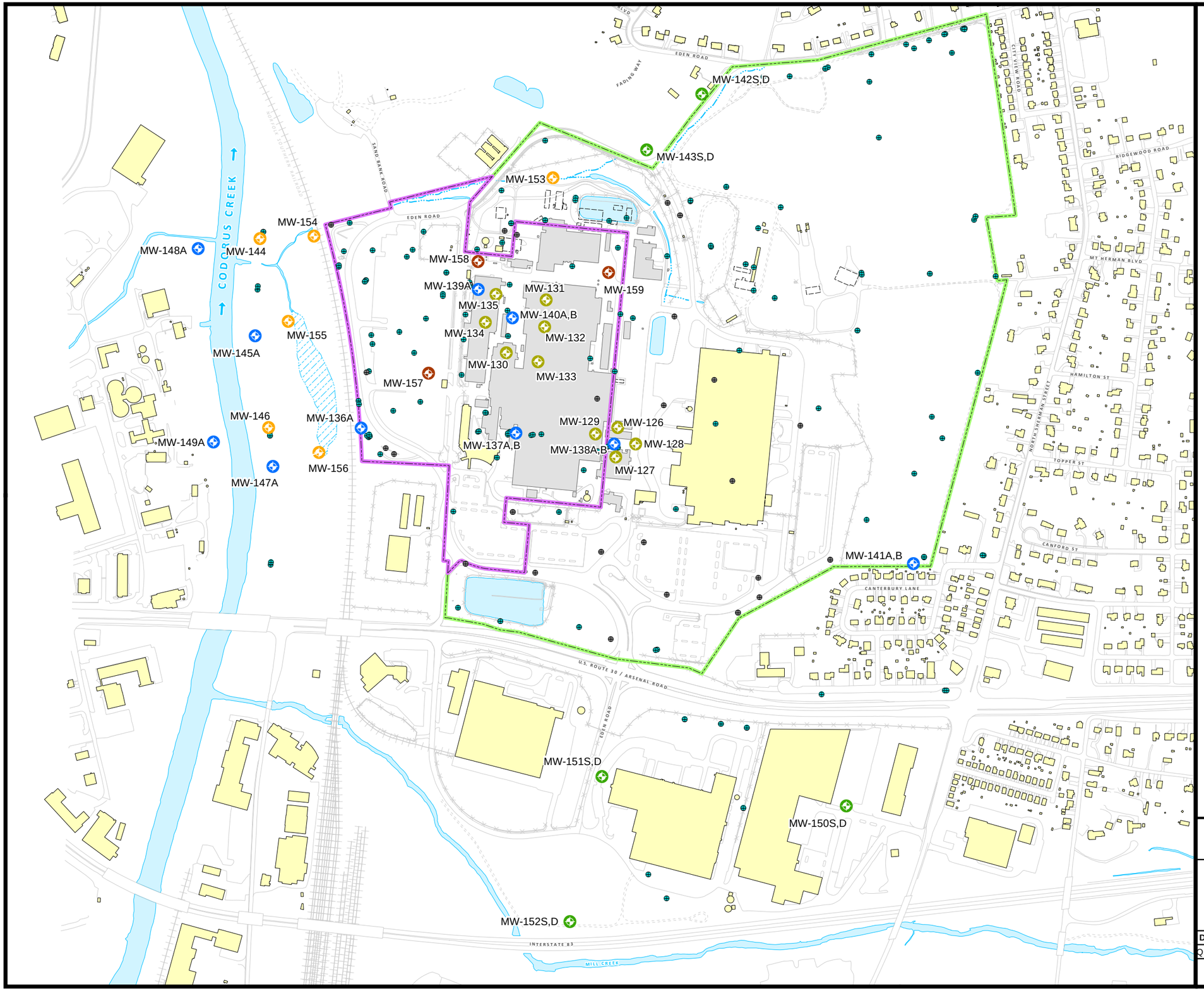
Prepared by:

Alan G. Miller, Environmental Scientist, GIS Specialist

Stephen M. Snyder, PG Senior Associate and Hydrogeologist

Table 1-FSP Addendum 1
Summary of Initial Sampling Analysis of Newly Installed Wells
Remedial Investigation Part 2
Former York Naval Ordnance Plant

Well ID	Area Designation	VOCs 8260B	SVOCs 8270C	1,4 Dioxane 8270C SIM	Dissolved and Total Metals SW-846 6020/7470A	Free Cyanide 4500CN-1	Total Cyanide 9012A	Total and Dissolved Cr+6 7169A
	Source Area Investigations							
MW-126	Bldg 58 - drill 1 shallow well north	X	X	X	X	X	X	X
MW-127	Bldg 58 - drill 1 shallow well south	X	X	X	X	X	X	X
MW-128	Bldg 58 - drill 1 shallow well east	X	X	X	X	X	X	X
MW-129	Bldg 58 - drill 1 shallow well west	X	X	X	X	X	X	X
MW-130	W Bldg 2 Corridor - drill 1 shallow well south	X	X	X	X	X	X	X
MW-131	W Bldg 2 Corridor - drill 1 shallow well northeast	X	X	X	X	X	X	X
MW-132	W Bldg 2 Corridor - drill 1 shallow well east	X	X	X	X	X	X	X
MW-133	W Bldg 2 Corridor - drill 1 shallow well southeast	X	X	X	X	X	X	X
MW-134	W Bldg 2 Corridor - drill 1 shallow well northwest	X	X	X	X	X	X	X
MW-135	W Bldg 2 Corridor - drill 1 shallow well west	X	X	X	X	X	X	X
	Vertical Extent/DNAPL Investigations - drill 1 or more well clusters in each area (2 per area are listed)							
MW-136A	SW-WPL	X	X	X	X	X	X	X
MW-136B	SW-WPL	X	X	X	X	X	X	X
MW-137A	TCA Tank/Bldg 2 Degreaser	X	X	X	X	X	X	X
MW-137B	TCA Tank/Bldg 2 Degreaser	X	X	X	X	X	X	X
MW-138A	Bldg 58	X	X	X	X	X	X	X
MW-138B	Bldg 58	X	X	X	X	X	X	X
MW-139A	N Bldg 4	X	X	X	X	X	X	X
MW-139B	N Bldg 4	X	X	X	X	X	X	X
MW-140A	W Bldg 2 Corridor	X	X	X	X	X	X	X
MW-140B	W Bldg 2 Corridor	X	X	X	X	X	X	X
MW-141A	SE Corner of Site	X	X		X	X	X	X
MW-141B	SE Corner of Site	X	X		X	X	X	X
	North Property Boundary Area							
MW-142S	W of NPBA (MW-18 Area) - drill 1 nested well pair north	X	X		X	X	X	X
MW-142D	W of NPBA (MW-18 Area) - drill 1 nested well pair north	X	X		X	X	X	X
MW-143S	W of NPBA (MW-18 Area) - drill 1 nested well pair south	X	X		X	X	X	X
MW-143D	W of NPBA (MW-18 Area) - drill 1 nested well pair south	X	X		X	X	X	X
	West of Site							
MW-144	East of Codorus Creek - drill 1 overburden well near MW-98	X	X		X	X	X	X
MW-145A	East of Codorus Creek - drill 1 deep well near MW-98	X	X		X	X	X	X
MW-146	East of Codorus Creek - drill 1 overburden well near MW-100	X	X		X	X	X	X
MW-147A	East of Codorus Creek - drill 1 deep well near MW-100	X	X		X	X	X	X
MW-148A	West of Codorus Creek - drill 1 deep well across from MW-98	X	X		X	X	X	X
MW-149A	West of Codorus Creek - drill 1 deep well across from MW-100	X	X		X	X	X	X
	South of Site							
MW-150S	Drill 1 nested well pair east	X	X		X	X	X	X
MW-150D	Drill 1 nested well pair east	X	X		X	X	X	X
MW-151S	Drill 1 nested well pair west	X	X		X	X	X	X
MW-151D	Drill 1 nested well pair west	X	X		X	X	X	X
MW-152S	Drill 1 nested well pair south	X	X		X	X	X	X
MW-152D	Drill 1 nested well pair south	X	X		X	X	X	X
	Shallow Wells Along Streams/Wetlands							
MW-153	East Johnsons Run - install 1 well	X	X		X	X	X	X
MW-154	West Johnsons Run - install 1 well	X	X		X	X	X	X
MW-155	North Wetlands - install 1 well	X	X		X	X	X	X
MW-156	South Wetlands - install 1 well	X	X		X	X	X	X
	Stratigraphic Borings							
MW-157	WPL	X	X	X	X	X	X	X
MW-158	North Plant Area (N of Bldg 4)	X	X	X	X	X	X	X
MW-159	North Plant Area (NE of Bldg 2)	X	X	X	X	X	X	X



LEGEND

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- Proposed Vertical Extent Wells
- Proposed Shallow & Deep Pairs
- Proposed Shallow Air Rotary
- Proposed Shallow Boring in Overburden
- Proposed Stratigraphic Boring
- Abandoned Wells
- Active Wells
- West Campus Property Line
- East Campus Property Line
- Existing Building to Remain
- Demolished
- Demolished/Slab Removed
- Railroad
- Road (Paved)
- Road Curb
- Road (Unpaved)
- Walkway
- Fenceline

Scale (feet)

0 140 280 560

Figure 1

Former York Naval Ordnance Plant

1425 Eden Road, York, PA 17402

Addendum 1 FSP (Part 2)
Proposed Well Installations

DRAWN BY: AGM	CHECKED AND APPROVED BY: SMS	DATE: 6/21/2012

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