PRE-DESIGN INVESTIGATION
FORMER AIR FORCE PLANT NO. 51
IRM REMEDIAL DESIGN

NYSDEC STANDBY ENGINEERING CONTRACT
Work Assignment #D007625-24

PREPARED FOR
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NEW YORK 12233

Prepared by

One International Boulevard
Mahwah, NJ 07495

September 2015

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1.0 PURPOSE AND OBJECTIVES

1.1 Purpose

This Pre-Design Investigation (PDI) Work Plan has been prepared to describe the individual tasks associated with two IRM areas at the site that will be completed by Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) during the remedial design for the Former Air Force Plant No. 51 under Superfund Standby Engineering Contract No. D007625 WA#24. This document provides a description of the anticipated tasks that will be completed in conformance with the Program Field Activities Plan (FAP), Health & Safety Plan (HASP) and Quality Assurance Project Plan (QAP).

2.0 TASK 3 - PRE-DESIGN INVESTIGATION

The pre-design investigation task is intended to collect additional site specific data necessary to better define the horizontal and vertical limits of excavation within the two IRM areas, determine waste characterization for disposal, locate subsurface features associated with the IRM areas, and refine dewatering and other field needs during future IRM implementation. PDI field work is planned for October 2015. Under this task, HDR will develop a PDI work plan for NYSDEC review, complete field sampling of media in each IRM area, provide oversight of subcontractors (including the NYSDEC Standby Remedial Contractor and Standby Laboratory Contractor), organize and interpret PDI data, and prepare a PDI Report. HDR will coordinate a licensed surveyor to complete a property survey to verify existing site conditions at the Former Septic System / Leach Field Area and Stormwater / Outfall Area. The surveying subcontractor will also create baseline survey maps for each IRM area.

It is assumed that installation of soil borings by Geoprobe and test pit investigation by wheel or track mounted excavator will be conducted by NYSDEC's Standby Remedial Contractor. It is assumed that the analysis of all soil, sediment, and water samples collected during the Task 3 activities will be conducted by NYSDEC's Standby Laboratory Contractor (the lab contractor will also be responsible for providing glassware and courier services for the samples collected at the site). A standard turn-around time of 30 days is assumed. All investigation derived waste

(IDW) generated during the Task 3 activities will be containerized at the Site by HDR or by NYSDEC's Standby Contractors. It is understood that IDW storage, classification, handling, and disposal will be performed by a NYSDEC Standby Remedial Contractor. Level D PPE is assumed for all Task 3 work.

2.1 Task 3.1 Survey

A pre-construction site survey will be completed to identify and delineate IRM site features, verify existing conditions, and provide IRM area base maps for remedial design drawings. Existing site survey data will be utilized to the extent possible. HDR has selected a licensed land surveyor (subcontractor) based on competitive bidding on a request for proposal (RFP). In-field and office time is assumed to prepare the base maps/ topographic surveys. Deliverables associated with the topographic surveys will include the site survey and legal description. HDR will coordinate and direct the survey work and review the survey maps received by the subcontractor. The surveying will be completed to define IRM excavation limits.

2.2 Task 3.2 PDI Work Plan

This PDI work plan was prepared by HDR. The work plan provides conceptual sampling locations / media, sampling rationale, and number of samples anticipated. Actual number and locations of sample will be field-determined during the PDI work.

2.3 Task 3.3 PDI Sampling

HDR will coordinate field mobilization for purposes of conducting the PDI in the two IRM areas. Work is anticipated for October 2015. The pre-design investigation task is intended to collect additional site specific data necessary to better define the horizontal and vertical limits of excavation within the two IRM areas, determine waste characterization for disposal, locate subsurface features associated with the IRM areas, and refine dewatering and other field needs during future IRM implementation. This will include coordination of access for HDR staff and the NYSDEC Standby Remedial Contractor. Conceptual PDI sampling locations are included on

Figures 1, 2A and 2B (see attached). Figure 1 includes the Stormwater / Outfall IRM area, and Figures 2A and 2B include the Former Septic System / Leach Field IRM area.

As part of this activity, one day of site clearing (brush hog, mowing, etc.) near the wooded or overgrown locations associated with the IRM areas, one day of air knife clearing of pipe runs, and four days of testpit and probe sampling is anticipated. HDR will work with the Standby Remedial Contractor assigned to the site by the NYSDEC to coordinate site clearing and sampling activities around the Former Septic System / Leach Field IRM and Stormwater / Outfall IRM area. Brush removal will be conducted with emphasis on preserving wooded and wetland/wetland adjacent areas wherever possible, and minimizing any impact that may happen during the course of PDI activities. Investigation-derived wastes (IDWs) from the PDI will be sampled for waste characterization parameters which will determine how the wastes will be disposed; it is assumed that IDW classification and handling will be conducted by NYSDEC Stand-by Remedial Contractor.

It is assumed that a total of 20 borings will be advanced by utilizing a direct-push probe rig over an estimated 2-day period in the field. Two days of testpit work is assumed. A maximum probe investigation depth of l5 ft bgs and a test pit excavation depth of 12 ft bgs will be targeted depending on actual site conditions. A total of 30 soil, sediment and/or water samples are estimated to be collected by HDR, with a total of 10 samples and associated QA/QC samples, submitted for laboratory analysis for contaminants of concern and TCLP parameters. The selection of those 10 samples will depend on whether the boring location or test pit covers a data gap or if samples have noticeable evidence of impact in the form of staining, odors, PID hits or other visual cues. If the extent of contamination is greater than expected based on in-field observations, the number of sampling points and lab submittals may increase in order to help quantify that extent (in which case HDR will notify the NYSDEC Project Manager). Water grab samples may be collected from test pits and 1” piezometers placed within select boreholes. The purpose of water sampling during the PDI would be to determine dewatering criteria and locate depth to shallow groundwater. Final PDI sample locations and depths will be determined by HDR, based on existing site data and field observations. The NYSDEC Standby Remedial

Contractor will provide the probing and testpit services. An HDR geologist will be present at the site during the duration of the PDI work (a total of 6 field days is assumed).

Test pit investigation will be conducted via wheel or track mounted excavator over an estimated 2-day period in the field. The purpose of the test pit investigation is to locate subsurface piping and abandoned infrastructure within the IRM areas. Excavation of test pits will be considerate of piping and other subsurface infrastructure located in the IRM areas. Soils excavated from the test pits will be returned back into the hole following assessment or stockpiled temporarily beside the test pit. HDR may collect soil samples during the test pit investigation. HDR technicians will be on-site for the duration of the test pit activities to provide direction and oversight to the subcontractor, conduct field screening and document necessary field observations, and collect soil and sediment samples / prepare for laboratory analysis. Groundwater samples will be collected for purposes of evaluating dewatering needs during IRM implementation.

2.3.1 Site Clearing and Utility Mark-Out

Prior to the commencement of PDI activities, minimal clearing via brush hog and mowing will occur near the wooded or overgrown locations within the IRM areas. Emphasis will be placed on clearing areas only to the level required to facilitate PDI sampling. No clearing within the wetland delineated areas is anticipated to be needed for the PDI. Utility maps will be reviewed prior to the start of the PDI and NYSDEC Stand-by Remedial Contractor will document notification to Dig Safe. As noted above, use of an air knife will also be employed to clear select test pit and probe locations before intrusive PDI work begins.

2.3.2 Soil Probe and Testpit Sampling Locations

2.3.2.1 Stormwater / Outfall IRM Area

The focus of this IRM area includes the existing stormwater piping from CB-2 to CB-1 and CB-1 to the Outfall Pipe, the CB-1 infrastructure itself, and the surrounding impacted soil (see Figure 1). The goal of these series of soil borings and test pits is to confirm the extent of impacted soils on either side of the existing piping, to confirm the location and construction of subsurface piping, to determine if any other historical piping exists, and refine waste disposal quantities. A

total of eight (8) soil borings and seven (7) test pits are selected for the Outfall IRM Area. As shown on Figure 1, the seven test pits trend perpendicular to either side of the IRM boundary at several sections along the length of the IRM Area. The eight soil borings allow for spot checks of contaminants along that boundary. This will allow further clarification of the IRM boundary from the CB-2 area to CB-1 then outward to the outfall in the woods. It is acknowledged that OU-1 exists immediately north to a portion of the outfall IRM area. As this OU is being evaluated and addressed under a separate action, no PDI sampling is proposed at this location.

2.3.2.2 Former Septic System / Leach Field IRM Area

The emphasis of this IRM area is the removal of 12" sanitary piping, a clay tile outfall pipe, former septic tank and leach field infrastructure, and associated impacted soils. The goal of this series of soil borings and test pits is to confirm the locations, depths and construction of subsurface piping and infrastructure, extent of impacted soils on either side of the existing piping, and to fill in apparent gaps in data particularly within the leach field. Figure 2A details the entire IRM area with testpits shown for examination of soils along the existing piping from the former Building #1 out towards the leach field. Three test pits will be dug perpendicular to the E-W trending 12" sanitary pipe. The first trench will be made closest to former Building #1 to confirm the location of where the piping is affixed to the building. The next will be located at a midway point between former Building #1 and the wooded area, to confirm the trend of the piping and to determine if any unknown piping exists. The last trench will aim to uncover the clay outfall pipe in addition to the 12" sanitary pipe, and determine whether both pipes connect. Figure 2B details the leach field area only. Ten (10) soil borings and six (6) test pits are designated for this area of the IRM.

2.3.3 Investigation- Derived Waste Handling

All IDW will be drummed by the NYSDEC Standby Remedial Contractor and staged on-site for later disposal**.** The subcontractor will supply 55-gallon drums or a roll-off container and the machinery (skid steer /backhoe) necessary to transfer cuttings from the drilling locations to a designated on-site staging area. It is assumed that the NYSDEC Remedial Standby Contractor

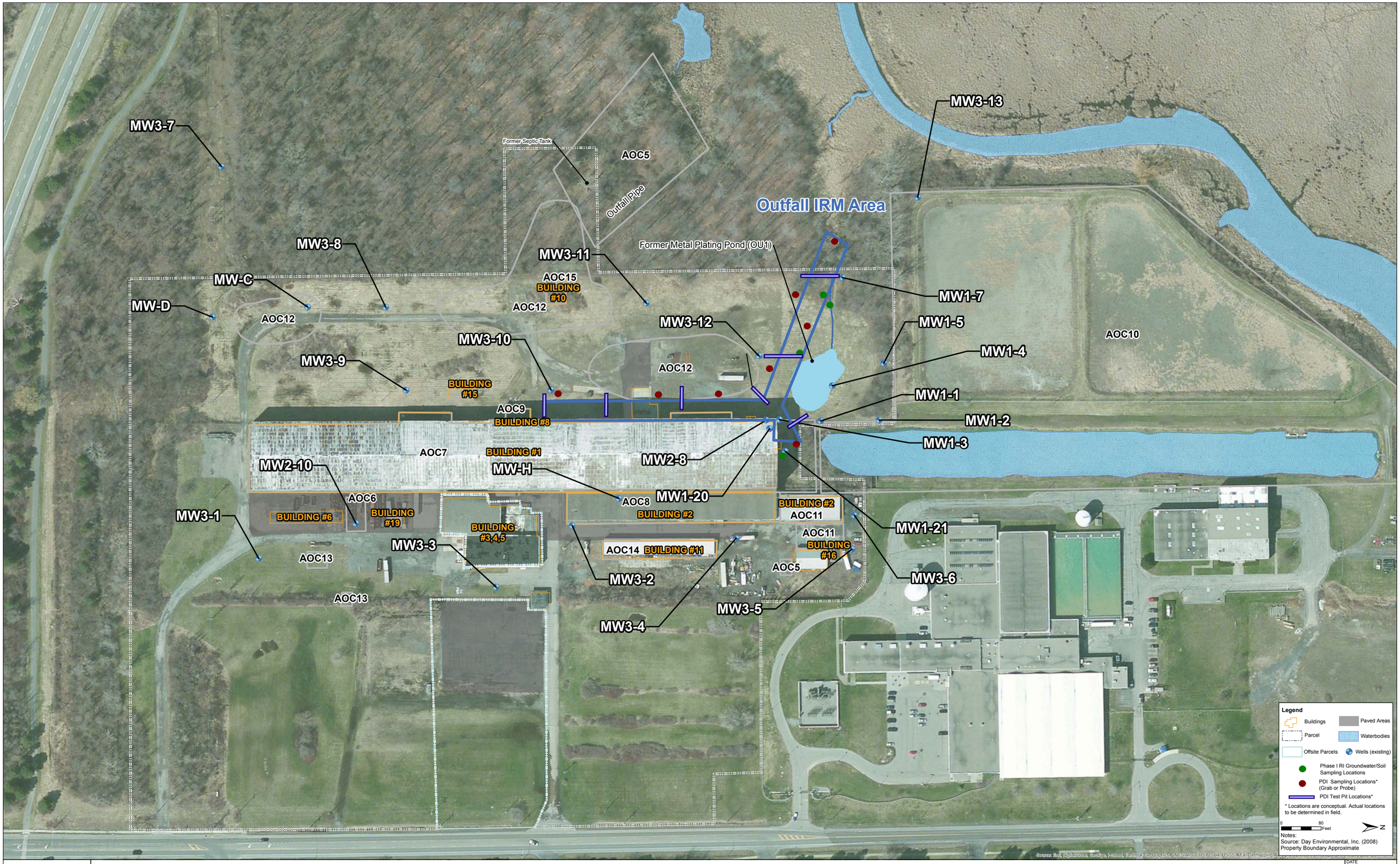
will collect samples for IDW classification and appropriately transport and dispose of the IDW generated during the PDI.

2.4 Task 3.4 PDI Report

Following the field work, a letter report will be provided to NYSDEC in the last quarter of 2015. This report will describe the PDI field work conducted, and the results of the investigation. It is assumed that only data collected during the PDI will be summarized and presented in the report. Data validation will be performed by an HDR subcontractor. Under this activity, HDR will evaluate possible disposal options that would be available to the contractor.

2.5 Task 3.5 Wetland Delineation

NYSDEC staff (Region 8) flagged wetland boundaries near the two IRM areas on September 11, 2015. The flagged areas will be surveyed by the work assignment surveying subcontractor.



Former Air Force Plant No. 51 (NYSDEC Site No. 828156)
Greece, Monroe County, New York

PDI Sampling Locations for the Stormwater / Outfall IRM Area

DATE
09/21/2015

FIGURE
1

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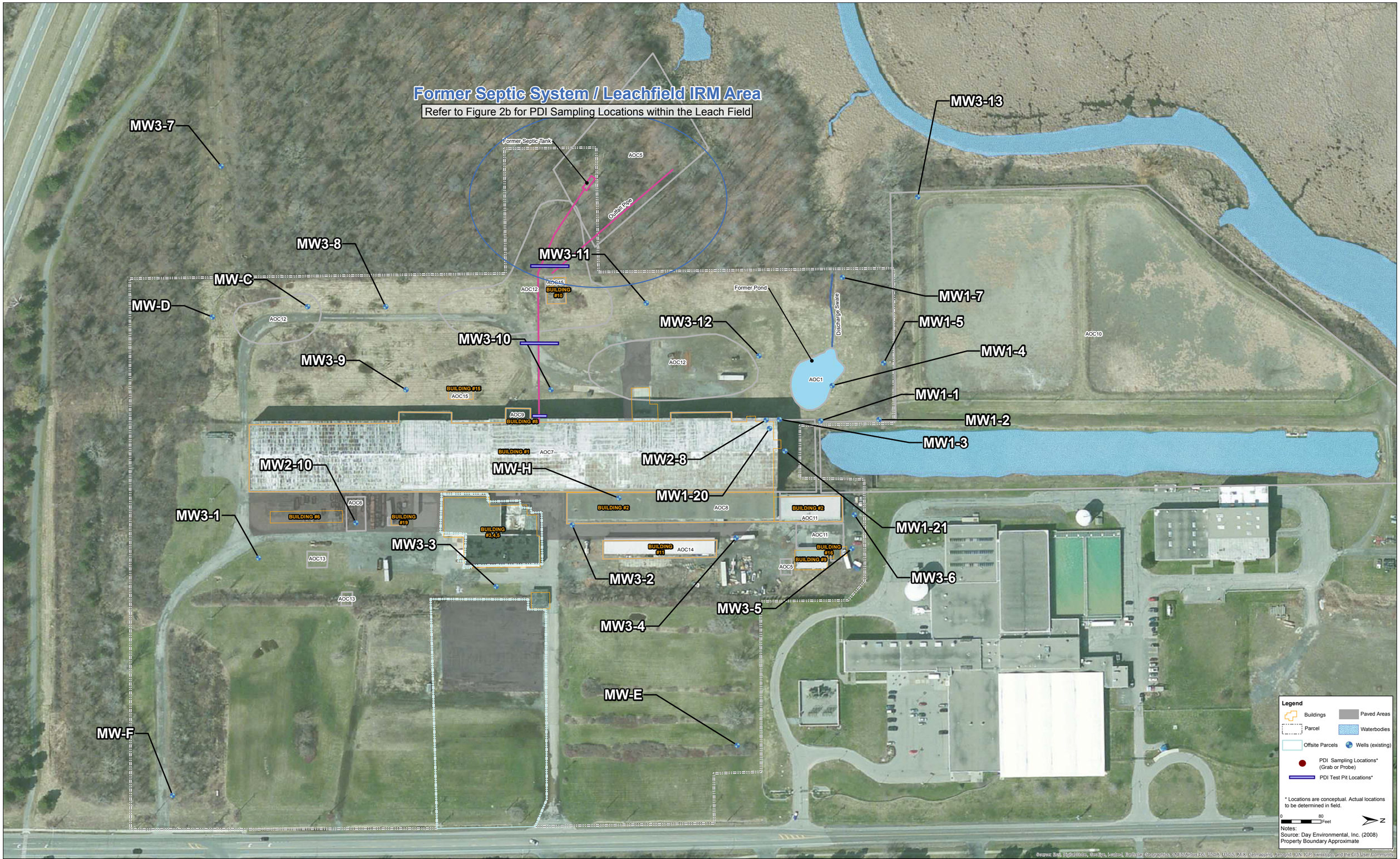
Former Septic System / Leachfield IRM Area

Refer to Figure 2b for PDI Sampling Locations within the Leach Field



Former Air Force Plant No. 51 (NYSDEC Site No. 828156)
Greece, Monroe County, New York

DATE
09/18/2015

FIGURE
2A

PDI Sampling Locations for the Former Septic System / Leach Field IRM Area

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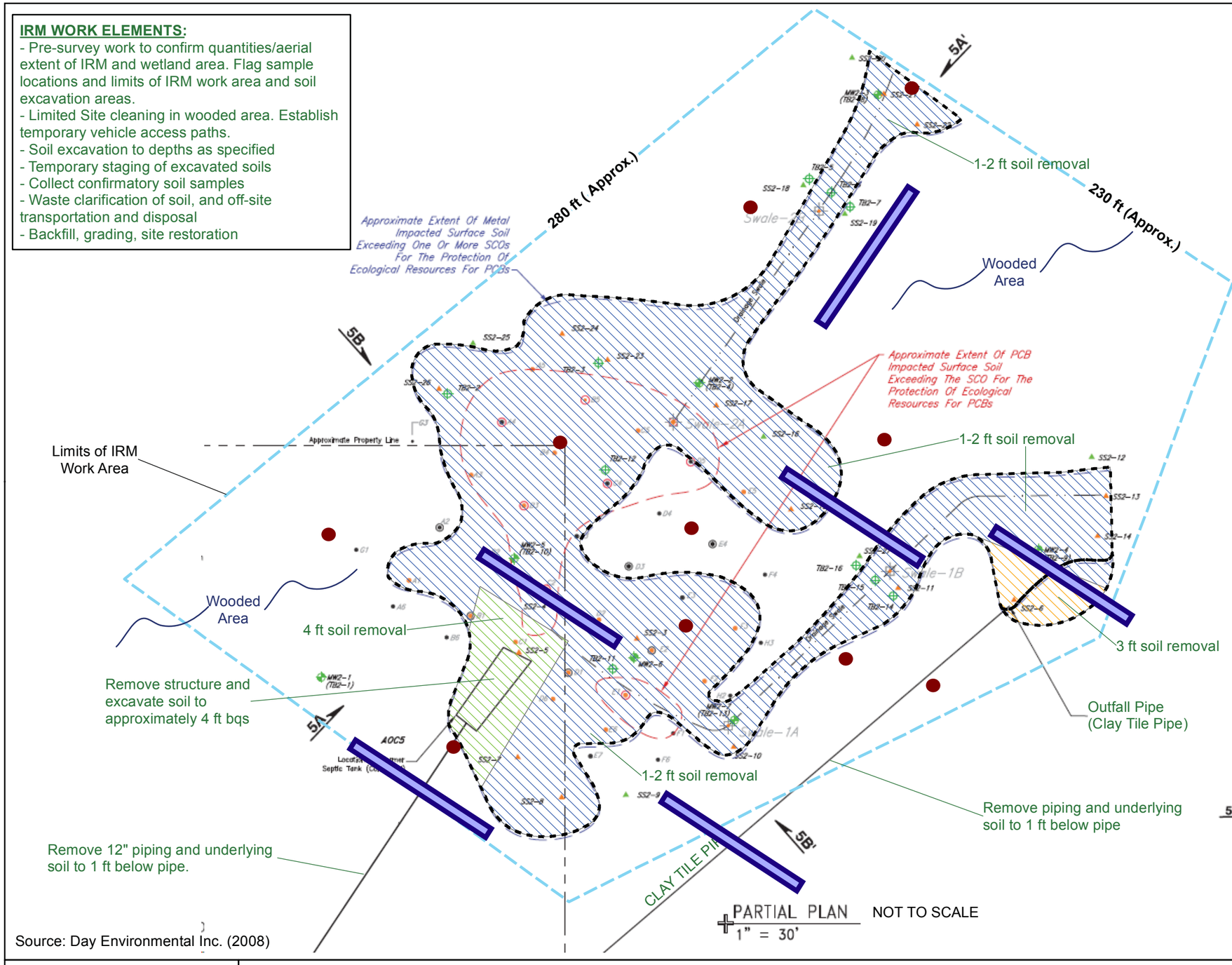
IRM WORK ELEMENTS:
- Pre-survey work to confirm quantities/aerial extent of IRM and wetland area. Flag sample locations and limits of IRM work area and soil excavation areas.
- Limited Site cleaning in wooded area. Establish temporary vehicle access paths.
- Soil excavation to depths as specified
- Temporary staging of excavated soils
- Collect confirmatory soil samples
- Waste clarification of soil, and off-site transportation and disposal
- Backfill, grading, site restoration



PARTIAL PLAN 1" = 30' NOT TO SCALE

Source: Day Environmental Inc. (2008)

N

NOTES:

1. Drawing prepared from: 1) A paper drawing by William M. Szawransky, P.E.,L.S., titled "Existing Water Disposal, Flower City Printing, Being Part Of Town Lot 44, Township 2, Short Range, Town Of Greece, Monroe County, NY" dated February 1987; 2) Monroe County Tax Map Number 046.01; 3) Various Figures from a report titled "Former Air Force Plant No. 51, HTRW Investigation, Greece, NY" by Ogden Environmental and Energy Services Co., Inc, dated April 2000; 4) A drawing for MCWA Water Treatment Plant by Metcalf & Eddy Engineers, Drawing Sheet A-1, "Architectural Plot Plan", date last revised 2-9-62; 5) Figure by Neil Norry, PO Box 51, Rochester, NY, CL-4-9058; 6) A paper drawing titled "Final Plans For Ext. 313 To Sewer Dist. 1", dated May 26, 1987; 7) Site observations by representatives of Day Environmental, Inc during November 2001 through April 2002.
2. Features shown are approximate, and their accuracy is not guaranteed.

LEGEND:

- Surface Soil Sample from Drainage Swale
- XRF/Metal Test Point Location & Designation
- XRF/Metal & PCB Test Point Location & Designation
- AOC5 — Area Of Concern with numbered designation
- MW2-2 — Groundwater Monitoring Well Location
- TB2-13 — Test Boring Location
- SS2-12 — Additional Surface Soil Sample Location
- Exceeds SCO for the Protection of Ecological Resources for PCBs
- Exceeds SCG for one or more metal that has available SCO for the Protection of Ecological Resources (Ba, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)
- Confirmed Location of 12" Sanitary Sewer Line
- Approximate Location of Drainage Swale
- 5B — 5B' Approximate Location of Geologic Cross Section
- IRM Work Area
- Approximate Limits of Soil Excavation Based on Analysis of Data
- 1-2 ft Excavation (1,500 CY)
- 3 ft Excavation (75 CY)
- 4 ft Excavation (220 CY)
- PDI Sampling Locations* (Grab or Probe)
- PDI Test Pit Locations*

Soil COC List:

PCBs	Copper	Selenium
Barium	Lead	Silver
Cadmium	Mercury	Zinc
Chromium	Nickel	

* Locations are conceptual. Actual locations to be determined in the field.

Former Air Force Plant No. 51 (NYSDEC Site No. 828156)
Greece, Monroe County, New York

DATE 09/21/2015

FIGURE 2b

PDI Sampling Locations for the Leach Field Area Only

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