

Former York Naval Ordnance Plant Military Munitions Response Program

Remedial Investigation Interim Findings

In-Progress Summary of Interim Sampling Results and Proposed Additional Sampling

Overview

Soil samples were collected in August 2016 based on the results of the Phase I and Phase II geophysical surveys, Phase I surface clearance, and the Phase II intrusive investigations. The memorandum dated 01 August 2016 details the sample list and associated rationale for the samples collected and/or analyzed to date. A presentation provided to stakeholders on 16 September 2016 at the Harley-Davidson plant in York, Pennsylvania described the project results and a summary of the sampling results and proposed additional sampling is presented below.

Summary of Sampling Results through August 2016

A total of 117 soil samples were collected in August 2016 from 60 locations identified as a result of prior investigations. Surface soil (SS) and subsurface soil boring (SB) samples were collected from each sample location with the exception of those locations within the building 14 backstop where only an SS sample was collected. The sampling plan assigned priorities to each location for immediate analysis or to have the sample held pending the results of the sample above and/or upgradient of the “Hold” sample.

Excluding quality assurance/quality control (QA/QC) samples, only 64 soil samples were submitted for immediate analysis of metals. Three samples included analysis for explosives and four samples included analysis for polynuclear aromatic hydrocarbons (PAHs). An additional six soil samples were analyzed for metals based on the results of the initial 64 samples bringing the total to 70 samples. Seven QA/QC samples were collected and submitted for analysis of metals. In addition, two of the QA/QC samples were submitted for analysis of explosives, and two were submitted for analysis of PAHs. The original sample locations are presented on **Figure 1** and **Figure 2**.

Analytical results were screened against four different screening criteria including the United States’ Environmental Protection Agency (USEPA) Regional Screening Level (RSL) for industrial soil; the Pennsylvania Department of Environmental Protection (PADEP) Direct Contact standard for surface soil; PADEP Direct Contact standard for subsurface soil; and the PADEP Soil-to-Groundwater – Non-Residential Used Aquifer with Total Dissolved Solids (TDS) Less than 2,500 (Generic)¹. Values of each screening level are presented in **Table 1**.

No explosives were detected in any samples. PAHs were detected in each of the four samples analyzed in Area-of-Concern (AOC) 1; however, no sample results exceeded the screening values. One or more metals exceeded screening values in five discrete samples collected from four locations. Of these five samples, two samples were collected from backstop sand within Building 14 (labeled with YNOP-BLDG14), two samples were collected from the concentrated dust piles from the air handling unit

¹ This screening level is less conservative than the PADEP Soil-to-Groundwater Non-Residential Used Aquifer with TDS Less than 2,500 (100x Medium Specific Concentrations [MSC]). Application of the 100xMSC screening level resulted in each sample exceeding at least one level for metals in soil (Pennsylvania Act 2 Soil-to-Groundwater Table).

associated with Building 14 (labeled with YNOP-H2-01), and one sample collected from Grid G2 (YNOP-G2-05). One sample from the backstop sand exceeded the screening level for lead and zinc while the second sample exceeded lead alone. Both samples from the dust associated with the air handling unit exceeded the screening levels for antimony, lead, and zinc. Finally, the subsurface soil sample collected at G2-05 (24-26 inches below ground surface) exceeded the screening level for lead. Samples with exceedances are presented in **Table 1** and sample locations with exceedances are presented on **Figure 3**.

Table 1: Summary of Soil Sample Exceedances for Remedial Investigation Phase II Soil Sampling

						Location ID:	YNOP-BLDG14	YNOP-BLDG14	YNOP-G2	YNOP-H2	YNOP-H2
						Sample Name:	YNOP-SS-BLDG14-01-00/02-0	YNOP-SS-BLDG14-03-00/02-0	YNOP-SB-G2-05-24/26-0	YNOP-SB-H2-01-24/26-0	YNOP-SS-H2-01-00/02-0
						Sample Date:	8/3/2016	8/3/2016	8/1/2016	8/3/2016	8/3/2016
						Parent Sample:	NA	NA	NA	NA	NA
Metals (SW6020A)	USEPA RSL Industrial Soil	PADEP Direct Contact for Surface Soil	PADEP Direct Contact for Subsurface Soil	PADEP Non-Residential Soil to Groundwater (Generic)	Unit	Result	Result	Result	Result	Result	
Antimony	470	1,300	190,000	27	mg/kg	14	23	0.51	37	39	
Barium	220,000	190,000	190,000	8,200	mg/kg	29	11	190	460	600 D	
Copper	47,000	120,000	190,000	43,000	mg/kg	670 D	410 D	120	16,000 D	26,000 D	
Lead	800	1,000	190,000	450	mg/kg	660 D	680 D	770 D	1,900 D	3,600 D	
Nickel	22,000	64,000	190,000	650	mg/kg	13	2.9	22	14	24	
Zinc	350,000	190,000	190,000	12,000	mg/kg	17,000 D	10,000 D	310 D	14,000 D	23,000 D	

Notes:
 USEPA RSL Industrial Soil = US Environmental Protection Agency Regional Screening Level for Industrial Soil, May 2016.
 PADEP Direct Contact for surface soil = PADEP Medium-Specific Concentrations (MSC) for Non-Residential Direct Contact Soil 0-2 feet, August 2016.
 PADEP Soil-to-Groundwater = Higher value of PADEP MSCs Non-Residential Soil to Groundwater, Used Aquifer with TDS < 2,500, Generic Values and Non-mg/kg = Milligrams per kilogram.
 NA = Not Applicable.
 Q = One or more quality control criteria failed.
 D = The reported value is from a dilution.
 Results exceeding the USEPA RSL Industrial Soil are shaded gray
 Results exceeding the PADEP Direct Contact for surface soil are bolded
 Results exceeding the PADEP Soil to Groundwater are in red font

Historical analytical results from samples collected from the dust from the Building 16 air handling system and the Building 16 backstop sand exceeded Toxicity Characteristic Leachate Procedure (TCLP) thresholds. In the event the material from the Building 14 backstops and the air handling unit is prepared for offsite disposal, TCLP analysis is recommended. Also, as noted in the original sampling memorandum, several 2007 SI sampling locations (YNO-TB-SS-02-03 [Bldg 14 Dust]; YNO-SW-SS-02-02 [AOC 1]; and YNO-TB-SB-12-01, YNO-TB-SS-02-06/YNO-TB-SS-02-05 in [AOC 2]) had lead results that exceeded PADEP Soil-to-Groundwater screening levels (August 2016 values). Based upon review of recent sampling results as compared to the 2007 SI data, additional sampling is recommended in two areas (AOC 1/Grid J-8 and AOC 2) to confirm/clarify 2007 sampling results as discussed below.

In addition to the results above, discussions with stakeholders conducted during the 16 September 2016 meeting covered proposed sampling of the soil pile to the north of the Building 16 target backstop², sampling of the spring water entering Building 14, and sampling associated with the areas in front of the Building 14 air handling unit with samples being submitted for analysis of the target list of metals.

² As discussed during the 16 September 2016 meeting at Harley-Davidson, material including soils and debris located in front of the backstops was scrapped, excavated, and placed in a pile behind the eastern backstop of the former Building 16. This material will be sampled to determine if it has exceedances of the target list of metals.

Sampling Rationale and Recommendations

Additional soil samples are proposed in the vicinities of the air handling system (outside the doorway) near former SI sample location YNO-TB-SS-02-03, around the Grid G2 subsurface sample exceedance, within the existing soil pile to the north of the Building 16 target backstops and from the groundwater seeps associated with the Building 14 backstop sand. Additional samples are also proposed around the backstop berm in the AOC-2 western target backstop near former SI location YNO-TB-SB-12-01, near former SI sample location YNO-SW-SS-02-02 in AOC 1 and near the former sample location YNO-TB-SS-02-06 in AOC 2. Based on the results from the previous sampling, all samples will be analyzed for metals with the exception of two samples described further below which will be analyzed for TCLP metals. The list of proposed samples and sample rationale is summarized in **Table 2** and discussed below.

Building 14 Backstop Area

Several samples from the backstop sand within Building 14 (samples from area BLDG 14) exceeded screening levels for metals and are in an area known for percolation of groundwater. One sample will be collected from the backstop sand and submitted for analysis of TCLP metals for characterization. One grab water sample will also be collected from this location (behind the backstop) with dedicated equipment and will be submitted for analysis of total and dissolved metals. Field parameters will be collected using either a calibrated water quality meter or by adding traditional field parameters³ to the laboratory analyte list. The sample will be collected from adjacent to the sand-filled backstop. Personnel will collect the sample from the screenhouse using a bailer with string lowered to the water behind the backstop.

Building 14 Air Handling Unit

Historically, one sample collected during the SI approximately 7-8 ft from the doorway of the air handling unit (YNO-TB-SS-02-03) had exceedances of lead (soil to groundwater) criteria. In order to account for concentrations of metals exceeding screening levels from the dust pile associated with the Building 14 air handling unit (samples from area H2-01), three samples are proposed outside of the south-facing door of the air handling area. One sample will be approximately 10 feet to the east of the door, the second sample approximately 10 feet to the south along the side of the building, and a third sample approximately 10 feet to the southeast and perpendicular to the shallow grade of the slope. Soil borings at each location will be advanced to a depth of approximately 2 feet below ground surface (bgs) with grab samples collected from the surface and two feet below the bottom of this sample. Each sample will be submitted for analysis of metals.

Area Surrounding Sample Location G2-05

One subsurface soil sample collected from 2 feet bgs (area G2-05) exceeded screening levels for concentrations of lead. The surface soil sample did not exceed screening criteria but it exhibited elevated concentrations of lead approaching the screening criteria. A soil boring will be advanced at this location to a depth of 15 feet bgs with samples collected at 5 feet bgs, 10 feet bgs, and 15 feet bgs. The initial sample collected from this location (5 feet bgs) will be analyzed and the remaining samples will be held pending analytical results. The potential for lateral migration will be assessed by advancing additional soil borings to a depth of 15 feet bgs at locations around location G2-05. Samples will be collected and analyzed from five locations surrounding G2-05.

³ Dissolved oxygen, turbidity, oxidation-reduction potential, conductivity, and pH.

Soil Pile behind Former Building 16 Eastern Backstop

One depth-integrated composite sample is proposed within the soil stockpile located to the north of the Building 16 target backstops within grid H4. Five subsamples will be collected using a hand auger and will contain increments from the surface and every three feet within the stockpile. The five depth-integrated subsamples will be distributed evenly across the stockpile and each sample will be composited into one sample submitted for analysis of metals. Sample material will be composited within a dedicated plastic container and/or plastic bag prior to placement within bottleware. Sample will be submitted for metals and TCLP analysis.

Area of Concern 2 - Building 16 Target Backstop Area

Three additional samples are proposed for collection near the intersection of Grids G4 and H4 in the vicinity of the Building 16 Target Backstops associated with elevated concentrations of metals identified during sampling near YNO-TB-SS-02-06. Samples are proposed around the historical exceedance associated with YNO-TB-SB-12-01⁴ at the base of the slope to the north of the buildings. Samples will be collected from surface soil and at a depth of 24-26 inches bgs and submitted for analysis of metals. One surface soil sample (YNOP-SS-H3-05-00/02-0) will be recollected and submitted for analysis as the sampling team identified asphalt in the original sample and did not submit in order to prevent a false detection. This location will be offset to the nearest viable location and recollected.

Area of Concern 1 – Berm Sampling

Five additional samples are proposed for collection near the northwest corner of Grid J8 within AOC-1 associated with elevated concentrations of metals identified during sampling during the 2007 SI (YNO-SW-SS-02-01/ YNO-SW-SS-02-02). These samples will be collected along the backstop berm near the samples listed above and two samples will be collected to the south near the toe of the slope. Samples will be submitted for analysis of the target group of metals.

Collection Methodologies and Summary Table

Surficial soil samples will be collected using dedicated equipment which will not require decontamination between samples. Subsurface samples will be collected using a direct-push drilling rig (e.g., Geoprobe®) or samples will be collected with a hand auger. Non-dedicated equipment will be decontaminated between samples. An updated dig permit will be provided under separate cover including information regarding the local one-call center (“Miss Utility”). Proposed sample locations for this mobilization are presented on **Figure 4** and **Figure 5**.

⁴ Samples collected during the initial Phase II MC sampling originally bounded this location to the east; however, additional samples are proposed to bound this location to the west. No samples collected as part of the Phase II MC sampling contained elevated concentrations of metals.

Table 2: Proposed Expanded Sample Plan - Samples and Rationale

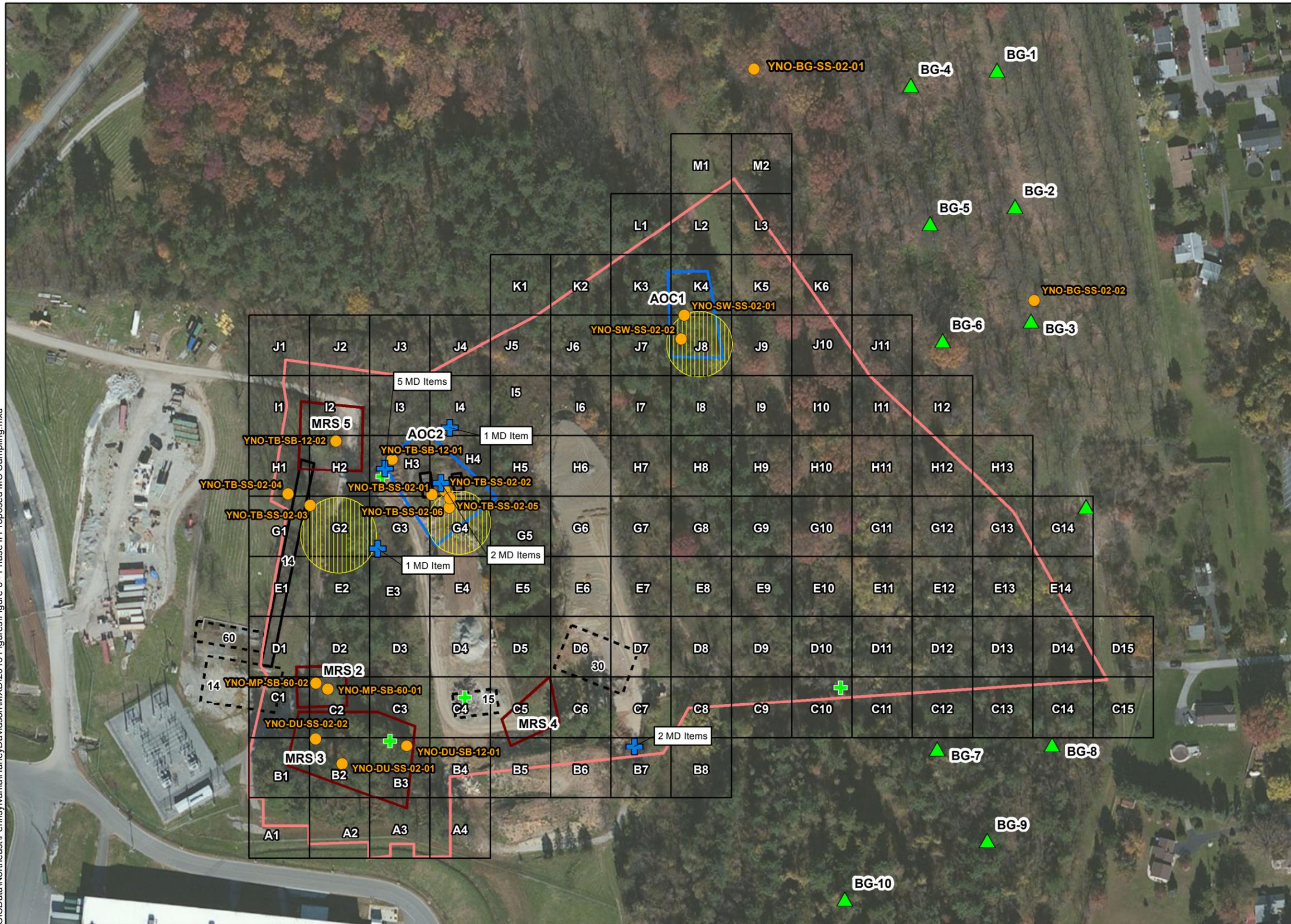
<i>Sample Identification</i>	<i>Analysis</i>	<i>Location</i>	<i>Rationale</i>	<i>Analyze or Hold</i>
<i>YNOP-GW-Bldg14-01-00/XX-0</i>	Dissolved and Total Metals	Building 14 Backstop Area	Several backstop sand samples exceeded screening levels and water in the area of the backstop may be potentially impacted by the elevated concentrations of metals.	Analyze
<i>YNOP-SS-Bldg14-01T-00/02-0</i>	TCLP Metals	Building 14 Backstop Area	Several backstop sand samples from this location exceeded screening levels. The sample and analysis will be used to characterize this material for disposal.	Analyze
<i>YNOP-SS-H2-01T-00/02-0</i>	TCLP Metals	Building 14 Air Handling Unit (Dust Pile)	Several dust samples from the air handling unit exceeded screening levels. The sample and analysis will be used to characterize this material for disposal.	Analyze
<i>YNOP-SS-G2-06-00/02-0</i> <i>YNOP-SB-G2-06-24/26-0</i>	Metals	Building 14 Air Handling Unit	Approximately 10 feet to the south along Building 14 to assess potential migration from the air handling unit dust pile.	Analyze Analyze
<i>YNOP-SS-G2-07-00/02-0</i> <i>YNOP-SB-G2-07-24/26-0</i>	Metals		Approximately 10 feet to the southeast of the door to the air handling unit dust pile.	Analyze Analyze
<i>YNOP-SS-G2-08-00/02-0</i> <i>YNOP-SB-G2-08-24/26-0</i>	Metals		Approximately 10 feet to the east of the door to the air handling unit dust pile.	Analyze Analyze
<i>YNOP-SB-G2-05-58/60-0</i> <i>YNOP-SB-G2-05-118/120-0</i> <i>YNOP-SB-G2-05-178/180-0</i>	Metals		Grid G2 Soil Lead Exceedance	Three samples collected from depths greater than the depth where an exceedance of lead was observed. The surface and 2 feet bgs samples have been analyzed.
<i>YNOP-SS-G2-04-00/02-0</i> <i>YNOP-SB-G2-04-24/26-0</i> <i>YNOP-SB-G2-04-58/60-0</i> <i>YNOP-SB-G2-04-118/120-0</i> <i>YNOP-SB-G2-04-178/180-0</i>	Metals	Grid G2 Soil Lead Exceedance	Sample location bounding the potential lateral migration of metals to the northwest and at depths mimicking samples collected from G2-05. Initial two samples have been collected.	Analyze Analyze Analyze Hold Hold
<i>YNOP-SS-G2-09-00/02-0</i> <i>YNOP-SB-G2-09-24/26-0</i> <i>YNOP-SB-G2-09-58/60-0</i> <i>YNOP-SB-G2-09-118/120-0</i> <i>YNOP-SB-G2-09-178/180-0</i>	Metals	Grid G2 Soil Lead Exceedance	Sample location bounding the potential lateral migration of metals to the northeast and at depths mimicking samples collected from G2-05.	Analyze Analyze Analyze Hold Hold
<i>YNOP-SS-E2-04-00/02-0</i> <i>YNOP-SB-E2-04-24/26-0</i> <i>YNOP-SB-E2-04-58/60-0</i> <i>YNOP-SB-E2-04-118/120-0</i> <i>YNOP-SB-E2-04-178/180-0</i>	Metals	Grid G2 Soil Lead Exceedance	Sample location bounding the potential lateral migration of metals to the southeast and at depths mimicking samples collected from G2-05.	Analyze Analyze Analyze Hold Hold
<i>YNOP-SS-E2-05-00/02-0</i> <i>YNOP-SB-E2-05-24/26-0</i> <i>YNOP-SB-E2-05-58/60-0</i> <i>YNOP-SB-E2-05-118/120-0</i> <i>YNOP-SB-E2-05-178/180-0</i>	Metals	Grid G2 Soil Lead Exceedance	Sample location bounding the potential lateral migration of metals to the southwest and at depths mimicking samples collected from G2-05.	Analyze Analyze Analyze Hold Hold
<i>YNOP-SS-E2-06-00/02-0</i> <i>YNOP-SB-E2-06-24/26-0</i> <i>YNOP-SB-E2-06-58/60-0</i> <i>YNOP-SB-E2-06-118/120-0</i> <i>YNOP-SB-E2-06-178/180-0</i>	Metals	Grid G2 Soil Lead Exceedance	Sample location bounding the potential lateral migration of metals to the west (perpendicular to the slope) and at depths mimicking samples collected from G2-05.	Analyze Analyze Analyze Hold Hold
<i>YNOP-SB-H4-04T-00/XX-0</i>	Metals & TCLP Metals	AOC 2 - Building 16 Target Backstop' Soil Stockpile	Multiple-point composite covering entire depth of stockpile in five evenly-distributed locations.	Analyze
<i>YNOP-SS-H4-05-00/02-0</i> <i>YNOP-SB-H4-05-24/26-0</i>	Metals	AOC 2 - Building 16 Target Backstop	South of the Building 16 Target Backstop in the vicinity of samples collected during the 2007 SI.	Analyze Analyze
<i>YNOP-SS-H4-06-00/02-0</i> <i>YNOP-SB-H4-06-24/26-0</i>	Metals	AOC 2 - Building 16 Target Backstop	South of the Building 16 Target Backstop in the vicinity of samples collected during the 2007 SI.	Analyze Analyze

Table 2: Proposed Expanded Sample Plan - Samples and Rationale

<i>Sample Identification</i>	<i>Analysis</i>	<i>Location</i>	<i>Rationale</i>	<i>Analyze or Hold</i>
<i>YNOP-SS-H4-07-00/02-0</i> <i>YNOP-SB-H4-07-24/26-0</i> <i>YNOP-SB-H4-07-58/60-0</i>	Metals	AOC 2 - Building 16 Target Backstop	South of the Building 16 Target Backstop in the vicinity of samples collected during the 2007 SI.	Analyze Analyze Hold
<i>YNOP-SS-H3-08-00/02-0</i> <i>YNOP-SB-H3-08-24/26-0</i> <i>YNOP-SB-H3-08-58/60-0</i>	Metals	AOC 2 - Building 16 Target Backstop	North of the Building 16 Target Backstop in the vicinity of sample collected during the 2007 SI.	Analyze Hold Hold
<i>YNOP-SS-H3-09-00/02-0</i> <i>YNOP-SB-H3-09-24/26-0</i> <i>YNOP-SB-H3-09-58/60-0</i>	Metals	AOC 2 - Building 16 Target Backstop	North of the Building 16 Target Backstop in the vicinity of sample collected during the 2007 SI.	Analyze Hold Hold
<i>YNOP-SS-H3-10-00/02-0</i> <i>YNOP-SB-H3-10-24/26-0</i> <i>YNOP-SB-H3-10-58/60-0</i>	Metals	AOC 2 - Building 16 Target Backstop	North of the Building 16 Target Backstop in the vicinity of sample collected during the 2007 SI.	Analyze Hold Hold
<i>YNOP-SS-H3-05-00/02-0</i>	Metals	AOC 2 - Building 16 Target Backstop	Recollection of previous sample. Sample location was within a surficial bed of asphalt. Sample will be offset to ensure that the sample is not biased due to surficial road/construction debris.	Analyze
<i>YNOP-SS-J8-07-00/02-0</i> <i>YNOP-SB-J8-07-24/26-0</i>	Metals	AOC-1 Berm	Within the AOC-1 backstop berm to the west of sample collected during 2007 SI.	Analyze Analyze
<i>YNOP-SS-J8-08-00/02-0</i> <i>YNOP-SB-J8-08-24/26-0</i>	Metals	AOC-1 Berm	Within the AOC-1 backstop berm to the east of sample collected during 2007 SI.	Analyze Analyze
<i>YNOP-SS-J8-09-00/02-0</i> <i>YNOP-SB-J8-09-24/26-0</i>	Metals	AOC-1 Berm	Within the AOC-1 backstop berm in the eastern portion of the berm adjacent to the slope.	Analyze Analyze
<i>YNOP-SS-J8-10-00/02-0</i> <i>YNOP-SB-J8-10-24/26-0</i>	Metals	AOC-1 Berm	Within the AOC-1 highest portion of the backstop berm to the west of sample collected during 2007 SI.	Analyze Analyze
<i>YNOP-SS-J8-11-00/02-0</i> <i>YNOP-SB-J8-11-24/26-0</i>	Metals	AOC-1 Berm	Within the AOC-1 highest portion of the backstop berm to the east of sample collected during 2007 SI.	Analyze Analyze
Notes:				
<ol style="list-style-type: none"> 1. Metals include aluminum, antimony, barium, copper, iron, lead, nickel, and zinc via method 6020A. 2. "T" in the sample nomenclature indicates analysis for TCLP Metals. 3. Quality Assurance/Quality Control samples will be collected at a rate equal to 10% or greater for Duplicate and 5% or greater for Matrix Spike/Matrix Spike Duplicates. The suffix will be changed accordingly and will be noted on the field sample sheet. 4. "XX" denotes final depth will be determined based on field observations. 				

FIGURES

L:\GISData\Northeast\Pennsylvania\HarleyDavidson\MXD\2015 Figures\Figure 6 - Phase II Proposed MC Sampling.mxd



Legend

- Existing Background Sample Locations
- Existing SI 2007 Soil Sample Locations
- Munitions Debris found previously
- Munitions Debris found during Phase 1 of RI
- Proposed RI Boundary (20.34 acres)
- MRS Boundary
- AOC Boundary
- Grids Containing Samples with Exceedances of RI Screening Criteria (based on SI Data)
- Former Building Locations
- Current Building Locations
- 100x100 foot grid

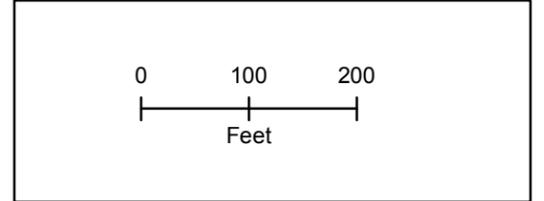
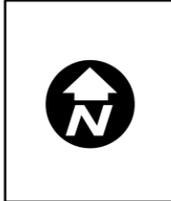
Note:
Initial soil pathway analysis found a complete pathway (SI sample results which exceed RI screening criteria [Act 2 soil to groundwater screening criteria]). Grids with complete soil pathways were identified for MC sampling during the RI; however, specific sampling locations were not identified within those grids. A list of sampling locations, which incorporates the SI results and the findings from the intrusive investigations (i.e. MD, MEC, etc.) will be shared with stakeholders prior to conducting RI nature and extent sampling.

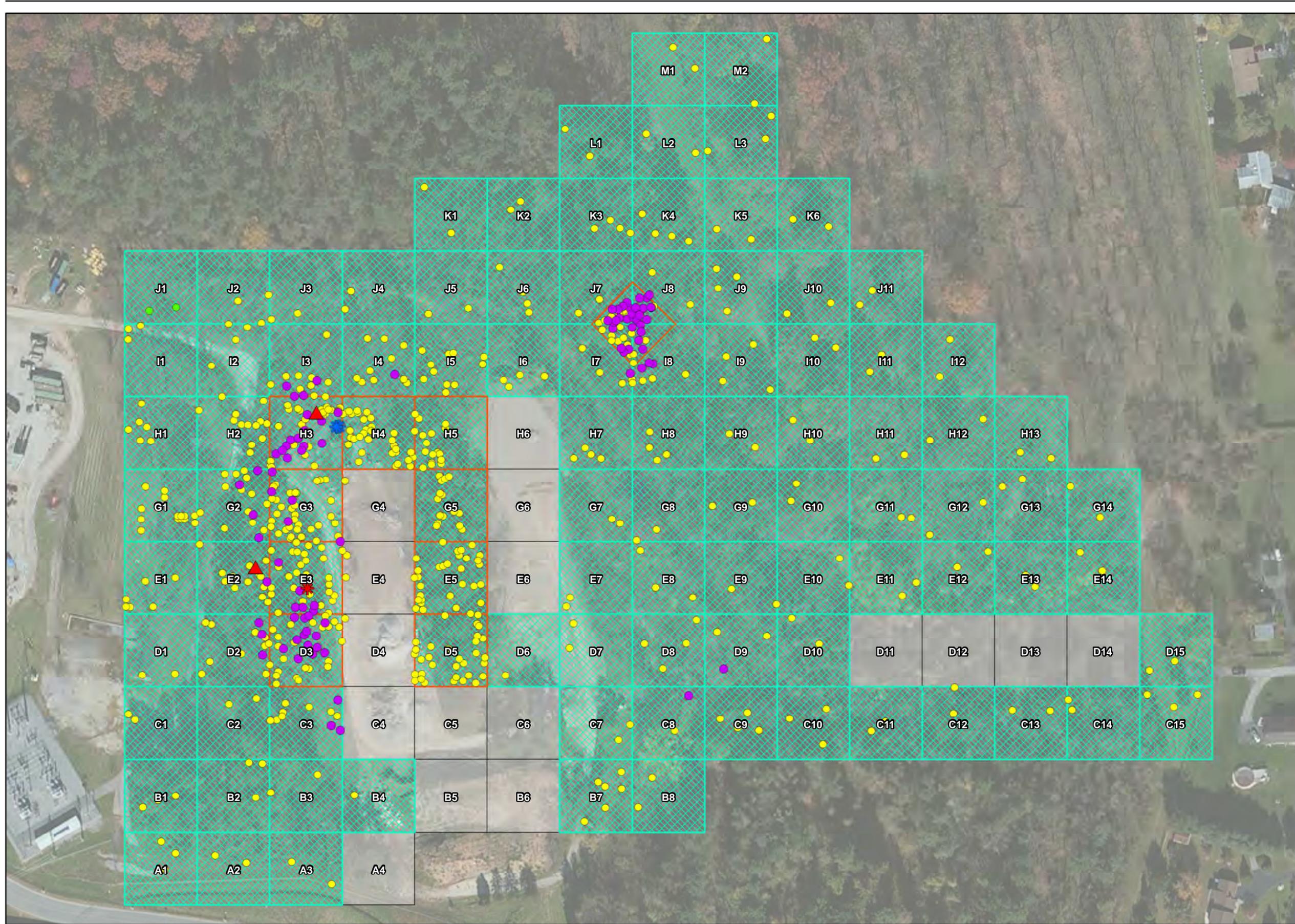


**Figure 1 - Results of Phase I Surface Clearance and Sampling Activities
MMRP RI Former York Naval Ordnance Plant**

Source:
ESRI 2012

Projection: NAD 83 Maryland StatePlane Feet
Date: December 2015





Legend

Intrusive Investigation Finds

- * MPPEH
- ▲ MEC
- MD
- NMRD
- Miscellaneous
- ⊕ Demo Location
- Grid where RI Intrusive Investigation is complete (as of 7/27)
- Grid Excluded from RI Intrusive Investigation
- Area of DGM Survey
- Former York Naval Ordnance Boundary

Notes:
 MEC = Munitions and Explosives of Concern
 MD = Munitions Debris
 MPPEH = Material Potentially Presenting an Explosive Hazard
 NMRD = Non-Munitions Related Debris
 Aerial Source: ESRI 2016

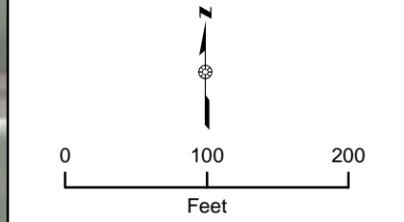
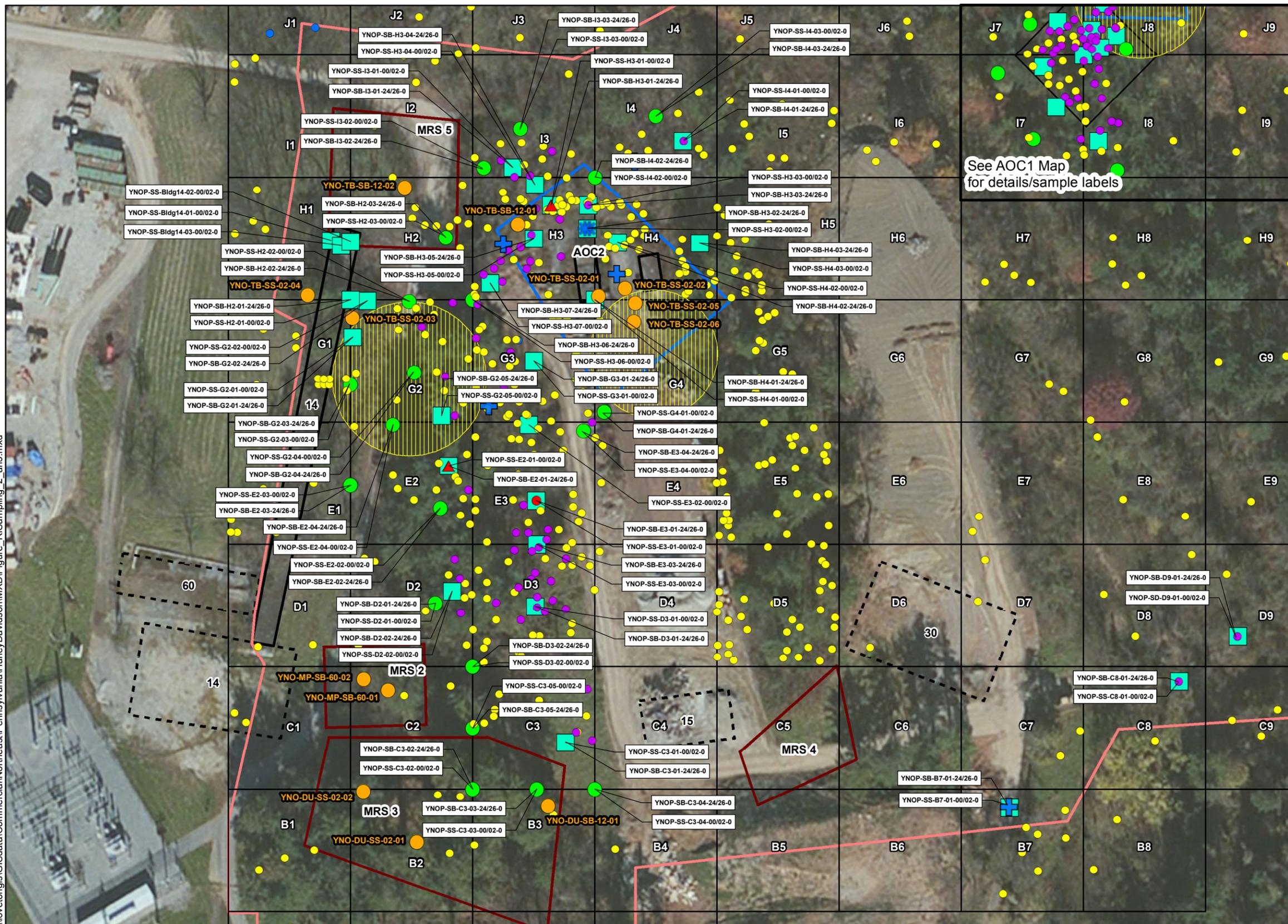


Figure 2
 Former York Naval Ordnance Plant
 Progress Map - July 28, 2016
 Former York Naval Ordnance Plant
 York, Pennsylvania

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Legend

Intrusive Investigation Finds

- MPPEH
- ▲ MEC
- MD
- NMRD
- Miscellaneous
- ⊕ Demo Location

Proposed Sample Locations

- Analyze Upon Collection
- Hold Pending Results
- Previous SI 2007 Soil Sample Locations

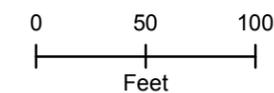
Proposed RI Boundary (20.34 acres)
 Munitions Response Site Boundary
 Area of Concern Boundary
 Grids Containing Samples with Exceedances of RI Screening Criteria (based on SI Data)
 Former Building Locations
 Current Building Locations
 100x100 foot grid



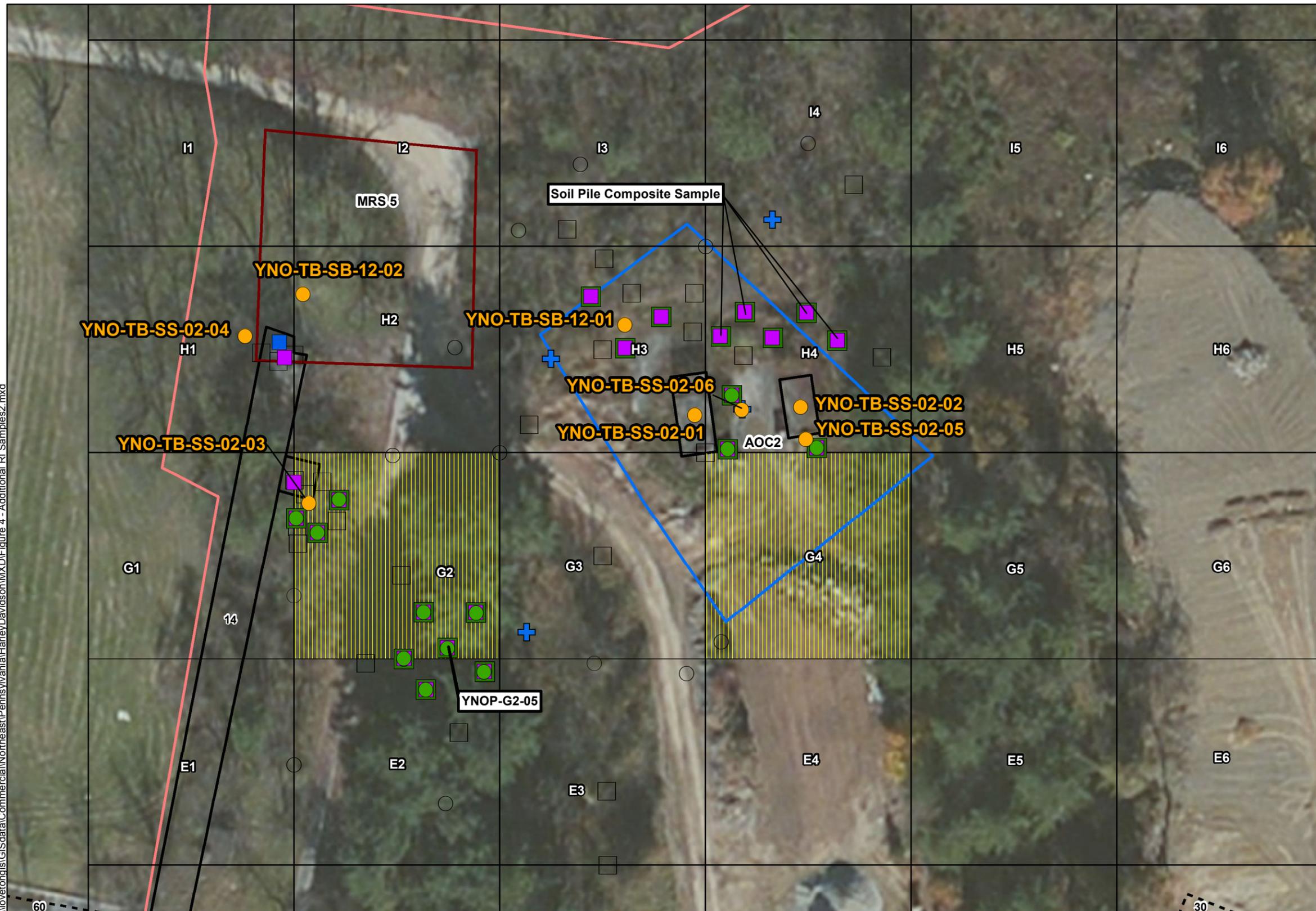
Figure - 3 Remedial Investigation Sample Locations - West Area MMRP RI Former York Naval Ordnance Plant

Source:
ESRI 2012

Projection: NAD 83 Maryland StatePlane Feet
Date: July 2016



\\lovetongis\GIS\data\Commercial\Northeast\Pennsylvania\HarveyDavidson\MXD\Figure 4 - Additional RI Samples2.mxd



Legend

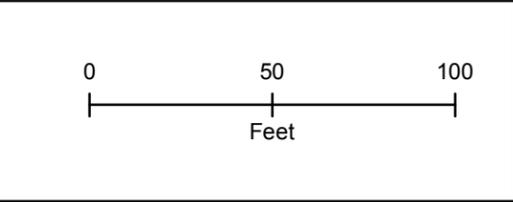
- Additional Remedial Investigation Samples**
- Groundwater (Analyze)
 - Surface (Analyze)
 - Subsurface
 - Subsurface (Hold)
- Initial Remedial Investigation Samples**
- Analyze
 - Hold
 - + Munitions Debris found during Phase 1 of RI
 - 2007 Site Investigation Sample Location
 - Proposed Remedial Investigation Boundary (20.34 acres)
 - Munitions Response Site Boundary
 - Site Inspection Area of Concern Boundary
 - Grids Containing Samples with Exceedances of Remedial Investigation Screening Criteria (based on Site Inspection Data)
 - Former Building Locations
 - Current Building Locations
 - 100x100 foot grid
- Note:
"T" in sample name indicates identical sample location analyzed for TCLP Metals



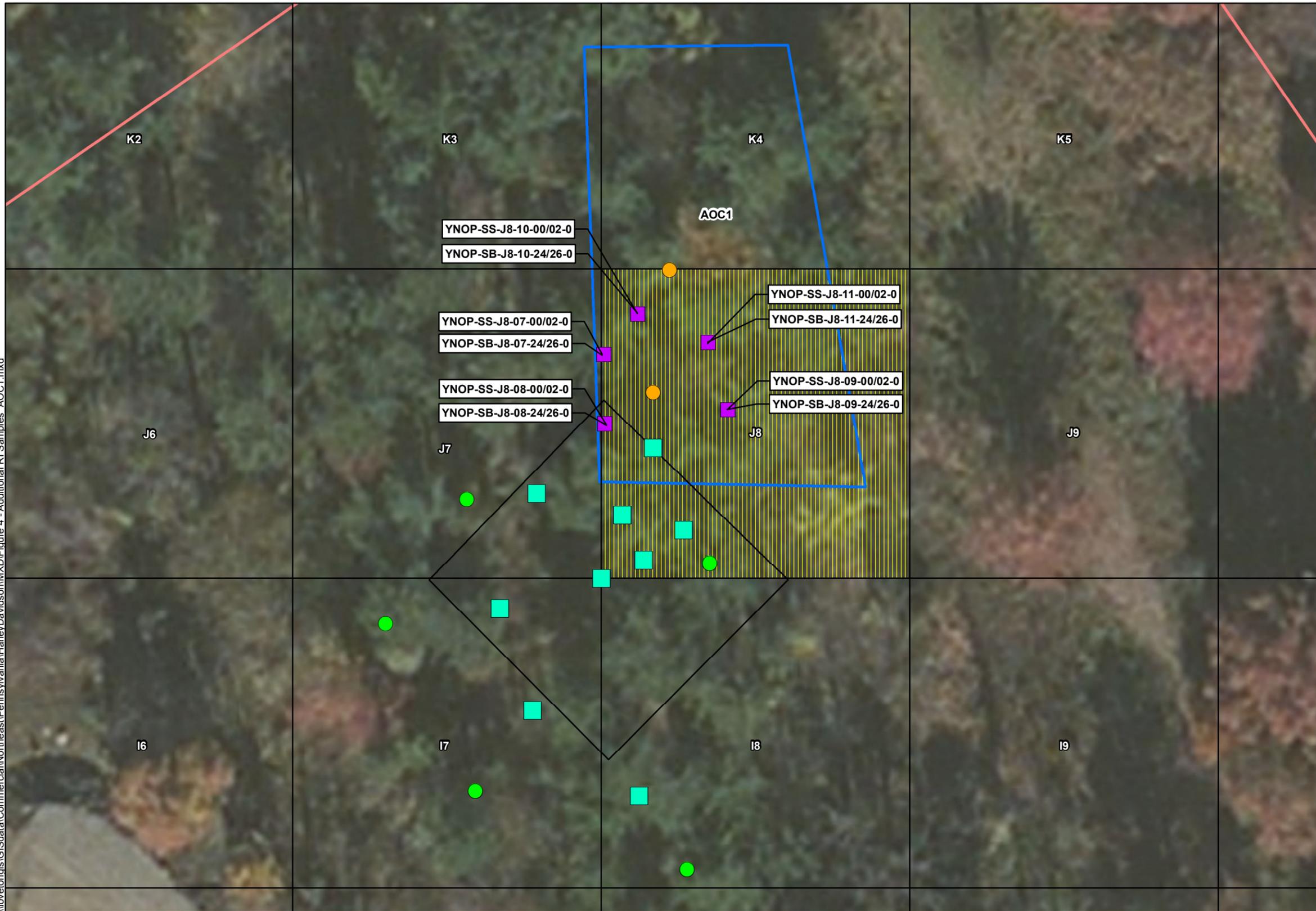
Figure 4 - Additional Remedial Investigation Soil Sample Locations

Source:
ESRI 2012

Projection: NAD 1983 StatePlane Pennsylvania South Feet
Date: September 2016



\\lovetongis\GIS\data\Commercial\Northeast\Pennsylvania\Harley\Davidson\MXD\Figure 4 - Additional RI Samples - AOC1.mxd



Legend

Additional Remedial Investigation Samples

- Surface (Analyze)
- Subsurface (Analyze)

Intitial Remedial Investigation Samples

- Analyze
- Hold
- 2007 Site Investigation Sample Location
- Proposed Remedial Investigation Boundary (20.34 acres)
- Site Inspection Area of Concern Boundary
- Grids Containing Samples with Exceedances of Remedial Investigation Screening Criteria (based on Site Inspection Data)
- 100x100 foot grid



Figure 5 - Additional Remedial Investigation Soil Sample Locations in AOC1

Source:
ESRI 2012

Projection: NAD 1983 StatePlane Pennsylvania South Feet
Date: September 2016

