Final Revision 1
Phase II Environmental Baseline Survey Work Plan
Air Force Plant 59
Johnson City, New York

Prepared for:
U.S. Air Force Life Cycle Management Center
AFLCMC/WNVC
1981 Monahan Way
WPAFB, OH 45433
and
U.S. Army Engineering Support Center, Huntsville
CENAN
P.O. Box 1600
Huntsville, AL 35807-4301

Prepared by:
CB&I Federal Services
111 Howard Boulevard, Suite 110
Mt. Arlington, New Jersey 07856

Contract No. W912DY-10-D-0014, Task Order No. 0010
CB&I Project No. 500179
Rev 1
July 2014

Table of Contents

Table of Contents *(continued)*

Table of Contents *(continued)*

Table of Contents *(continued)*

List of Tables

List of Figures

List of Appendices

Acronyms and Abbreviations

ACM	asbestos containing material
AFP 59	Air Force Plant 59
AHERA	Asbestos Hazard Emergency Response Act
AHU	air heating unit
AOC	Area of Concern
APP	accident prevention plan
BAE	BAE Systems, Inc.
BCIDA	Broome County Industrial Development Agency
bgs	below ground surface
CB&I	CB&I Federal Services LLC
CD-ROM	compact disk-read only memory
CFR	Code of Federal Regulations
cm	centimeter
COC	contaminants of concern
CP	Command Post
DCA	dichloroethane
DCE	dichloroethene
DFW	definable feature of work
DID	Data Item Description
DoD	U.S. Department of Defense
DPT	direct push technology
DQCR	daily quality control report
DQO	data quality objective
EA	Environmental Assessment
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
ELAP	Environmental Laboratory Accreditation Program
EM	electromagnetic
EPA	U.S. Environmental Protection Agency
ESS	Explosive Safety Submission
FADL	field activity daily log
FONSI	Finding of No Significant Impact
ft	foot/feet
GE	Aeronautics and Ordnance Systems Division of General Electric
GIS	geographic information system
GOCO	Government-owned, contractor-operated
GPS	global positioning system
HID	high density discharge
HPV	high purge volume
HSA	homogenous sampling area
IAW	in accordance with
IDW	investigative-derived waste

Acronyms and Abbreviations *(continued)*

IRP	Installation Restoration Program
LBP	lead based paint
LDR	land Disposal Restrictions
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MS/MSD	matrix spike/matrix spike duplicate
msl	mean sea level
NEPA	national Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOAA	National Oceanic and Atmospheric Administration
NOB	non-organically bound
NIOSH	National Institute for Occupational Safety and Health
NTP	notice-to-proceed
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORM	other regulated materials
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
PDA	personal data assistant
PHSM	Program Health and Safety Manager
PID	photoionization detector
PLM	polarized light microscopy
PM	Project Manager
PPE	personal protective equipment
ppm	parts per million
PSR	Periodic Status Report
PWS	Performance Work Statement
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RCRA	Resource Conservation and Recovery Act
RI	remedial investigation
ROD	Record of Decision
RSL	regional screening level
SACM	suspected asbestos containing material
SAP	sampling and analysis plan
SCO	soil cleanup objectives
SOP	Standard Operating Procedure
SSHP	site safety and health plan
SSHO	Site Safety and Health Officer
SVOC	semivolatile organic compound
TAL	target analyte list

Acronyms and Abbreviations *(continued)*

TCA	trichloroethane
TCE	trichloroethene
TCL	target compound list
TCLP	Toxicity Characteristic Leaching Procedure
TEM	Transmission Electron Microscopy
TPP	Technical Project Planning
TWA	time weighted average
UFP	Uniform Federal Policy
USACE	U.S. Army Corps of Engineers
USAESCH	U.S. Army Engineering and Support Center, Huntsville
USAF	U.S. Air Force
VOC	volatile organic compound
VI	vapor intrusion
WERS	Worldwide Environmental Remediation Services
WWII	World War II

Draft
WORK PLAN
Approval Signature Sheet

Project Title:	Phase II Environmental Baseline Survey (EBS), Air Force Plant 59, Johnson City, NY
Project Number:	500179
Client Name:	U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville, Alabama
Contract Name:	Worldwide Environmental Remediation Services
Contract Number:	W912DY-10-D-0014, Delivery Order 0010
Contractor:	CB&I Federal Services LLC
Task Order Period:	28 March 2014 – 31 December 2014
Date of Version:	May 15, 2014

Reviewed and Approved by:

Project Manager:  May 14, 2014
Date

TECHNICAL REVIEW RECORD		
PROJECT NAME: Air Force Plant 59	PROJECT NO.: 500179	CLIENT: U.S. Army Engineering and Support Center - Huntsville
DOCUMENT NAME/DATE: Environmental Baseline Survey Work Plan/May 2014		
DRAFT___X___ DRAFT FINAL_____ FINAL _____ REVISION NO._____		
AUTHOR(s): L. O'Donnell, D. Schicho		
MANAGEMENT REVIEWER: Douglas L. Schicho		
EDITORIAL REVIEWER: Steve Gehring		
ENGINEERING REVIEWER: Laura O'Donnell		
GEOLOGY REVIEWER: NA		
CHEMISTRY REVIEWER: Eric Malarek		
HEALTH & SAFETY REVIEWER: Winston (Doug) Russell		
OTHER REVIEWER* (Specialist as required):		

THE APPROPRIATE SIGNATURE(S) MUST BE COMPLETED AND DATED BEFORE RELEASE OF THE PROJECT DOCUMENT

REVIEWER SIGNATURE	DATE	INITIAL IF N/A
MANAGEMENT OK:	5/15/14	
EDITORIAL OK: SWG	5/14/14	
ENGINEERING OK:	5/15/14	
GEOLOGY OK:		
CHEMISTRY OK:	5/15/14	
HEALTH & SAFETY OK: WR	5/15/14	
MUNITIONS AND RANGE SERVICES OK:		
OTHER REVIEWER:		

1.0 INTRODUCTION

1.1 General

The U.S. Army Corps of Engineers (USACE) has authorized CB&I Federal Services LLC (CB&I) to conduct a Phase II Environmental Baseline Survey (EBS) for the Air Force Plant 59 (AFP 59), Johnson City, New York. These efforts will be conducted as Task Order 0010 under Contract No. W912DY-10-D-0014. Government project management and technical oversight will be provided by the USACE. This Phase II EBS Work Plan describes the technical approach for the survey and sampling activities to be conducted within AFP 59.

1.2 Purpose and Objective

Due to the extensive damage associated with Hurricane Irene and Tropical Storm Lee, plans are in place to demolish AFP 59 and transfer the land to the Broome County Industrial Development Agency (BCIDA) (U.S. Army Engineering and Support Center, Huntsville [USAESCH], 2013a). The primary objective of this project is to collect sufficient data to delineate all areas of contamination within and beneath the building. Specifically, the scope of the Phase II EBS consists of 1) sampling, identifying, and quantifying all asbestos containing material (ACM), other regulated materials, RCRA constituents, and polychlorinated biphenyl (PCB) contaminated items/materials in order to provide sufficient data to support delineation of those materials for demolition and soil remedial actions; and 2) collecting sufficient data to inventory remaining hazardous materials/wastes to include locations and quantities that can be used for cost estimating purposes by the demolition contractor. The inspection and sampling design will focus on obtaining accurate data for the next step of the project.

1.3 Work Plan Organization

This work plan is organized as follows:

- Chapter 1.0, Introduction
- Chapter 2.0, Technical Management Plan
- Chapter 3.0, Field Investigation Plan
- Chapter 4.0, Quality Control Plan
- Chapter 5.0, Explosives Management Plan (not used)
- Chapter 6.0, Environmental Protection Plan
- Chapter 7.0, Property Management Plan (not used)

- Chapter 8.0, Interim Holding Facility Siting Plan for Recovered Chemical Warfare Material Projects (not used)
- Chapter 9.0, Physical Security Plan for Recovered Chemical Warfare Material Project Sites (not used)
- Chapter 10.0, References

1.4 Project Location

AFP 59 occupies approximately 30 acres in Johnson City, New York (**Figure 1-1**). Facilities located within AFP 59 include: numerous aboveground structures, paved parking areas, and limited green space. AFP 59 is located in a medium- to high-density developed area, with residential facilities located west and east of the facility. The site is also bound by the Little Choconut Creek to the east and south.

1.5 Site Description

1.5.1 Topography

AFP 59 is located within the Appalachian Plateau Physiographic Provence. AFP 59 is relatively flat, with elevations ranging from 830 to 840 feet (ft) above mean sea level (msl) (Argonne, 1995). The Little Choconut Creek is located to the east and south of the facility. **Figure 1-2** presents the topography at AFP 59.

1.5.2 Climate

The climate at AFP 59 is classified humid and maritime, with mild summers and long, cold winters. The National Oceanic and Atmospheric Administration (NOAA) identified the average annual precipitation for nearby Binghamton, New York, as 38.65 inches, with February as the driest month and June as the wettest month. **Table 1-1** reflects the annual climate and weather normally encountered at Binghamton, NY.

Table 1-1
Climatic Information, Binghamton, New York

Temperature Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Normal Max Temperature (°F)	28.4	30.9	40.6	53.1	65.6	73.4	78.1	75.8	67.8	56.7	44.3	33.4
Normal Min Temperature (°F)	15.0	16.7	24.7	35.1	46.2	54.4	59.2	57.4	49.9	39.6	30.9	20.8
Mean Precipitation (inches)	2.58	2.46	2.97	3.49	3.55	3.80	3.49	3.35	3.59	3.02	3.32	3.03

Source: National Oceanic and Atmospheric Administration Climatography of the United States No. 81 1971-2000

^{0}F denotes degrees Fahrenheit.

1.5.3 Vegetation

The majority of the AFP 59 property is developed and contains the footprint of the building and parking lot. Landscaped areas, consisting of lawn grasses and decorative shrubs, are located along the perimeter of the parking lot and near the front of the Plant Admin Building.

Along the Little Coconut Creek, small areas of second growth hardwood forests are present. Common species within these areas include: sycamore (*Platanus occidentalis*), elm (*Ulmus spp.*), willow (*Salix spp.*), and other hardwoods (ITSI, 2009).

1.5.4 Site Geology

AFP 59 is located within the Susquehanna River basin. The facility is underlain by Pleistocene-age glacial deposits at of approximately 75 to 100 ft. These deposits consist of sand, gravel, silt, and clay and began forming approximately 18,000 years ago. The stratigraphy at the site generally consists of 2 to 5 ft of artificial fill, 3 to 34 ft of glacial outwash deposits, 0 to 54 ft of fine-grained glacial deposits, and 15 to 64 ft of ice-contact deposits (AECOM, 2011). A thin layer of fine-grained alluvium from the Little Choconut Creek caps the eastern portion of the site. In the northwestern portion of AFP 59, ashy fill grading to course-grained alluvium overlays the glacial deposit. Underneath the bedrock, a thin mantle of glacial till is present. The bedrock becomes deeper and slopes downward toward the northeast (CH2MHill, 1984).

1.5.5 Soils

The majority of soils at AFP 59 consist of silty alluvial materials (AECOM, 2011). Soil types associated with the Appalachian Plateau include: Utisols and Inceptisols (ITSI, 2009).

1.6 Site History

1.6.0.0. AFP 59 has been a U.S. Air Force (USAF) government-owned, contractor-operated (GOCO) facility since 1942. The plant was built by the Defense Plant Corporation in 1942. From 1942 until 1945, Remington Rand produced aluminum aircraft propellers. After World War II (WWII), production stopped at AFP 59 and the facility was used as a warehouse and for reserve training. The Aeronautics and Ordnance Systems Division of General Electric (GE) began manufacturing aircraft flight and fire control components in 1948, but was not fully operational until 1951. After the Korean Conflict ended, manufacturing declined at AFP 59. Between 1951 and 1958, AFP 59 supported the F-4 program.

1.6.0.1. Activities at the plant were at their highest during the Vietnam War. In 1961, AFP 59 supported the F-111 program and, in 1970, supported the F-15 program. Manufacturing at the plant changed in the 1970s and 1980s from mechanical systems to

electronic and computer systems, which included flight controls and internal navigation and guidance systems. During the mid-1980s, AFP 59 was producing avionic and electronic controls, such as fire/flight controls, displays and simulators, propulsion controls and condition monitors, and space craft controls, in support of the A-10, F-18, F-4, F-5, F-15, F-111, C-5, B-1, and V-22 programs. Most of these systems were on subcontract to McDonnell Douglas, Lockheed, and Rockwell. In 1986, AFP 59 was recommended for disposal. However, operations continued at AFP 59. In 1993, Martin Marietta acquired GE Aerospace and took over operations. In 1995, when Lockheed and Martin Marietta merged, Lockheed Martin Control Systems took over operation of the facility and continued to manufacture avionics and electronic controls. BAE Systems, Inc. (BAE), acquired Lockheed Martin Control Systems in April 2000 and assumed control over AFP 59. In June 2006, the Susquehanna River flooded AFP 59. Major flooding also occurred during Hurricane Irene and Tropical Storm Lee in 2011. Given the frequent and extensive flooding of the facility, BAE has vacated AFP 59 and demolition of the plant is needed due to the extensive and catastrophic damages that exist (USAESCH, 2013a).

1.7 Summary of Previous Investigations

This section summarizes the investigations and actions that have been performed at AFP 59 that may pertain to the Phase II EBS. A full summary of Installation Restoration Program (IRP) documents is not presented as the IRP sites are closed and not pertinent to the Phase II EBS.

1.7.1 Asbestos Management Plan

1.7.1.0.0. The Asbestos Management Plan was prepared in 1990 to identify and locate all asbestos containing materials (ACM) in the buildings and to assess the health hazards associated with these materials (Independent Asbestos Labs, 1990). The Plan also developed alternative methods for protecting occupants, a comprehensive program to prevent release of asbestos fibers, and a record-keeping system and procedures to comply with the U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) regulations. During the Asbestos Hazard Emergency Response Act (AHERA) inspection, all available construction records were reviewed in an effort to identify areas with the potential to contain ACM. As part of the building inspection, all accessible internal spaces were inspected. All suspect ACM was recorded and tested by physical hand pressure to determine whether the material was friable. Additionally, bulk samples were collected and analyzed using polarized light microscopy (PLM).

1.7.1.0.1. The Asbestos Management Plan identified numerous areas with ACM. For each area identified, the following information was presented:

- Description
- Physical Assessment
- Risk Assessment
- Recommended Response Action

1.7.1.0.2. During the inspection, the following areas were visited: basements, office areas, production areas, roof domes, the calibration fluid storage building, the reservoir, and roof areas. The inspection identified 29 homogenous areas, with numerous locations in each area. Types of areas identified included: transite (walls, ducts, panels, and siding), fire doors, floor tile, linoleum, pipe insulation, magblock, roof material, flashing, and patching. Of the 29 areas, 17 received a hazard rank of 7 and the remaining received a hazard rank of 8.

1.7.2 Environmental Baseline Survey

1.7.2.0.0. An EBS was prepared in 1995 to document the condition of the property resulting from the storage, use, and disposal of hazardous substances and petroleum products at AFP 59 (Earth Tech, 1995). The EBS also established a baseline for the USAF in making decisions regarding the property. It is important to note that this EBS was performed prior to the flooding events, BAE Systems moving, and some IRP activity. Therefore, conditions may have changed and some of the EBS findings may no longer be current.

1.7.2.0.1. The EBS inspected the property for the following environmental factors: Hazardous Material/Petroleum Product Management; Hazardous Waste/Petroleum Waste Management; Radioactive Materials and Mixed Waste; Aboveground/Underground Storage Tanks and Pipelines; Oil/Water Separators (OWSs); Wastewater Treatment and Disposal; Pesticides; Solid Waste; IRP Sites /Areas of Concern (AOCs); Asbestos; Lead-based Paint; PCBs; Radon; Medical and Biohazardous Waste; and Ordnance.

1.7.2.0.2. Based on the inspection, portions of the buildings and property were classified into one of seven categories. Properties identified as Category 1 through 4 are eligible for deed transfer. However, Category 5 through 7 properties may not be considered for transfer until all necessary actions have been taken to reclassify these areas as Category 1 through 4. Below is a description of each category and the buildings/property associated with each category. Plate 3-1 from the 1995 EBS depicts these areas and is presented in Appendix B.

- Category 1: Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred:

- Parking Lot #5, most of the administrative building, large sections of the manufacturing building, and land on the north, east, and west sides of the plant.

- Category 2: Areas where hazardous substances or petroleum products have been stored:
  - Three areas in the administrative building, numerous areas in the manufacturing building, the special programs facility , and parts of the range building.

- Category 3: Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred at concentrations that do not require a removal or remedial action:
  - Location where one underground storage tank was removed in 1975 and the associated site (AOC Site 1), and the JP-4 Piping Area (AOC Site 2).

- Category 4: Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken:
  - Location of a small PCB spill, which was remediated in 1990, in the administration building.

- Category 5: Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are underway, but the required remedial actions have not yet been taken
  - None were observed.

- Category 6: Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but the required response actions have not yet been implemented:
  - None were observed.

- Category 7: Areas that are unevaluated or that require additional evaluation:
  - The entire southern part of the plant property where a remedial investigation (RI) is underway. The area is being investigated to determine the nature and

extent of soil and groundwater contamination. This area includes IRP Sites 1, 2, 5, and 6, and AOC 3, as well as the pump house.

- Eight areas of rafters in the manufacturing building, which were former sites of PCB-containing transformers where leaks are suspected or known to have occurred, are under investigation.

1.7.3 Supplemental Site Inspection for Air Force Plant 59

1.7.3.0.0. A Supplemental Site Inspection was performed in 1995 to aid in implementing a final remedial action plan under the IRP (Argonne, 1995). The goals of the investigation were to determine the quality of groundwater, determine the contamination state of soils, and determine the contamination state of a nearby stream.

1.7.3.0.1. The inspection identified soil and groundwater contamination associated with past activities, but determined that these concentrations were too low to function as significant sources of contaminants for groundwater wells. Areas with high concentrations of contaminants were generally isolated or semi-isolated from the main aquifer. Contamination was identified at the following areas:

- Semivolatile organic compound (SVOC) contamination at Site A-1, Site A-2, and well cluster 8.
- Trichloroethene (TCE) present in the shallow aquifer at well clusters 4 and 9.
- Based on Level 2 screening data, possible presence of inorganic contaminants in the soil beneath the central part of the rear parking lot.
- Organic contaminants present in the soil beneath the west-central parking lot area.

Figure 1.2 from the 1995 Supplemental SI is presented in Appendix B.

1.7.4 Draft Letter on Environmental Baseline Survey, USAF Plant #59

In 1998, Lockheed Martin drafted a letter to the USAF to inform interested parties of newly identified environmental AOCs at AFP 59, which were not included in the 1995 EBS. Lockheed Martin requested that the USAF reopen the EBS for inclusion of these AOCs. The following were considered newly identified AOCs:

- Water Tank
- Dust Collection Systems

- Flammable Liquid Tanks
- Propeller pits in floor
- JNAC floor trenches
- JNAC Naptha above ground tanks and piping
- Cutter Grind dust collector
- Range heating, ventilation, and air conditioning (HVAC) system – 2nd floor
- Dynamics Vibration units – oil coolant systems
- Pits (holds some water/confined space)
- Machine Floor
- Dynamics – centrifuge
- Destructor Building
- Chip collection
- Oil Room
- Vacuum System
- Maintenance Shed (former)
- Basements
- Equipment isolation pads/granite blocks

1.7.5 Memorandum on Newly Identified Potential Environmental Areas of Concern at Air Force Plant #59

In response to the Draft Letter on Environmental Baseline Survey (Lockheed Martin, 1998), an Industrial Hygienist from the Defense Logistics Agency toured the newly identified AOCs. The following observations were made:

- The "propeller pits" have been concreted over and are located throughout the plant. Most of these pits can be identified because they appear as patches/slabs of concrete

that was poured at a different time than the rest of the floor. Some of these patches appear to be stained.

- The "JNAC floor trenches" are approximately 3 ft wide and 3 ft deep and are equipped with piping that collected residue from the metal working machines.
- The JNAC Naptha Tanks accepted residue from the floor trenches, but have been filled with a Naptha solution.
- The "Cutter Grind dust collector" is a cyclone located outside of the building. The cyclone was connected to ducts, inside the building, that carried contaminants.
- The "Range HVAC system" was used to remove smoke and other airborne residue for the firing range.
- The "Dynamics Vibration Units" were used to perform vibration tests.
- The "Pit" can be accessed by removing a filter that covers a hole on the wall of Dynamics Room B. This is a confined area and appears to contain water.
- The "Machine Floor" situation is the same as the propeller pit.
- The "Dynamics Centrifuge" was purchased for the F4 program and belongs to Lockheed Martin.
- The Incinerator chimney is the only remains left of the "Destructor Building."
- The "Chip Collection Hoppers" cannot be visually seen as they have been bricked over. They were probably used to store metal chips from the machine floor.
- The Oil Room could not be seen.
- The "Vacuum System" consists of 46 units and the connecting ductwork. It appears that the only way to access the units are through a plate that is bolted on to the side of what appears to be a collection box at the top of the cyclone.
- The "Maintenance Shed" no longer exists and is currently covered with grass.
- The "Basement" is poorly lit and accessed through a 2 ft by 2 ft trap door. During the inspection, the only thing observed was a yellow fiberglass tank (approximately 200 gallons) with some piping.

- The “Equipment isolation pads/granite blocks” were used for inspection or testing and may have floated on some kind of liquid/oil. No granite blocks were present, but the base of the equipment was present. In addition, liquid can be seen below floor level in a very small opening along the side of the base.

1.7.6 Groundwater Record of Decision

1.7.6.0.0. A Record of Decision (ROD) was prepared under the IRP in 1999 (Earth Tech, 1999). The ROD identified the selected remedy for volatile organic compounds (VOCs) in groundwater at AFP 59. During AFP 59 operations, the following release of waste products has occurred: cutting, lubricating, and coolant oils; degreasing agents; plating acids, caustics, chromium, and cyanide solutions; and paint residues. As a result of these releases, VOC contamination exists in groundwater beneath the site.

1.7.6.0.1. In order to assess groundwater contamination, numerous investigations were performed at AFP 59. The USAF determined that the preferred method for cleanup of VOCs in groundwater was to upgrade the groundwater treatment system at the Camden Street Well Field. The system upgrade was designed to intercept the discharge lines from all three production wells and route them to a treatment system.

1.7.7 Environmental Baseline Survey Addendum

1.7.7.0.0. An EBS Addendum was performed in 2000 to document the physical condition of real property at AFP 59 (USAF, 2000). The Addendum documented the Government’s cleanup actions and the closure of Category 5 through Category 7 sites that were identified in the 1995 EBS. Additionally, the report identified new Category 7 sites and any closure activities for these sites. It is important to note that this EBS was performed prior to the flooding events, BAE moving, and some IRP activity. Therefore, conditions may have changed and some of the EBS findings may no longer be current.

1.7.7.0.1. The data used to evaluate real property included: record reviews, interviews, and visual inspections of the property and any structures on the property not obstructed by process equipment or other obstacles. Based on the inspection, portions of the buildings and property were classified into one of seven categories. The seven categories are defined in paragraph 1.7.2.0.2. Below is a description of the buildings/property associated with each category.

- Category 1 properties: Building 04; Maintenance Dock; Maintenance Dock 09; Oil Water Separator 03; Oil Water Separator North 01; Oil Water Separator North 02; and Still

- Category 2 properties: Buildings 01, 02, 06, 10, 11; AOC 01; AOC 02; LIQNIT; and Maintenance Dock 01
- Category 3 properties: AOC 03; IRP Site 04; Oil Water Separator 01; and Oil Water Separator 02
- Category 4 Properties: Building 05; IRP Sites 01, 02, 05, 06; and South Reservoir Area
- Category 5 Properties: none present
- Category 6 Properties: none present
- Category 7 Properties: none present

1.7.8 PCB Management Plan

A PCB Management Plan was prepared in 2005 (O'Brien & Gere, 2005). The goal of the document was to provide a plan that addressed preventative maintenance activities in areas of AFP 59 that have been contaminated with PCBs. Areas of flooring potentially contaminated with PCBs were designated as PCB Management Areas. The PCB Management Plan figure is presented in Appendix B. This document summary is based on a previously-conducted summary, as a complete version of the 2005 document is unavailable. The plan addressed the following areas:

- Encapsulated overhead trusses for the Former Transformer Platforms 1, 2, 3, 4/5, 6, 7, 8, 9, 10, 11, 12/15, 16, 17, 18, and 23
- Floor in Rooms 704 and 712 and beneath Platform 23
- Encapsulated stairwell to the courtyard in Area 124
- Encapsulated air handling units (AHUs) AC-1, AC-2, and AC-5039, located in mechanical rooms 260, 758, and the west end of the North Catwalk, respectively.

1.7.9 Manufacturing Building East Basement Soil Excavation Letter Report

1.7.9.0.0. In July 2005, soil excavation activities were performed in the East Basement of the Manufacturing Building at AFP 59 (Earth Tech, 2005). The details and findings of the soil excavation were prepared in the Manufacturing Building East Basement Soil Excavation Letter Report.

1.7.9.0.1. The excavation concentrated on TCE-contaminated soil, located in a soil pile against the western wall of the East Basement. Previous soil investigations were performed to characterize the nature and extent of TCE contamination. Based on those findings, approximately 78.3 linear feet of the soil pile was recommended for excavation.

1.7.9.0.2. During the excavation, approximately 119 cubic yards of soil was removed from the East Basement. Upon completion of the excavation, clean, compacted backfill replaced the existing soils. Due to structural concerns, TCE-contaminated soil identified at 6 ft below ground surface (bgs) and located between columns 20 and 21 was unable to be removed. The report concluded that the lateral extent of this contamination is limited. A map from the 2005 Earth Tech Report depicting the area of soil investigation is presented in Appendix B.

1.7.10 Vapor Intrusion RI Report

1.7.10.0.0. A vapor intrusion (VI) RI was performed in 2009 at AFP 59 (AECOM, 2011). The objectives of the RI were: evaluate VI inside the AFP 59 Manufacturing Building; perform a VI assessment of adjacent residential structures; abandon eight USGS monitoring wells; collect one round of groundwater samples from eleven monitoring wells; and evaluation of the Fire Suppression Reservoir Area.

VI Investigation

1.7.10.0.1. As part of the VI investigation of the Manufacturing Building, TCE and methylene chloride were detected in indoor air above New York State Department of Health (NYSDOH) air guideline values. The report identified TCE as the compound detected at the highest concentrations and frequencies and determined it was the most significant VOC relative to VI. Additionally, the typical vertical distribution of VOCS was identified as: low-level indoor air contamination; elevated sub-slab vapor contamination; elevated shallow soil-gas and moderate deeper soil-gas contamination; and low-level groundwater concentration.

1.7.10.0.2. Based on the findings of the VI investigation, recommended actions were developed based on each sample. The recommended action was based on the relationship between sub-slab vapor concentrations and indoor air concentrations for TCE, 1,1,1-trichloroethane (TCA), vinyl chloride, tetrachloroethylene (PCE), carbon tetrachloride, cis-1,2-dichloroethene (DCE), and 1,1-DCE. A summary of the overall recommended actions is as follows:

- Mitigate: 58/120 samples
- Monitor/mitigate: 3/120 samples

- Monitor: 22/120 samples
- Identify source(s) and reduce exposures: 37/120 samples
- No Further Action: 0/120 samples

Fire Suppression Reservoir

1.7.10.0.3. During the RI, additional soil-gas, soil, and groundwater samples were collected around the Fire Suppression Reservoir. In soil, chlorinated VOCs were detected at relatively low concentrations and frequency. However, chlorinated VOCs were detected at high frequencies and concentrations in soil-gas and at high frequencies, but low concentrations in groundwater. For each media, TCE and 1,1,1-TCA were detected at the highest concentrations and frequency.

Off-Site Residential VI Assessment

1.7.10.0.4. The off-site residential VI assessment collected indoor air and sub-slab vapor samples from five homes in February 2010. The sample results were compared to NYSDOH decision matrices and the following recommendations were made:

- Identify source(s) and reduce exposures at 4 of the 5 houses and
- No further action at the remaining house.

1.7.10.0.5. Although remedial action was recommended at four homes, it was concluded that the detections were likely due to indoor and/or outdoor sources rather than VI.

Groundwater Sampling of Existing Monitoring Wells

1.7.10.0.6. Several VOCs were detected in groundwater from shallow and deep monitoring wells. The most common VOCs identified were TCE, 1,1,1-TCA, 1,1-dichloroethane (DCA), and cis-1,2-DCE. In the shallow monitoring wells, TCE and cis-1,2-DCE were the only analytes detected above New York State drinking water standards. However, no VOCs were detected above standards in monitoring well SW3, which is downgradient and located on the western boundary of the site. In deep monitoring wells, cis-1,2-DCE was detected above New York State drinking water standards on the western, downgradient edge of the site and in an off-site monitoring well downgradient of the site.

1.7.11 Supplemental Vapor Intrusion RI Report and Focused Feasibility Study

1.7.11.0.0. In 2010, an additional VI investigation and groundwater sampling was performed at AFP 59 (AECOM, 2012). The goal of the VI investigation was to compare the 2010 data with the 2009 data, presented in the subsection above. Additionally, one round of groundwater samples were collected from ten on-site and off-site monitoring wells.

VI Investigation

1.7.11.0.1. The data collected from the August 2010 sampling event was compared to the August 2009 sampling event. The results confirmed that TCE in indoor air is still an issue, with TCE detected in 100 percent of the samples collected during the August 2010 sampling event. Although the maximum concentration of TCE was similar to the August 2009 data, the average concentration of TCE during the August 2010 sampling event was much lower than the average concentration in August 2009.

1.7.11.0.2. Based on the findings of the VI investigation, recommended actions were developed based on each sample. The recommended action was based on the relationship between sub-slab vapor concentrations and indoor air concentrations for TCE, 1,1,1-TCA, vinyl chloride, PCE, carbon tetrachloride, cis-1,2-DCE, and 1,1-DCE. A summary of the overall recommended actions is as follows:

- Mitigate: 48/60 samples
- Monitor/mitigate: 0/60 samples
- Monitor: 3/60 samples
- Identify source(s) and reduce exposures: 9/60 samples
- No Further Action: 0/60 samples

Groundwater Sampling of Existing Monitoring Wells

1.7.11.0.3. Several VOCs were detected in shallow and deep monitoring wells during the November 2010 sampling event. The most common VOCs detected include: TCE, 1,1,1-TCA, 1,1-DCA, and cis-1,2-DCE. In the shallow monitoring wells, TCE and cis-1,2-DCE were the only analytes detected above New York State drinking water standards. However, no VOCs were detected above standards in monitoring well SW3, which is downgradient and located on the western boundary of the site. In deep monitoring wells, cis-1,2-DCE was detected above New York State drinking water standards on the western, downgradient edge

of the site and in an off-site monitoring well downgradient of the site. Therefore, groundwater exceeding drinking water standards is migrating beyond the property boundary in the deep zone of the aquifer.

1.7.12 Assessment of Subsurface VOCs and Vapor Intrusion Risks, AF Plant 59, Johnson City, New York

1.7.12.0.0. In 2011, an assessment of the potential risks attributable to subsurface VI, performed by AECOM, was performed (Geosyntec, 2011). As part of the work, additional sub-slab and indoor air sampling was performed in the areas with highest sub-slab TCE concentrations (near SL-022, SL-084, and SL-118). In addition, high purge volume (HPV) testing was performed.

1.7.12.0.1. The report identified TCE as the main compound of interest, with current concentrations comparable to previous investigations. TCE concentrations in indoor air were below the NYSDOH guideline value by at least a factor of five. When sub-slab data, indoor air data, and mass-flux calculations were compared against the EPA Commercial/Industrial Regional Screening Levels, it was concluded that there is a very low exposure due to VI. The report recommended institutional controls that constrain residential development of the property and changes to the structure below the surface of current floor or changes to ventilation. It is important to note that this investigation was performed prior to the flooding events in 2011 and the report was submitted shortly after the flooding events. This document was not reviewed by the State since conditions may have changed and some of the findings may no longer be current.

1.7.13 Visual Inspection Report

1.7.13.0.0. In June 2013, the USACE completed a visual inspection of AFP 59 (USAESCH, 2013b). The goal of the visual inspections was to identify areas of potential contamination as well as hazardous materials that remained in the building. During the survey, the team inspected all accessible areas:

- Crawlspace/Basement
- Pump Station
- Outside Areas
- Roofs
- JP-4 Storage Building
- Range Building

- Production Building
- Office Building

1.7.13.0.1. During the visual inspection, numerous items were inventoried including, but not limited to: fluorescent light bulbs, smoke detectors, fuel tanks, thermometers, OWSs, fuel tanks, piping, thermostats. Additionally, potential PCB contaminated areas and areas containing ACM were observed. Additional details on the exact items observed during the visual inspection can be found in the report.

1.7.14 Environmental Assessment for the Proposed Demolition of AFP 59

1.7.14.0.0. In accordance with (IAW) the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) was performed to evaluate the environmental and socioeconomic impacts associated with the proposed action to demolish AFP 59 (USAESCH, 2013a).

1.7.14.0.1. The EA described environmental impacts associated with the following actions:

- Proposed Action: Demolition and restoration of AFP 59
- Alternative Action: Rehabilitation of flood damaged buildings at AFP 59 and restoring these buildings for continued use
- No Action Alternative: The No Action Alternative serves as a baseline against which impacts can be evaluated

1.7.14.0.2. The environmental impacts evaluated in the EA include: noise; air quality; land use and recreation; geological resources; water resources; coastal zone management; biological resources, human health and safety; utilities and infrastructure; hazardous materials and wastes; socioeconomic resources and environmental justice; and cultural and visual resources.

1.7.14.0.3. The EA findings determined whether preparation of a Finding of No Significant Impact (FONSI) or Environmental Impact Statement (EIS) was warranted. The EA stated that unavoidable adverse effects associated with the proposed action are not anticipated to be significant.

1.7.15 Finding of No Significant Impact/Finding of No Practicable Alternative, Demolition of AFP 59

Based on the findings of the EA, a FONSI was prepared for the proposed alternative at AFP 59. The FONSI summarized the findings of the EA and concluded that no significant impacts to the quality of the natural and human environment are associated with the proposed action (USAF, 2013).

Air Force Plant 59 Location

0 2.5 5 10 Miles

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

U.S. AIR FORCE

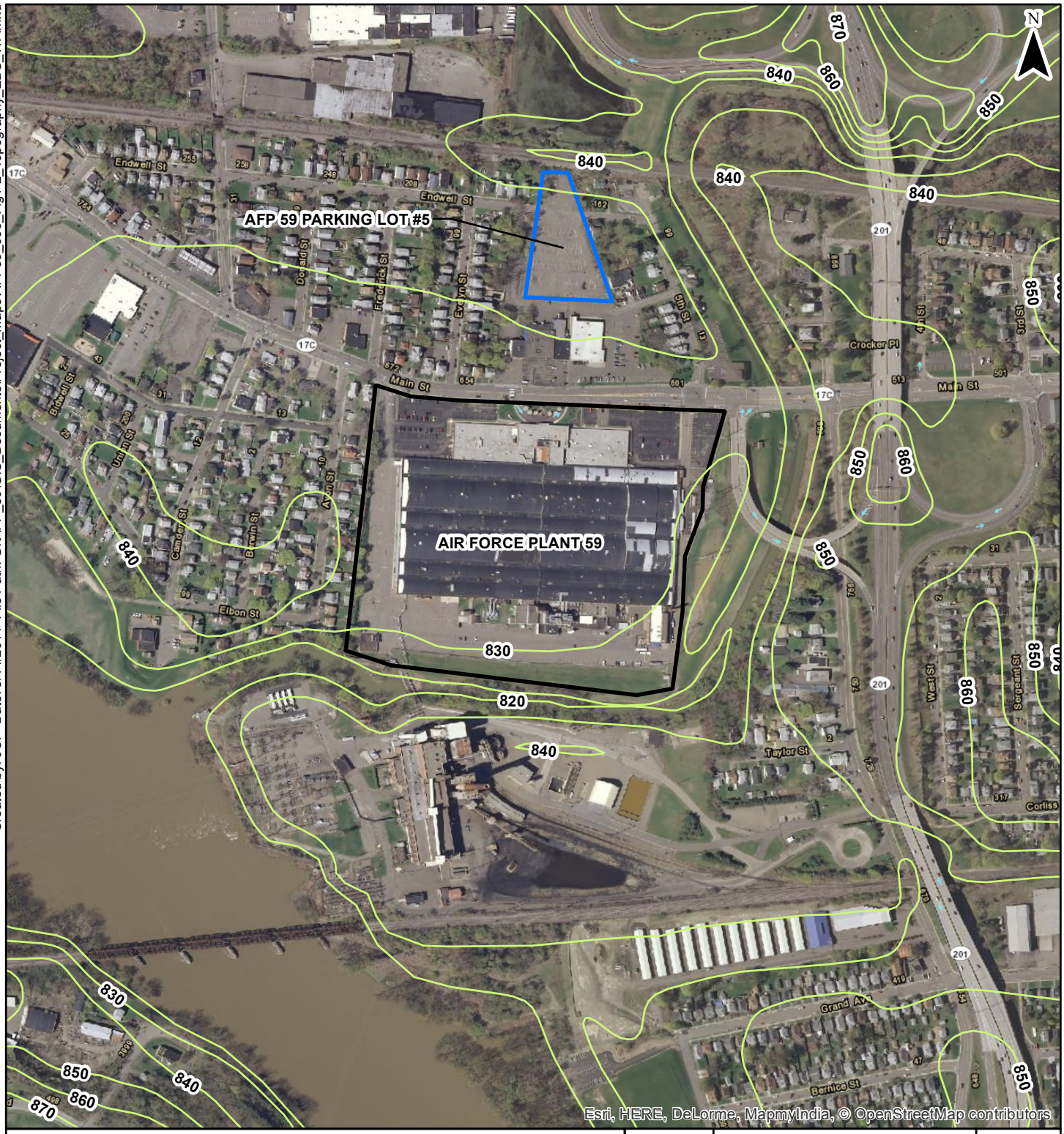
FIGURE NUMBER
1-1

AIR FORCE PLANT 59
FACILITY LOCATION
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, NJ 07856

Created by: JCP Date: 5/14/2014 File Path: G:\AFP_59\GIS_Documents\Project_Maps\AFP59_002_Fig1-1_Facility_Location_EBS_WP.mxd

Project Number: 500184



Ground Surface Contour Line (10-Foot Interval)

Air Force Plant 59 Property Boundary

Parking Lot Boundary

Aerial photo source: NYS Statewide Digital Orthoimagery Program (NYSDOP), 2011. Web map service (WMS) provided by NYS ITS GIS Program Office.

0 250 500 1,000 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

U.S. AIR FORCE

FIGURE NUMBER
1-2

AIR FORCE PLANT 59
TOPOGRAPHY
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, NJ 07856

Created by: JCP Date: 5/14/2014 File Path: G:\AFP_59\GIS_Documents\Project_Maps\AFP59_003_Fig1-2_Topography_EBS_WP.mxd

Project Number: 500184

2.0 TECHNICAL MANAGEMENT PLAN

2.1 Project Objectives

The primary objective of this project is to collect sufficient data to delineate all areas of contamination within and beneath the building. The goal of the project is to characterize, quantify, delineate, and report on the nature and extent of these contaminants so that demolition contractors can provide accurate estimates that are not artificially inflated due to uncertainties regarding hazards in and beneath the building. The objectives for this task order will be met when the following are accomplished:

a. Work plans are prepared IAW the Performance Work Statement (PWS) and referenced governing regulations and requirements. These work plans identify appropriate field work elements and define and present a cost-effective approach to the planning and implementation of field work.

b. All areas of contamination within and beneath AFP 59 are delineated.

c. A Phase II EBS Report, which summarizes the results of the EBS, is completed and accepted by the Government.

2.2 Project Organization

This subchapter describes the organizations involved, along with their project roles. **Table 2-1** lists the key project organizations and their responsibilities. In addition to the key organizations listed in **Table 2-1**, support organizations, local governments, local emergency management agencies, and other stakeholders may also have roles in the project.

2.2.1 Responsibility Matrix

2.2.1.0.0. **Figure 2-1** presents the project organizational chart for the Phase II EBS at AFP 59. The responsibilities of the key personnel are presented in **Table 2-2**. The CB&I Project Manager (PM), Site Manager, and the Program Health and Safety Manager (PHSM) are responsible for formulating and enforcing environmental, health and safety and quality requirements for implementing the approved work plan.

2.2.1.0.1. Services that may be subcontracted for the Phase II EBS activities may include waste transportation and disposal (investigative-derived waste [IDW]), survey work, drilling, and chemical analytical services. CB&I will solicit bids from small business and small disadvantaged business firms to maximize small business content and meet contract goals. CB&I will research local subcontractors and providers and solicit proposals from qualified local vendors. Selection of subcontractors will be based on most qualified for the task required as determined by CB&I.

2.3 Project Communications and Reporting

All communication to stakeholders, regulators, and local authorities will be coordinated with the USACE. CB&I will not contact any stakeholders other than USACE and USAF without receiving approval from the USACE. All aspects of administering the project must be substantiated by permanent records, such as written correspondence, notes, and photographs. It is essential to summarize important non-written communications with notes covering conferences, telephone calls, and discussions, giving the date, location, parties involved, and important issues/topics discussed. Written correspondence is the most deliberate, as well as the most important, of the three general types of contractual communication (i.e., person to person, telephone calls, and written correspondence). All incoming correspondence from a USAESCH representative that requires a reply must be responded to within five working days in one of the following manners:

a. Reply in full;

b. Interim reply (stating the date by which a full answer can be expected); or,

c. Acknowledgment of receipt.

2.3.1 Office Communications and Reporting

2.3.1.0.0. The CB&I PM is responsible for issuing the following documents throughout the project:

a. Meeting minutes (due 7 days after a meeting);

b. Record of telephone conversations (due with the Periodic Status Report [PSR]); and,

c. PSRs (IAW Data Item Description [DID] Worldwide Environmental Remediation Services [WERS]-016.02).

2.3.1.0.1. A PSR will be issued pursuant to the terms of the contract. The PSR will include a progress report regarding project tasks, scheduling, work progress, budget completion, pertinent correspondence, deliverable status, potential barriers to project completion, exposure data, and quality control (QC) documentation.

2.3.2 Field Communications and Reporting

2.3.2.0.0. The following communications will be documented in a chronological communications log maintained by the CB&I Site Manager (and geologist, Jeff Tarr) and Site Safety and Health Officer (SSHO):

a. When and why work is stopped for safety reasons;

b. Health and Safety violations/plan deviations; and,

c. Personnel changes and reason for changes.

2.3.2.0.2. When field operations are being conducted, a Daily Quality Control Report (DQCR) will be prepared and submitted to document daily progress. The DQCR will include:

a. Weather Information;

b. Discussion of work progress;

c. Individuals contacted;

d. Equipment on-site;

e. Personnel on-site;

f. Problems encountered;

g. Departures from the Work Plan or Uniform Federal Policy (UFP)-Quality Assurance Project Plan (QAPP) (**Appendix E**);

h. Discussion of work completed versus project schedule; and

i. Government personnel directives.

2.4 Project Deliverables

2.4.0.0. At a minimum, each report shall be issued in draft and final versions. The draft is for USACE and USAF review and comment only. The final version will be prepared as needed in order to facilitate USACE and USAF back check of responses to comments. Since this project does not fall under a regulatory program, State and Federal Regulators will not be reviewing the planning documents. All final major submittals will be submitted in both hard copy and electronic (compact disc-read only memory [CD-ROM]) format. A CD-ROM that includes the report, all data, and maps produced will be delivered with each copy of the report.

2.4.0.1. Project deliverables will consist of the following documents:

a. Technical Project Planning (TPP) Memoranda;

b. Work Plan;

c. QC Documents;

d. Phase II EBS Report;

e. Final geographic information system (GIS) data package; and,

f. Administrative Record Updates.

2.5 Project Schedule

An overall project schedule is provided as **Figure 2-2**. This schedule will be updated, when necessary, and submitted to USAESCH with the associated progress report. The included schedule is based on the PWS and the anticipated time needed for document review and planning for field mobilization.

2.6 Periodic Reporting

2.6.1 Monthly Progress Reports

Project status reports will be provided monthly IAW DID WERS-016.02. The Monthly Status Report will be submitted no later than 10 calendar days following the reporting cut-off date. Daily status reports will report project status from beginning through completion of field work. CB&I's reporting systems are routinely customized to meet customer needs. Various productivity comparison reports can be generated by Task Order or other selected elements. Safety/QC documentation will be provided on the required forms IAW the WERS DIDs.

2.6.2 Web-Based Information Portal

2.6.2.0.0. CB&I will establish and maintain a web-based portal to facilitate the management of work under this contract to disseminate project-related information to project delivery team and the interested public for the contract duration.

2.6.2.0.1. The portal will be established so that CB&I, USACE, and the USAF will have access to a common website (Extranet portal) that houses relevant historical project information. The portal (located at https://xnet.cbifederalservices.com/sites/afp59/default.aspx) will provide access to items including schedules, submittals, meeting minutes, site data and plans, regulatory documents, reference documents, and project management information. The portal can also be made available to the EPA and New York State Department of Environmental Conservation (NYSDEC) at the direction of the USACE.

2.6.3 Field Status Reports

CB&I will prepare and submit daily status reports during field activities to document field activities completed and planned. The report will be delivered electronically via e-mail and posted to a project website.

2.7 Costing and Billing

This project delivery order was awarded as a Firm Fixed Price task. The Firm Fixed Price task will be billed based on physical work completed derived from negotiated milestones. CB&I will invoice the tasks monthly and submit the PSR and the back-up information required by the contract.

2.8 Project Public Relations Support

CB&I will not make available or publicly disclose any project data or reports generated or reviewed under this contract unless specifically authorized by USAESCH and the USAF. CB&I will support USAESCH and the USAF with managing public affairs related to all field activities. The support will include providing information for items such as public meetings and fact sheets on an as-needed basis.

2.9 Subcontractor Management

Each subcontractor working on the Installation will be required to adhere to the Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP) and will be subject to the same training and medical surveillance requirements as CB&I personnel depending on job activity. All activities involving the potential for exposure to hazardous waste materials will require medical and training certification as mandated by Title 29 Code of Federal Regulations (CFR) Sections 1910.120 and 1926.65.

2.10 Management of Field Operations

Fieldwork will be coordinated within the CB&I Mt. Arlington, New Jersey, office. Field teams may be composed of CB&I staff from throughout the United States. Such resources, as well as any necessary subcontractor support, will be managed by the PM and/or Site Manager. The Site Manager will be responsible for identifying appropriate field staff through local office managers and will confirm that proposed project personnel have the necessary experience and required training for the project.

Table 2-1
Roles and Responsibilities of Project Organizations

Participant Organizations	Responsibilities
USAF	Ultimate team leader for project decisions and actions; approves and directs the project, including changes in the objectives, budget, and scope; programs and obtains funding to accomplish tasks as appropriate; reviews and comments on project related documents including work plans, status reports, and final report; attend all project related meetings/calls; coordinates operations on facility side as it relates to CB&I's work under the WERS contract at AFP 59. Exchanges/transfers technical data and information with Integrated Team throughout the project.
USAESCH	Provides life cycle project management of all aspects of the project; serves as the Project Delivery Team leader for all USACE support; overall responsibility for project definition, scope, budget, schedule, quality and change; manages all funding for the project; oversight of CB&I activities including review and conditional approval of CB&I deliverables; attends all project planning meetings and other meetings/calls as it deems necessary; oversees the safety and quality of field work efforts; oversees the day to day activities of the projects construction phase; coordinates technical activities and elements required to meet the established schedules and complete work within established budgets and performing quality assurance (QA) review of the contractors field practices during the

	work efforts as required and identifying and recording deficiencies in field practices. Exchange/transfer technical data and information with Integrated Team throughout the project.
USACE – NY District	Provides life cycle project management of all aspects of the project, ensuring a quality product; ensures all project objectives are met; oversees CB&I activities including review and conditional approval of CB&I deliverables; attends all project planning meetings and other meetings/calls as it deems necessary; and coordinates technical activities and elements required to meet the established schedules.
CB&I	Overall management and execution of all services related to the WERS project for implementation of an EBS required to meet performance objectives for AFP 59; obtains approval of documents submitted to the USACE and USAF; prepare contract required submittals; coordinates and attends all project related meetings/calls; and coordinates CB&I's site activities with USAF and USACE personnel. Exchanges/transfers technical data and information with Integrated Team throughout the project.

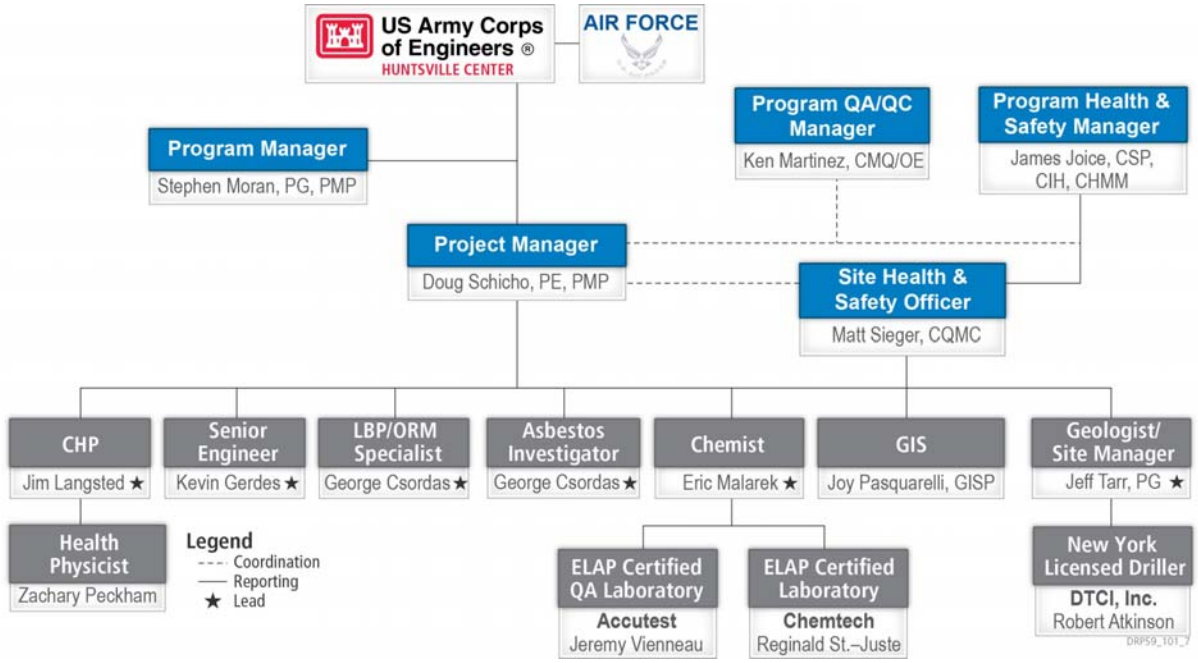
Table 2-2
Responsibilities of CB&I Team Members – AFP 59 Phase II EBS

Title	General Description	Responsibilities
PM	Reports to upper-level management. Has authority to direct response operations and implement the PWS for USAESCH.	Coordinates and reviews the project records, the Work Plan, the Explosive Safety Submission (ESS), the APP/SSHP, and the reports. Organizes the field team. Obtains approval to start field work and coordinates activities with appropriate officials. Employs the Project Safety and Health Officer to ensure that safety and health requirements are met. Oversees the performance of all project team members. Coordinates subcontracted activities. Assures that technical and contractual issues are resolved. Controls cost and schedule targets.
Site Manager	Primary point of contact for CB&I for all field activities. Responsible for logistics and coordination of all field teams and subcontractors.	Manages overall field operations and determines the sequence of field team activities. Oversees subcontractors' field operations and reviews subcontractors' weekly status reports. Coordinates with the PM to take corrective actions to ensure budgets and schedules are enforced during the field work. Reports all QC failures and corrective actions to the PM and QA Manager. Enforces site control. Documents field activities and reports to the PM. Responsible for understanding field procedures and ensuring that the procedures are followed IAW the work plan. Certifies that all site personnel are properly trained in their respective positions.
PHSM	Advises PM on all aspects of health and safety and supervises the SSHO.	Provides technical support concerning health and safety issues. Manages/Oversees the preparation of the APP/SSHP. Ensures that the health and safety protocols being followed conform to established industry protocols and standards. Confirms each team member's suitability for work based on a physician's recommendation. Conducts field health and safety audits to ensure APP/SSHP conformance and CB&I's policy compliance. Certifies that all workers have proper training. Investigates each accident or reportable incident.
QC Manager	Independent of the project team and interacts and communicates with subcontractor and USAESCH QA personnel.	Reviews all QA/QC procedures to be used in the project. Reviews subcontractor system audits and QC procedures to ensure compliance with the project QC guidelines. Performs a quality review to ensure the quality of deliverables from the project team.

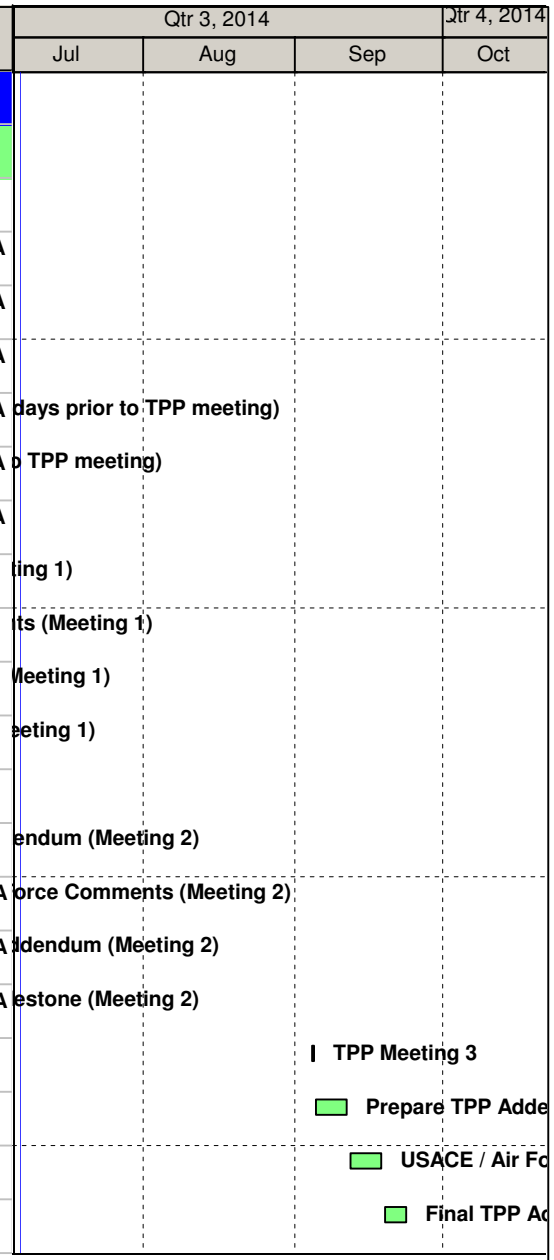
Table 2-2 *(continued)*
Responsibilities of Team Members – SEDA OD Grounds MEC Clearance Activities

Title	General Description	Responsibilities
Senior Engineer	Coordinates with the PM and other CB&I disciplines	Responsible for the management of the technical quality of the contract, including the QC/QA Program. The Senior Environmental Engineer will direct the development and implementation of the QC/QA Program and ensure the Health and Safety Program is adequately implemented. Experienced and knowledgeable in the field of environmental investigation and shall be the primary point of contact for technical coordination of project requirements.
Certified Health Physicist	Technical Lead and Oversight for all aspects of the MagThor investigation	Responsible for the technical approach for the radiation survey and sampling. Primary author of the Radiation Protection Plan and report sections detailing the findings of the radiation survey and sampling of the dust collection system. Experienced and knowledgeable in the Health Physics field and will be the primary point of contact for the Health Physics Technician
Health Physics Technicial	Field technician to conduct radiation survey and collect samples for off-site laboratory analysis	Responsible for field survey and sample collection. Experienced and knowledgeable regarding field survey instrumentation and sample collection.

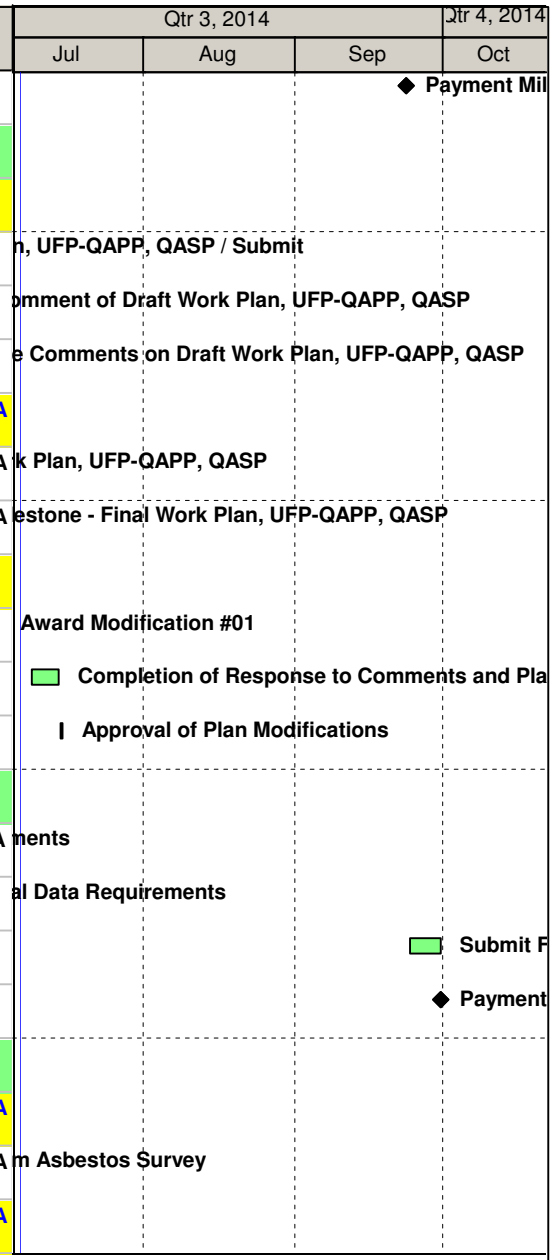
Figure 2-1
Project Organization Chart



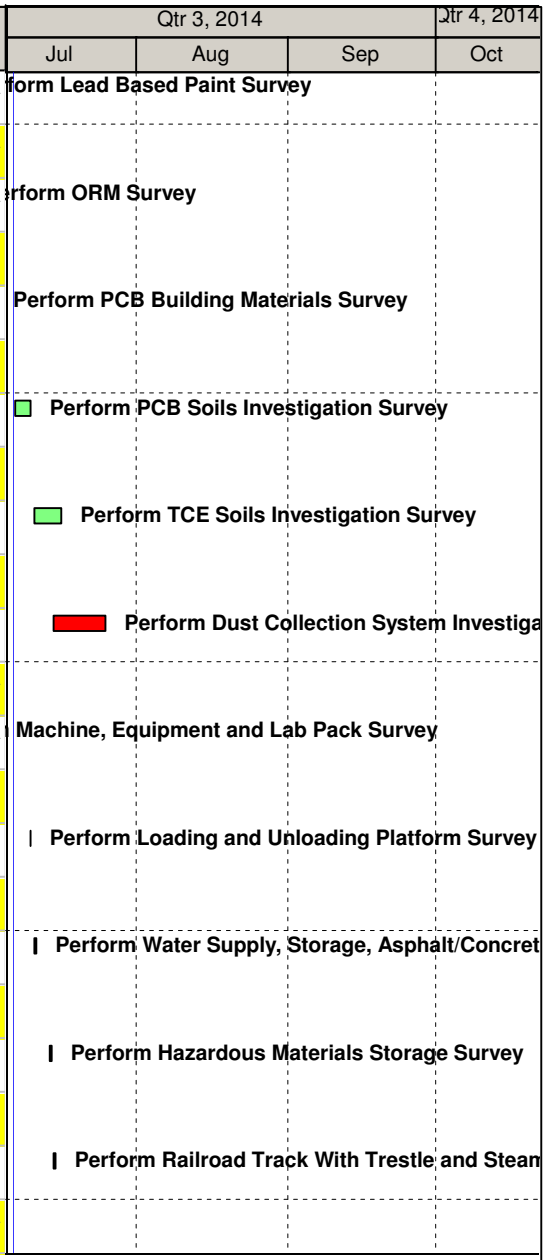
Activity ID	Activity Name	Rem Dur	Start	Finish
Huntsville WERS - Demolition and Remediation of AFP 59		**65**	**28-Mar-14 A**	**06-Oct-14**
Technical Project Planning		**14**	**28-Mar-14 A**	**23-Sep-14**
A1000	**Notice to Proceed**	**0**	**28-Mar-14 A**	
A1001	**Kick Off Teleconference**	**0**	**03-Apr-14 A**	**03-Apr-14 A**
A1002	**Meeting Minutes**	**0**	**04-Apr-14 A**	**07-Apr-14 A**
A1003	**Proposed Schedule**	**0**	**04-Apr-14 A**	**09-Apr-14 A**
A1004	**Prepare TPP Materials / CSM (Submit 14 days prior to TPP meeting)**	**0**	**04-Apr-14 A**	**09-Apr-14 A**
A1005	**Prepare AAPP (Submit 7 days prior to TPP meeting)**	**0**	**04-Apr-14 A**	**17-Apr-14 A**
A1007	**TPP Meeting 1**	**0**	**24-Apr-14 A**	**24-Apr-14 A**
A1580	**Draft TPP Memorandum (Meeting 1)**	**0**	**25-Apr-14 A**	**01-May-14 A**
A1590	**USACE / Air Force Comments (Meeting 1)**	**0**	**02-May-14 A**	**06-May-14 A**
A1600	**Final TPP Memorandum (Meeting 1)**	**0**	**07-May-14 A**	**09-May-14 A**
A1601	**Payment Milestone (Meeting 1)**	**0**		**16-May-14 A**
A1610	**TPP Meeting 2**	**0**	**19-May-14 A**	**19-May-14 A**
A1620	**Prepare TPP Addendum (Meeting 2)**	**0**	**20-May-14 A**	**27-May-14 A**
A1630	**USACE / Air Force Comments (Meeting 2)**	**0**	**28-May-14 A**	**03-Jun-14 A**
A1640	**Final TPP Addendum (Meeting 2)**	**0**	**04-Jun-14 A**	**06-Jun-14 A**
A1641	**Payment Milestone (Meeting 2)**	**0**		**06-Jun-14 A**
A1650	**TPP Meeting 3**	**1**	**04-Sep-14**	**04-Sep-14**
A1690	**Prepare TPP Addendum (Meeting 3)**	**5**	**05-Sep-14**	**11-Sep-14**
A1700	**USACE / Air Force Comments (Meeting 3)**	**5**	**12-Sep-14**	**18-Sep-14**
A1710	**Final TPP Addendum (Meeting 3)**	**3**	**19-Sep-14**	**23-Sep-14**



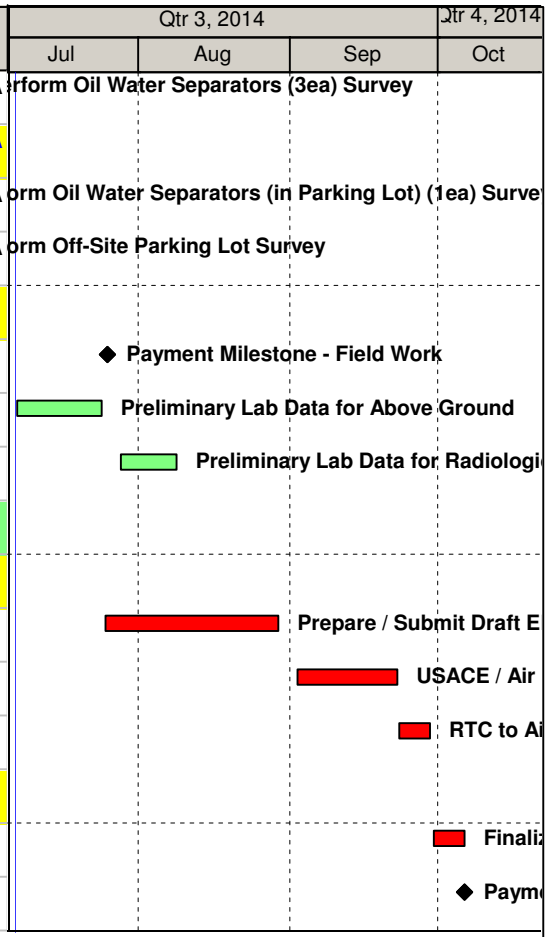
Activity ID	Activity Name	Rem Dur	Start	Finish
A1740	Payment Milestone (Meeting 3)	0		23-Sep-14
Work Plan, UFP-QAPP, QASP		5	21-Apr-14 A	15-Jul-14
Draft		0	21-Apr-14 A	30-May-14 A
02000110	Prepare Draft Work Plan, UFP-QAPP, QASP / Submit	0	21-Apr-14 A	15-May-14 A
02000111	Air Force Review/Comment of Draft Work Plan, UFP-QAPP, QASP	0	16-May-14 A	22-May-14 A
02000120	RTC to Air Force Comments on Draft Work Plan, UFP-QAPP, QASP	0	23-May-14 A	30-May-14 A
Final		0	02-Jun-14 A	06-Jun-14 A
02000130	Finalize Work Plan, UFP-QAPP, QASP	0	02-Jun-14 A	06-Jun-14 A
02000131PM	Payment Milestone - Final Work Plan, UFP-QAPP, QASP	0		06-Jun-14 A
Modification 01		5	03-Jul-14 A	15-Jul-14
A1780	Award Modification #01	0	03-Jul-14 A	
A1790	Completion of Response to Comments and Plan Modificaitons	4	09-Jul-14	14-Jul-14
A1800	Approval of Plan Modifications	1	15-Jul-14	15-Jul-14
GIS		5	21-Apr-14 A	30-Sep-14
A1150	Submit GeoSpatial Data Requirements	0	21-Apr-14 A	25-Apr-14 A
A1160	Air Force to Accept GeoSpatial Data Requirements	0	28-Apr-14 A	02-May-14 A
A1180	Submit Final GIS Documentation	5	24-Sep-14	30-Sep-14
A1770	Payment Milestone - Electronic Data Submittal of GIS Documentation	0		30-Sep-14
EBS Field Activities		25	09-Jun-14 A	08-Aug-14
Asbestos Survey for Production Complex - Facility #0001 and Plant Admi...		0	09-Jun-14 A	18-Jun-14 A
04000001	Perform Asbestos Survey	0	09-Jun-14 A	18-Jun-14 A
Lead Based Paint Survey for Production Complex - Facility #0001 and Pla...		0	19-Jun-14 A	25-Jun-14 A



Activity ID	Activity Name	Rem Dur	Start	Finish
04000002	Perform Lead Based Paint Survey	0	19-Jun-14 A	25-Jun-14 A
ORM Survey for Production Complex - Facility #0001 and Plant Admin - F...		0	25-Jun-14 A	27-Jun-14 A
04000003	Perform ORM Survey	0	25-Jun-14 A	27-Jun-14 A
PCB Building Matls Survey for Production Complex - Facility #0001 and P...		0	09-Jun-14 A	03-Jul-14 A
04000004	Perform PCB Building Materials Survey	0	09-Jun-14 A	03-Jul-14 A
PCB Soils Investigation for Production Complex - Facility #0001 and Plant...		4	07-Jul-14	10-Jul-14
04000005	Perform PCB Soils Investigation Survey	4	07-Jul-14	10-Jul-14
TCE Soils Investigation for Production Complex - Facility #0001 and Plant...		4	11-Jul-14	16-Jul-14
04000006	Perform TCE Soils Investigation Survey	4	11-Jul-14	16-Jul-14
Dust Collection Sys Investigation for Prod Complex-Facility #0001 and Pl...		9	15-Jul-14	25-Jul-14
04000007	Perform Dust Collection System Investigation Survey	9	15-Jul-14	25-Jul-14
Mach, Equip and Lab Pack Survey for Prod Complex-Facility #0001 and Pl...		0	13-Jun-14 A	16-Jun-14 A
04000008	Perform Machine, Equipment and Lab Pack Survey	0	13-Jun-14 A	16-Jun-14 A
Loading and Unloading Platform - Facility #0003		1	10-Jul-14	10-Jul-14
04000009	Perform Loading and Unloading Platform Survey	1	10-Jul-14*	10-Jul-14
Wtr Supply-Facility #0007, Wtr Storage-Facility #0028, Asphalt/Concrete P...		1	11-Jul-14	11-Jul-14
04000010	Perform Water Supply, Storage, Asphalt/Concrete Parking Areas Survey	1	11-Jul-14	11-Jul-14
Hazardous Material Storage - Facility 0025		1	14-Jul-14	14-Jul-14
04000011	Perform Hazardous Materials Storage Survey	1	14-Jul-14	14-Jul-14
Railroad Track With Trestle - Facility 0032 and Steam Line - Facility 0039		1	15-Jul-14	15-Jul-14
04000012	Perform Railroad Track With Trestle and Steam Line Survey	1	15-Jul-14	15-Jul-14
Oil Water Separators		0	24-Jun-14 A	27-Jun-14 A



Activity ID	Activity Name	Rem Dur	Start	Finish
04000013	Perform Oil Water Separators (3ea) Survey	0	24-Jun-14 A	27-Jun-14 A
Additional Facilities - Off Site		**0**	**23-Jun-14 A**	**23-Jun-14 A**
04000014	Perform Oil Water Separators (in Parking Lot) (1ea) Survey	0	23-Jun-14 A	23-Jun-14 A
04000014A	Perform Off-Site Parking Lot Survey	0	23-Jun-14 A	23-Jun-14 A
Final Field Payment		**25**	**07-Jul-14**	**08-Aug-14**
04000015PM	Payment Milestone - Field Work	0		25-Jul-14
5000130	Preliminary Lab Data for Above Ground	14	07-Jul-14	24-Jul-14
5000170	Preliminary Lab Data for Radiological Investigation	10	28-Jul-14	08-Aug-14
EBS Report		**51**	**25-Jul-14**	**06-Oct-14**
Draft		**46**	**25-Jul-14**	**29-Sep-14**
05000110	Prepare / Submit Draft EBS Report & Analytical Data Submittal	26	25-Jul-14	29-Aug-14
05000111	USACE / Air Force Comment on Draft EBS Report	15	02-Sep-14	22-Sep-14
05000120	RTC to Air Force Comments on Draft EBS Report	5	23-Sep-14	29-Sep-14
Final		**5**	**30-Sep-14**	**06-Oct-14**
05000130	Finalize Draft EBS Report	5	30-Sep-14	06-Oct-14
05000131PM	Payment Milestone - EBS Report	0		06-Oct-14



3.0 FIELD INVESTIGATION PLAN

3.1 Overall Approach to EBS Activities

3.1.0.0. The primary objective of this project is to collect sufficient data to delineate all areas of contamination within and beneath the building. Work will be performed by grouping the individual facilities specified in the PWS (**Appendix A**) into groupings that includes facilities with similar sampling and/or EBS objectives. CB&I will be responsible for completing the Phase II EBS at Air Force Plant 59 by conducting required research, investigation, evaluation, coordination, and sampling at the following facilities/OWSs:

- Production Complex and Plant Admin (Facilities #0001 and #0002)
- Loading and Unloading Platform (Facility #0003)
- Water Supply, Water Storage, Asphalt/Concrete Parking Areas (Facilities #0007, #0028, #0034)
- Hazardous Material Storage (Facility #0025)
- Railroad Track with Trestle (Facility #0032)
- Steam Line (Facility #0039)
- OWSs, Neutralization Tank

3.1.0.1. **Figure 3-1** presents the layout of AFP 59. As part of the EBS, the following activities will be performed at AFP 59: Asbestos Survey; Lead Based Paint (LBP) Survey; Other Regulated Materials (ORM) Survey; and Environmental sampling.

3.1.1 Removal Action Goals

The goal of the project is to characterize, quantify, delineate, and report on the nature and extent of ACM, ORM, RCRA constituents, and PCB contaminated items/materials so that demolition contractors can provide accurate estimates that are not artificially inflated due to uncertainties regarding hazards in and beneath the building. In general, suspect ACM will be sampled to determine asbestos content. When ACM is found, its quantity will be estimated. Painted surfaces will be sampled to determine if paint contains lead or PCBs. The quantity of LBP will be estimated. The quantity of paint containing PCB and PCBs in excess of 50 milligrams per kilogram (mg/kg) will be estimated. Other regulated materials will be inventoried. In cases where ORM could be contaminated with other constituents (i.e. vacuum pump oil), it will be sent to a laboratory for waste characterization. Building

materials potentially contaminated with PCBs will be sampled. Materials with PCB content in excess of 50 mg/kg will be delineated as either PCB Bulk Product Waste or Toxic Substance Control Act (TSCA) waste. Potentially contaminated concrete will be characterized for disposal. Soil will be delineated as compared to residential standards. The inspection and sampling design will focus on obtaining accurate data for the next step of the project. Additional details regarding the specific goals for these activities are presented in subsequent sections of this work plan.

3.1.2 Data Quality Objectives

3.1.2.0.0. Data quality objectives (DQOs) are qualitative and quantitative statements that specify the quality and the level of the data needed to support the decision-making processes during each project. Guidance for the DQO development process is contained in Guidance for Performing Site Inspections under Comprehensive Environmental Response, Compensation, and Liability Act (USEPA, 1992) and DQOs for Superfund (USEPA, 2000). The data collection objectives, the data uses, and the appropriate analytical data quality levels are identified in this section. Additionally, the sampling required for the project will be performed in agreement with the UFP-QAPP (**Appendix E**). DQOs have been established using the USEPA seven-step method:

1. State the Problem
2. Identify the Decision
3. Identify inputs to the Decision
4. Define Study Boundaries
5. Develop Decision Rules
6. Specify Tolerable Limits on Decisions
7. Optimize the Design

3.1.2.0.1. **Table 3-1** identifies the DQO process for AFP 59. The DQOs for environmental sampling are presented in **Appendix E**.

3.1.3 Data Incorporation into the Phase II EBS

Whenever possible, existing data will be incorporated into the Phase II EBS. Numerous investigations have been performed at AFP 59. Section 1.7 details the findings of previous investigations. As appropriate, CB&I will use prior investigation results to support our current investigation.

3.1.4 Follow-On Activities

A Phase II EBS Report will be prepared and submitted, which fully documents the fieldwork effort and will provide an evaluation of ACM, LBP, environmental contamination, contaminated building materials, and ORM quantities. The Phase II EBS Report will also describe the site history, the work conducted under this task order, and any deviations from this Work Plan. The report will be supported as necessary with accompanying maps, charts, photo evidence, and tables to fully describe and document all work performed and all conclusions presented. This data can then be used to estimate the cost of demolition and soil remediation (if required).

3.2 Production Complex and Plant Admin (Facilities #0001 and #0002) Investigation Strategy

3.2.0.0. The Production Complex and Plant Admin (Facilities #0001 and #0002) are the primary structures at AFP 59. At the time of facility closure, the Production Complex was divided into numerous offices, laboratories, production areas, and safe storage rooms. The Plant Admin Building is a two-story building that contains a central open court to the south of the lobby. Plant Admin served as office space at the time of the facility closure.

3.2.0.1. Within Facilities #0001 and #0002 are numerous AOCs with different contaminants of concern (COCs). The following text describes each source and approach within the Production Complex and Plant Admin buildings.

3.2.1 ACM

3.2.1.0.0. Asbestos is any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite. Asbestos has been used in many products over the years, from floor tile and mastics to pipe insulation. AFP 59 was initially constructed in 1942. ACM use was commonplace during this time period. In 1990, an Asbestos Survey of the Plant was conducted and ACM was identified in different portions of AFP 59. Based on previous findings, ACM can be found throughout the entire building and in different forms (tiles, insulation, etc.).

3.2.1.0.1. An ACM survey will be performed within the Production Complex and Plant Admin (Facilities #0001 and #0002), as well as Water Storage (Facility 0028), Railroad Track with Trestle (Facility 0032), and Steam Line (Facility 0039). Additional details on the ACM survey are provided in Section 3.12.

3.2.2 Other Regulated Materials

3.2.2.0.0. During previous site visits and investigations, ORM has been observed within AFP 59. ORM with the potential to be present include, but are not limited to the following

materials: mercury, switches, light ballasts, machine oils, fuels, lubricants, paints, solvents, acids, bases, hydraulic fluid, smoke alarms, etc.

3.2.2.0.1. An ORM survey will be performed within the Production Complex and Plant Admin (Facilities #0001 and #0002). Additional details on the ORM survey are provided in Section 3.10.

3.2.3 Paints and Coatings

3.2.3.0.0. Lead has been used in many paint products over the years to increase durability, maintain its appearance and resist moisture that causes corrosion. Lead was banned from household use in 1978, but industrial and road marking paints may still contain it. AFP 59 was initially constructed in 1942. LBP use was commonplace during this time period; therefore, there is likelihood that at least some of the paints present in the facilities at AFP 59 may contain lead. Additionally, it was common for paints containing PCBs to have been used in Department of Defense (DOD) facilities. PCBs were added to condition the paint and to increase the paints fire retardant capability. Therefore, there may be the potential for PCB-contaminated paint present in the facilities at AFP 59.

3.2.3.0.1. LBP and PCB-containing paint will be surveyed. Additional details on the ORM survey are provided in Section 3.13.

3.2.4 Building Materials

During operations, spills and leaks of fluids occasionally occurred. Building materials have been contaminated with PCBs through spills and leaks of transformer oil or other materials. Transformers formerly within the rafters have leaked and contaminated wooden rafters, wooden cat walks, and potentially the flooring and building slab. Environmental sampling of building materials will be performed during the Phase II EBS. The objective of the investigation is to characterize and delineate contaminated building materials to establish quantities and volumes for proper disposal pricing. Details on the sampling approach for each potential source are presented in the following subsection. All sampling and analysis will be performed IAW the QAPP (**Appendix E**).

3.2.4.1 Roof Trusses

3.2.4.1.0.0. According to the PCB management plan, transformers formerly installed within the rafters have contaminated 14 wooden platforms, one stairwell, and three air handling units with PCBs. These areas were delineated and have been encapsulated with paint to preclude contact with the PCB contamination. However, the PCB management plan does not show the location of these contaminated areas. Locations which formerly housed transformers in the cat walk system are depicted on engineering drawing 846-1-A1A. These locations have been georeferenced and are depicted on **Figure 3-2**. As part of the

investigation, CB&I will inspect all former transformer locations (**Figure 3-2**) to identify the encapsulated areas. The investigation of the truss systems will take place in three phases.

1. During the first phase, the delineation performed during the encapsulation will be confirmed by collecting screening-level samples of the wood beyond the paint encapsulation. If contamination outside the encapsulated area is identified; it will be delineated by collecting additional screening-level samples. Any PCB detections identified by the screening-level samples will be delineated during the second phase.

2. During the second phase, the encapsulated rafters will be characterized and delineated with wood chip samples. Wood chip samples will be collected every 30 ft of truss and analyzed at an off-site laboratory.

3. The third phase will determine if the trusses are a potential TSCA waste. All locations of roof truss shown to contain total PCBs in excess of 25 mg/kg will be sampled IAW the mega rule protocol. The 25 mg/kg concentration has been selected based on the NYSDEC industrial soil cleanup objective (SCO) and because at half the TSCA value of 50 mg/kg it will conservatively identify any areas that could potentially be TSCA waste.

3.2.4.1.0.1. As part of the Phase II EBS, CB&I anticipates to collect 70 screening level samples and 139 wood core samples to be analyzed at an off-site laboratory. The screening-level chip samples and wood chip samples will be collected and analyzed IAW Section 3.13.1 and Section 3.13.2, respectively.

3.2.4.2 Flooring

3.2.4.2.0.0. According to the PCB management plan, there are 24 areas of known PCB contaminated flooring covering 114,891 square ft (O'Brian and Gere, 2005). Contamination has been noted in the upper and lower subfloor. Delineation of these areas will be conducted IAW the NYSDEC DER-10/Technical Guidance for Site Investigation and Remediation. Delineation sampling will be conducted to a 90 percent level of confidence using the Visual Sample Plan (VSP) in find hot-spot mode. VSP requires delineation samples be collected on 30 ft centers (144 samples). In addition, CB&I anticipates collecting a minimum of nine additional samples for step outs. Initial sample locations are presented on **Figure 3-3**. The additional samples may be collected to horizontally delineate areas shown to be contaminated in excess of the NYSDEC industrial SCO of 25 mg/kg total PCBs. After this additional delineation of the flooring material, the slab will be also be delineated beneath all flooring shown to be contaminated with PCBs.

- Sampling will be conducted sequentially to determine if the flooring is contaminated.

- Initially screening-level chip samples will be collected to determine the presence or absence of PCBs on the flooring or upper subfloor.

- If PCBs are present on the flooring or upper subfloor step outs (screening-level chip samples) will be made to determine the full extent of potentially contaminated flooring.

- Wood flooring containing PCB contamination will serve as a potential indicator of PCB contaminated concrete beneath it.

- Concrete chip samples for off-site laboratory analysis will be collected from all locations contaminated with PCBs based on the screening-level sampling. The new area of PCB contamination will be calculated and VSP will be used to determine the number of chip samples required to obtain a 90% confidence level.

- Any areas exhibiting PCB concentrations in excess of 25 mg/kg will be characterized for disposal IAW the mega rule as discussed in Section 3.2.4.5

3.2.4.2.0.1. In addition to the 114,891 square ft of known contaminated areas, areas of stained concrete were identified when the flooring was removed. These areas have been covered with plywood that is labeled "PCB." To determine if these stained areas contain PCBs, one chip sample will be collected from each location and analyzed for PCBs by screening-level analysis. If the initial chip sample indicates PCB contamination in excess of 25 mg/kg characterization IAW the mega rule will be performed.

3.2.4.0.2. The screening-level chip samples and concrete chip samples will be collected and analyzed IAW Section 3.13.1 and Section 3.13.2, respectively.

3.2.4.3 Transformer Pad

The former transformer pad located on the buildings east side will have four chip samples collected and analyzed at an off-site laboratory. Chip sampling will be performed IAW Section 3.15.2. The samples will be biased to areas exhibiting staining. Any areas contaminated in excess of 25 mg/kg will be sampled IAW the mega rule.

3.2.4.4 Courtyard

The courtyard was the former location of a transformer (**Figure 3-2**) and was reportedly contaminated with PCBs. This courtyard is one of the PCB management areas (**Figure 3-3**). Therefore, these samples are accounted for under Section 3.2.4.2. Chip samples of the concrete or asphalt in the courtyard will be sampled for PCBs and analyzed at an off-site laboratory. Chip sampling will be performed IAW Section 3.15.2. Three samples will be

collected. Soil samples will be collected beneath any areas contaminated in excess of 25 mg/kg.

3.2.4.5 Mega Rule

3.2.4.5.0.0. After delineation is complete, areas that have been demonstrated to be contaminated with PCBs will be characterized for disposal. The primary objective will be to determine if the material constitutes a TSCA waste. The basis for the characterization strategy will comply with "Cleanup Site Characterization Sampling for PCB Remediation Waste" per 49 CFR 761 Subpart N. The types of wastes that this will apply to are wood floors, wood rafters, concrete flooring/slab, and soils beneath the building.

3.2.4.5.0.1. Each discrete area of contamination will be divided up IAW the protocol. From within each divided area, three grab samples will be retrieved and composited. In small areas of contamination, the divided area will each have its own composite tested and the set of composite sample results will represent that area. In significantly larger areas, the composite sample will be composed of three adjacent areas, for a total of nine grab samples making up that composite. The sampling technique will use a core sampler with a diameter between 2 and 3 centimeters (cm) and a maximum depth of 7.5 cm pursuant with 49 CFR 761.286. All composite samples will be sent to a commercial lab and analyzed for PCBs by SW 876 Method 8082.

3.2.4.5.0.2. The data results from this sampling activity will determine whether or not each area represented will need to be managed as a TSCA waste.

3.2.5 Soil

Equipment that contained PCBs (transformers) and VOCs (tanks, degreasers, etc.) were present at AFP 59. Spills of these fluids may have migrated to the soil beneath the building through cracks and joints. Furthermore, TCE contamination was confirmed in the eastern basement of the Production Complex. Although a removal action was conducted, two small areas of TCE contamination remain in the area of the east basement.

3.2.5.1 PCB-Contaminated Soil

PCB contamination beneath the slab is anticipated to be limited to the first 2 ft of soil, unless the PCBs were mobilized by significant amounts of dielectric oil, which is unlikely since leaks of this magnitude would have been cleaned up. Sub-slab samples will be collected in all locations where PCBs are detected in concrete in excess of the NYSDEC industrial SCO of 25 mg/kg. It is estimated that 24 borings will be sampled in the first round with 10 additional borings for delineation. Wherever PCB sampling areas overlap with TCE sampling areas, direct push technology (DPT) borings will be sampled for both PCBs and TCE. Concentrations in soil will be delineated to the NYSDEC Residential SCO of 1 mg/kg.

Twenty-five mg/kg in concrete is a conservative indicator of potential migration to the subsurface. If no concrete exhibits concentrations in excess of 25 mg/kg, then a minimum of one DPT sample will be collected from each restricted work area grid (**Figure 3-3**). These samples will be biased to cracks, joints or slab penetrations. Soils will be delineated horizontally through the use of step outs conducted on 30 ft increments. PCBs will be delineated vertically to the residential standard through the collection of soil samples on 1 ft increments. Soil samples will be analyzed off-site via method 8082A.

3.2.5.2 VOC-Contaminated Soil

3.2.5.2.0.0. Spills of VOCs in the building may have migrated to subsurface soil beneath the building through cracks and joints. Storage of VOCs in the building (tanks, degreasers, etc.) may have released vapors, which over time can accumulate in sub slab soils.

3.2.5.2.0.1. In addition, extensive investigation of VI into the building has identified chlorinated solvents in indoor air and beneath the building in soil gas. Soil gas sampling is an indicator of potential sub-slab soil contamination but can also be indicative of groundwater contamination. Based on the previous investigations, the following AOCs include:

1. Soil in the area of elevated soil-gas readings,

2. The eastern basement of the building was the subject of a soil removal action for TCE contamination as the soil removal was not completed due to the concern of undermining the building foundation

3. Groundwater samples collected in the area of the fire suppression reservoir exhibited chlorinated solvents above comparison criteria.

3.2.5.2.0.2. Additionally, newly-identified potential sources of VOC contamination have been identified within the former production area. Within the Production Facility and Plant Admin, the following features were identified as potential VOC sources: degreaser pit; plating room; area east of the plating room; blade etching pit near column A43; propeller pit between columns E46 and E47; and propeller pit at column E48 (**Figure 3-4**). It is unknown if the degreaser pit, blade etching pit and two propeller pits were physically removed or simply taken out of service when no longer needed. If the pits were removed, DPT borings will be advanced directly through the pit's previous location. Soil beneath the pits will be sampled for VOCs and metals. If they were not removed but backfilled with concrete, DPT borings will be advanced directly downgradient of the pit. Soil samples will be collected adjacent to the pit bottom and analyzed for metals and VOCs.

3.2.5.2.0.3. Initially, a total of 20 DPT borings will be sampled in the areas identified. The samples will be biased to AOCs identified, based on previous investigations and the site

history. **Figure 3-5** presents the preliminary sample locations. Up to an additional 20 DPT borings will be sampled to delineate TCL VOCs in soil found above residential criteria. Additional borings will be spaced approximately 50 feet down gradient from the original locations. Soil samples from the 40 DPT borings will be analyzed for TCL VOCs contamination (8260C). Wherever contamination overlaps, the borings collected for PCB soil delineation will also be used for TCL VOC delineation.

3.2.5.3 Potential Buried Waste Material

There is concern over potential buried waste material (i.e., fly ash) in the soil beneath the Production Facility and Plant Admin. Test pitting will be performed to assess and characterize waste material. If potential buried waste material is identified in the DPT borings, the test pit will be biased to that location. If no evidence of potential buried waste material is identified in the DPT borings, no test pitting will be required. If test pitting for buried waste material is performed, one sample of waste material will be collected for full TCLP analysis, additional samples for VOCs or PCBs may be collected if these contaminants are indicated based on the DPT borings.

3.2.6 Dust Collection Systems

3.2.6.0.0. The building was equipped with a dust collection system and metal reclamation system to collect dust, metal chips, and cuttings from the production facility. Within the Production Complex and Plant Admin facilities, there were 46 dust exhaust vents. The collection systems were grouped into five “fan groups.” No information on the layout of the fan groups was identified. The in-floor ducts connected to large cyclone systems in the rafters that would vacuum dust swept into the floor ducts and collected at cutting and grinding machines. The cyclone system would separate dust and cutting oils. The cutting oils were recovered and the dust was recovered from the cyclones for later removal by rail car. In addition to the dust collection system, a metal reclamation system was located in the southeastern part of the building. This system was used for reclamation of metal chips and cuttings. The metal reclamation system included aboveground oil tanks, five in-floor sumps, overhead hoist system for moving bins of metal cuttings, and metal tip-hoppers used to load chips/cuttings into rail cars. **Figure 3-6** presents the locations of the dust collection piping, exhaust openings and pneumatic pipe locations, and metal reclamation system. Reportedly, the pneumatic piping, vents, duct work in rafters, and cyclone systems have never been cleaned out. The dust and other debris/oil in the duct work have not been characterized.

3.2.6.0.1. An inspection of the floor ducts and clean outs will be performed to determine if material is still present. According to a 1998 Lockheed Martin memorandum, there are 12 slab penetrations in the area of column F23 similar in construction to man holes. The penetrations were reportedly 24 inches in diameter, and covered with thin metal plates. The

man holes lead down 3 ft to masonry piping coated with up to 2 inches of deposits. 3.2.6.0.1. 3.2.6.0.2. Reportedly, the deposits exceeded NYDEC cleanup standards for oil and grease, arsenic, cadmium, chromium, and lead. These areas will be accessed and the deposits sampled. If material is present, it will be sampled and sent to an off-site laboratory for toxicity characteristic leaching procedure (TCLP) metals, target compound list (TCL) PCBs, TCLP SVOCs, and TCLP VOCs IAW the QAPP. The large ducts connected to the cyclones in the rafters will be also opened. If sampleable material is present, it will be sampled for TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs. If material is not present within arms-reach from the access port, the cyclones themselves will be inspected for the presence of cleanouts. If cleanouts are identified, they will be opened and sampled. If no cleanouts can be identified then confined space entry will be performed in order to collect the sample. One section of pneumatic piping will be excavated from beneath the slab, the pipe opened, and inspected for residue. Any available residue will be sampled. It is estimated that up to 23 samples will be collected for TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs.

3.2.6.0.3. MagThor (magnesium alloys containing thorium) has had a variety of applications, but its primary use was in the manufacture of airplane parts, especially engines, with the average concentration of thorium in these alloys being on the order of 1.7 percent. It is unlikely MagThor was used in the building and also unlikely that any radiological concern is present. However, all isotopes of thorium are radioactive so there would be some radiological concerns associated with this material if it were used in the building. The primary radionuclide of concern associated with MagThor components is thorium-232 (232Th), which emits alpha and a small amount of gamma radiation. There are several decay progeny that will be in partial with 232Th. These progeny emit alpha, beta, and/or gamma radiation. Thorium-228 (228Th) is an isotope in the 232Th decay series. Thorium-234 (234Th) and thorium-230 (230Th) exist as part of the uranium decay series. All these nuclides of thorium are expected to exist in any MagThor contamination encountered.To rule out the past use of MagThor, The following work activities will be conducted:

- Survey of the dust collector unit and surrounding area prior and after sludge sampling. Any identified areas of elevated radioactivity will be reported to the Project Certified Health Physicist.

- Sludge sampling from within the dust collector. Up to three samples of dust/sludge will be collected and analyzed for alpha spectroscopy. Alpha spectroscopy will quantify Th-232, Th-230 and Th-228. Surveys will be performed to verify the absence of elevated levels of thorium on sample containers.

- Background soil sampling outside the building. Up to three samples of soil will be collected from an outside area designated as a background location. This area will be selected as an unlikely location for contamination from airborne contamination from the facility. This location will be nearly the facility but upwind. Surveys will be performed to verify the absence of elevated levels of thorium on sample containers.

All field activities will be conducted in accordance with the project Radiation Protection Plan.

3.2.7 Classified Documents Incinerator

The classified document incinerator should have only been used for paper; however, burning of other waste materials cannot be ruled out. Historical engineering drawings depict the incinerator being housed in a "destructor room" adjacent to the still-present smoke stack. The destructor room was equipped with a paper storage area, consistent with its use as a classified document incinerator. As part of the Phase II EBS, the classified documents incinerator smoke stack will be opened and inspected. Any residual ash or other material will be sampled to characterize for disposal. One sample will be collected for TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs.

3.2.8 Former Gun Range

3.2.8.0.0. On the south side of the production complex, the Former Gun Range was used to test small arms weapons systems that were manufactured in the building. The former gun range contained three firing ranges: Range 1, Range 2, and the All-Angle Range. **Figure 3-8** presents the location of the former ranges and targets. In addition, two exhaust systems were located above the ranges.

3.2.8.0.1. CB&I will collect one chip sample from the concrete slab where each target area was previously located. Chip sampling will be performed IAW Section 3.15.2. If accessible, CB&I will also sample the exhaust openings. The samples will be analyzed and characterized for disposal via TCLP metals.

3.3 Loading and Unloading Platform (Facility #0003) Investigation Strategy

The loading and unloading facility is located on the southeastern side of the Production Complex. The loading and unloading platform may have been subject to spills and leaks. The loading and unloading platform will be inspected for signs of spills, discharge, and contamination. If staining is observed, two concrete chip samples will be collected to characterize the platform. If staining is not observed, one concrete chip sample will be collected. Chip sampling will be performed IAW Section 3.15.2. Samples will be analyzed for TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs.

3.4 Water Supply, Water Storage, Asphalt/Concrete Parking Areas (Facilities #0007, #0028, #0034) Investigation Strategy

3.4.0.0. The site includes water supply, water storage, and asphalt/concrete parking areas. During previous investigations, samples collected in the area of the fire suppression reservoir exhibited chlorinated solvents above comparison criteria. Reservoir water in the vicinity of the fire suppression reservoir has not been characterized. Soil in the area of the Fire Suppression Reservoir was sampled during the VI RI (AECOM, 2011). Delineation was complete with the exception of two data gaps. Additional depth delineation in the area of DP003 and DP025 will be conducted (**Figure 3-7**). Additional horizontal delineation will be conducted by advancing a boring between the location of DP030 and DP029.

3.4.0.1. Initially, three borings will be advanced by DPT rig and 10 ft soil cores will be collected and screened using a photoionization detector (PID). For the depth delineation borings, an additional 10 ft will be collected and screened with a PID. One sample from the interval exhibiting the greatest PID reading within each core will be collected and sent to the laboratory for analysis by method 8260C. Should the greatest PID reading come from the bottom of the boring, one sample will be collected from 10 ft and the boring will be advanced to the water table and screened with the PID. One additional sample will be collected from the deeper interval. It is estimated that three total borings will be sampled using a track mounted DPT rig to delineate potential soil contamination. Also, the reservoir water has not been characterized. Six soil samples collected from the three DPT borings for VOCs and one sample from the reservoir water will be analyzed for TCL VOCs, TCL, SVOCs and target analyte list (TAL) metals. It is anticipated that no characterization of asphalt or concrete parking areas will be necessary. The parking lots and surrounding soil will be visually inspected for signs of environmental release and sampled if necessary.

3.5 Hazardous Material Storage (Facility #0025) Investigation Strategy

The Hazardous Material Storage is located on the southeastern side of the Production Complex adjacent to the Loading and Unloading Platform. The Hazardous Material Storage Facility may have been subject to spills and leaks. Additionally, this facility has a blind sump (secondary containment), which reportedly has not been cleaned of sediment. The Hazardous Material Storage facility will be inspected for stained concrete. Areas of stained concrete will be sampled for TCLP metals, TCL PCBs, and TCLP SVOCs. Chip sampling will be performed IAW Section 3.13.2. Should the stained concrete exhibit levels of contamination in excess of RCRA standards, a soil sample beneath the stained area will be collected. One sediment sample will be collected from the sump and analyzed for TCLP metals, TCL PCBs, and TCLP SVOCs.

3.6 Oil Water Separators, Neutralization Tank Investigation Strategy

3.6.0.0. The project site includes three on-site OWSs, one neutralization tank, and one OWS in the former employee parking lot across route 17C (**Figure 3-9**). The OWSs may have leaked or overflowed in the past and there is no documentation regarding whether or not the units were pumped out after they were last used. The OWS are reportedly as deep as 19 feet bgs.

3.6.0.1. IAW DER-10, each OWS will have two samples collected: one water sample and one sludge sample. Sampling will require confined space entry. Sludge and water will be analyzed for TCLP VOCs, TCLP SVOCs, TCLP metals, and TCL PCBs. One boring will be advanced within 2 ft of the down gradient side of the OWS to determine the potential for leaks and one sample will be collected from 2 ft below the bottom of the OWS. Samples obtained for VOC analysis will be field screened using a PID. An undisturbed sample will be collected from the 2 ft interval exhibiting the greatest reading. If field readings are above background at the bottom of the boring, the core will be extended to the water table. Soil samples will be analyzed for VOCs, SVOCs, metals, and PCBs and compared to NYSDEP residential SCOs. Exceedances of residential standards will be delineated horizontally and vertically to the water table.

3.7 X-Ray Room

According to historical engineering drawings there was a medical x-ray room in the Plant Admin Area (**Figure 3-10**). The former x-ray room will be inspected for the presence of lead shielding in walls or room dividers.

3.8 Mark Out of Contaminated Areas

Sample locations will be physically marked with marking paint, grease paint, or permanent marker so they can be re-located in the future. Additionally, areas of contaminated building materials or equipment will be marked will red marking paint and labeled consistently with the type of contamination (i.e. TCSA waste, PCB containing equipment, etc.) This will not be possible for all ACM or painted surfaces. ACM and painted surfaces containing lead or PCBs will be identified in the report.

3.9 Mobilization/Demobilization Plan

3.7.0.0. This sub-plan details the activities necessary to mobilize personnel and equipment for site work, as well as those activities necessary to shut down the site at the conclusion of the field work. As part of mobilization, the following general activities are required for the project to proceed:

a. Site access;

b. Site preparations;

c. Establishment of command post (CP);

d. Equipment mobilization;

e. Training and briefing;

f. Communications; and,

g. Work zone preparations.

3.7.0.1. Demobilization will consist of the performance of the same activities (or their undoing) in reverse order. In general, staging areas will be demobilized last, so that they can be used as a staging area for the demobilization efforts.

3.9.1 Preparations

Preparations for mobilization will not commence until receipt of the notice-to-proceed (NTP) from USAESCH. However, in order to meet the project schedule all procurement and travel arrangements will be made prior to obtaining NTP. Upon receipt of NTP the requisite copies of the applicable documents will be assembled (i.e., Work Plan, QAPP, Standard Operating Procedures [SOPs], and APP). The field team will have already reviewed these documents, and any additional data obtained during previous site visits.

3.9.2 Establishment of Command Post

A CP will be established, which will consist of an office trailer. The CP will be equipped with electricity and will serve as the primary location for personnel training, equipment storage, and analysis of screening level samples.

3.9.3 Equipment Mobilization

Equipment and materials will be sent to the site via commercial carrier, transported to the site by the field team, or obtained locally. Equipment will include: handheld 2-way radios, global positioning system (GPS), personal digital assistants (PDAs), digital cameras (if not incorporated within the PDA), asbestos survey tool and supplies, environmental sampling tools and supplies, documents, first aid kits, fire extinguishers, office trailer, portable lighting, portable toilets, potable water, mini-excavator, scissor lift, personal protective equipment (PPE), confined space retrieval system, self-retracting lifelines, DPT rig and other materials/supplies needed for site operations. Mobilization of personnel, equipment, and supplies will be conducted in a safe, secure, and orderly fashion. Site vehicles will be from the CB&I fleet or rented and in most cases will be four-wheel drive sport utility vehicles or pickup trucks that will accommodate site personnel and equipment.

3.9.4 Training and Briefing

3.9.4.0.0. Prior to field activities, team members will be trained in activities to be performed and safe work practices.

3.9.4.0.1. The field team will be briefed each day prior to commencement of field activities. Daily briefings will include a discussion of weather conditions, the previous day's findings (if related to safety issues), emergency response and evacuation procedures, and a review of the general procedures. Because some delineation sampling will necessarily be performed in an iterative fashion, results will be uploaded to the GIS daily and relayed back to the field team. Upon reviewing each day's data, the field team will determine when sampling can cease or where to place the next step-out samples.

3.9.5 Communications

Cell phones will be the primary means of communications. Each field team will remain together throughout the field activities.

3.9.6 Work Zone Preparation and Support

Prior to the initiation of the field activities, the work areas will be cleared of any debris. If any obstacles are identified in the building, the area will be clearly marked. Additional details for layout of AFP 59 are included in subsequent sections.

3.9.7 Demobilization

In general, personnel and rental equipment, unless otherwise needed for the demobilization effort, will be demobilized as early as possible upon completion of use for its intended purpose. The CP and any temporary waste storage area established for IDW will be dismantled only after field activities are complete and all IDW is transported off-site.

3.10 Land Surveying

The corners of the Production Complex building will be located, marked, and surveyed to guide the field crew during activities. The boundaries will be surveyed by a New York licensed professional surveyor to determine horizontal coordinates referenced to the Universal Transverse Mercator Coordinate System and marked with survey disks. Disks will be placed next to building corners in order to accurately locate the building. Ground surface will be surveyed to the nearest 0.01 ft and referenced to the 1983 North American Vertical Datum.

Compatibility confirmation of coordinate system w/ USAF mapping systems has been performed. Geospatial data is being stored in Universal Transverse Mercator (UTM) Zone 18 Coordinate System, in North American Datum 1983 (NAD 83), and metric units, per Chapter 5 of EM 1110-1-4009. Additionally, geospatial data submittals will be formatted to

the Tri-Service CADD/GIS Technology Center's Data Standards for Facilities, Infrastructure, and the Environment (SDSFIE), per Chapter 5 of EM 111-1-4009.

New project control markers will be installed to accurately survey the exterior of the building. Rebar with disks will be placed at the four corners of the building. The disks will be placed in accordance with the following:

(a) Located within the project limits with a minimum separation of 100 meters.

(b) Set 10 meters from the edge of any existing road inside the project limits.

(c) Constructed with the top set flush with the ground.

Performance of the survey and installation of the disks will be conducted in compliance with EM385-1-1 and the APP (Appendix D).

3.11 Utility Clearance

Prior to conducting any intrusive site activities outside of the building, CB&I site personnel will contact "Dig Safely, New York" to ensure that any underground utilities in the area are located and marked prior to beginning intrusive field activities. It should be noted that Dig Safely, New York may only mark out known public utilities. Other non-public utilities may not be marked out. Utility markouts will not be necessary within the building because nearly all utilities beneath the building are disconnected. The only active utility within the building footprint is the city sewer line on the buildings western side. This sewer line will be marked outside the building and no intrusive sampling will be allowed within 30 ft of the sewer line within the building. In accordance with CB&I policy a "no-dig" buffer zone of 5 feet will be established around all active utilities. This includes the fire suppression loop, the drain lines associated with the OWS, and the sewer line. Additionally, hand digging or air knife to a depth of 5 feet will be performed for all excavations outside the building.

3.12 ACM Survey

As part of the Phase II EBS, CB&I will be performing an ACM survey. Details on the ACM survey are provided in the subsections below.

3.12.1 Purpose and Objectives

The four primary objectives of the ACM survey are to:

- Conduct sampling and hazard identification consistent with EPA AHERA protocols as stated in 40 CFR 763.86. This sampling protocol is required for all asbestos surveys prior to renovation or demolition of a building under EPA National Emission

Standards for Hazardous Air Pollutants (NESHAP) rules at 40 CFR Part 61.M to prove that materials are negative for asbestos;

- Evaluate whether the concentrations and types of asbestos present operational, regulatory compliance, or public health concerns;

- Assess and report whether certain areas/conditions may have the potential to create visible friable asbestos releases or asbestos in air concentrations above applicable regulatory requirements.

- Collect sufficient data to inventory ACM to include locations and quantities that can be used for cost estimating purposes by the demolition contractor.

3.12.2 Walkthrough Inspection

3.12.2.0.0. The term "asbestos" describes six naturally occurring fibrous minerals. Of that general group, the minerals chrysotile, amosite, and crocidolite have been most commonly used in building products. When mined and processed, asbestos is typically separated into very thin fibers. In appearance, ACM ranges from soft and cottony to hard and brittle. **Table 3-2** provides a description of general physical characteristics and uses and **Table 3-3** includes a partial list of suspect ACMs that may be identified and sampled during the ACM survey.

3.12.2.0.1. A walkthrough inspection of accessible portions of the buildings will be performed to identify suspected ACM (SACM). An inspection will be conducted to investigate possible concealed spaces in the buildings; however, not all concealed spaces may be accessible, and will be assumed to include suspected or confirmed ACM.

3.12.2.0.2. Visual and tactile evaluations will be conducted of ACMs to assess material condition to ensure that the friability and any ACM damage or deterioration will be detected and the appropriate corrective action taken, as applicable. Friable materials can be crumbled or reduced to powder by hand pressure when dry. Non-friable materials cannot be crumbled, pulverized, or reduced to powder by hand pressure when dry. Friable materials are more likely to be released into the air, especially if impacted or damaged during normal use, renovation, or demolition of a building.

3.12.2.0.3. The ACM survey will be performed following a modified sampling protocol for the renovation/demolition areas as outlined under AHERA, 40 CFR 763, as follows.

3.12.2.0.4. Materials within the building that are similar throughout in terms of color and texture will be identified as a homogenous sampling area (HSA) and recorded. Representative bulk samples from each HSA will be collected IAW protocols outlined in the

EPA AHERA regulations. As suspect asbestos is located and sampled, obvious ACM and ACMs identified in the existing report, such as thermal system insulation and asbestos-cement panels, will also be quantified. Quantification of other miscellaneous ACMs may occur after laboratory analytical results are received. Samples will be collected to minimize potential contamination to the surrounding area. Additional details on the sample collection and analysis are provided in the following subsection.

3.12.3 Sample Collection and Analysis

3.12.3.0.0. Bulk samples of SACM will be collected in a representative manner as determined by the inspector. Building subsystems consisting of multiple layers will be sampled by taking a composite core that includes all layers within the SACM. The asbestos bulk samples will be collected per EPA AHERA protocols according to New York State Department of Labor and Department of Housing requirements for non-school buildings. Confirmed friable ACM are classified according to AHERA designations for condition assessment purposes. While AHERA classification protocols are followed for informational purposes, applicable state regulation does not require actions associated with the identified AHERA hazard ranking categories in non-school buildings.

3.12.3.0.1. Bulk sample locations, notes, and observations will be made on-site at the time of sampling. Samples of the SACM will be immediately placed in sealed containers, marked with a sample identifier and carried under chain-of-custody procedures to the analytical laboratory.

3.12.3.0.2. Per the project PWS, field QA splits with a QA laboratory are required for this scope and are to be collected at a frequency of 10 percent (1 per 10); therefore, there will be a primary and QA laboratory for asbestos analysis. The asbestos laboratories for the project have been subcontracted by the project primary analytical laboratory (Chemtech) and the project QA analytical laboratory (Accutest-NE). The bulk suspect asbestos samples will be submitted to Chemtech and Accutest-NE for them to forward to their respective subcontract asbestos laboratories. Chemtech will be responsible for sending the samples to Atlas Environmental Labs Corp. (NYDOH Environmental Laboratory Accreditation Program [ELAP] Certification #11999) and Accutest-NE to EMSL Analytical Inc. (NYDOH ELAP Certification #10872) for bulk asbestos fiber analysis. Analytical methods will report asbestos by mineral type and concentration as a percent by weight both by layer and in the composite sample as a whole. The results of sample analysis will be considered representative of materials in each homogeneous area if: the sample material exhibited similar physical characteristics, or the application of the sampled material can be clearly correlated to the application of un-sampled material.

3.12.3.0.3. Sample results with ACM content less than 10 percent will automatically be reanalyzed using Point Counting. Non-detect results for non-organically bound (NOB) materials will be confirmed by Transmission Electron Microscopy (TEM) analysis.

3.12.3.0.4. As specified in 40 CFR Chapter I (1-1-87 edition) Part 763, Subpart F, Appendix A, each sample will be analyzed using PLM/dispersion staining techniques, IAW EPA Method 600/M4-82-020. Detection limits for this type of analysis are approximately 1 percent (by surface area). Materials containing greater than 1 percent asbestos are considered to be ACM. The EPA and OSHA distinguish between friable and non-friable forms of ACM.

3.13 Other Regulated Material

As part of the Phase II EBS, CB&I will be performing an ORM survey. Details on the ORM survey are provided in the subsections below.

3.13.1 Purpose and Objectives

The two primary objectives of the ORM survey are to:

- Provide information to meet the applicable EPA RCRA and TSCA requirements as stated in 40 CFR 261 and 40 CFR 761
- Collect sufficient data to inventory ORM to include locations and quantities that can be used for cost estimating purposes by the demolition contractor.

3.13.2 Walkthrough Inspection

3.13.2.0.0. The ORM survey will identify and quantify the following:

- Fluorescent bulbs and ballasts, and transformers potentially containing mercury or PCBs;
- Switches and thermostats potentially containing mercury;
- Mechanical systems potentially containing mercury;
- Exit light and emergency lighting batteries;
- Oil-, glycol-, and Freon-containing devices;
- Regulated lamps (including high-intensity discharge [HID], neon, high-pressure sodium, and metal halide);

- Fuel tanks
- Potentially regulated or hazardous substances, including unknown or unlabeled chemical containers, and other materials for which special handling may be required prior to demolition; and
- Smoke alarms

3.13.2.0.1. The ORM survey will include assessment and inventory of stored chemicals and chemicals/oils in process systems, lighting wastes and refrigerants in the buildings. A walkthrough inspection of accessible portions of the building will be performed to identify potentially regulated building materials, and other potentially hazardous substances, including stored chemicals.

3.13.2.0.2. For stored chemicals and chemicals that may exist in process systems, the assessment will include the location and inventory of stored chemicals or oils that may remain in process systems or structures.

3.13.2.0.3. PCBs will be surveyed to collect required data to identify whether oils in lighting equipment, electrical components or other process systems may be disposed of as non-hazardous on the basis of TSCA criteria.

3.13.2.0.4. Regulated lighting waste will be assessed and inventoried, including light bulbs and associated ballasts. The regulated light bulbs include both fluorescent and HID bulbs, which may contain mercury. The regulated lighting waste also may include PCB containing light ballasts. In addition, mercury-containing switches and thermostats will be assessed and inventoried.

3.13.2.0.5. Systems with refrigerants containing chlorofluorocarbons will be assessed and inventoried. This includes equipment such as air conditioners, chillers, refrigerants, and drinking fountains.

3.13.2.0.6. In summary, the ORM survey will be conducted such that the demolition contractor will address whether certain ORMs may be reused, recycled, burned for energy recovery, must be disposed of in an industrial landfill, or must be disposed of in a hazardous waste landfill.

3.13.3 Sample Collection and Analysis

3.13.3.0.0. When acceptable process knowledge or historical analytical data are not available, testing of ORMs will be conducted to obtain a detailed chemical and physical analysis IAW 40 CFR 264.13. The objectives of sampling are to:

- Confirm characterizations of ORMs for which prior analysis or acceptable (process) knowledge is not available.

- Determine compliance with applicable regulatory requirements, including Land Disposal Restrictions (LDRs).

- Provide information to aid in the safe management of ORM.

- Provide relevant data for use in making disposal and demolition decisions.

3.13.3.0.1. Per the project PWS, field QA splits with a QA laboratory are required for this scope and are to be collected at a frequency of 10 percent (1 per 10); therefore, there will be a primary and QA laboratory for asbestos analysis. The asbestos laboratories for the project have been subcontracted by the project primary analytical laboratory (Chemtech) and the project QA analytical laboratory (Accutest-NE).

3.13.3.0.2. The following sections outline the procedures that will be followed to ensure that the objectives are met and that we comply with all regulatory requirements for waste analysis.

3.13.3.1 PCBs

3.13.3.1.0.0. PCBs may be present in equipment oil and lighting ballasts. If the PCB lighting ballasts or equipment oil contains concentrations of PCBs less than 50 parts per million (ppm) they are considered non-hazardous. The EPA regulates PCB-containing waste equal to or greater than 50 ppm as halogenated organic compounds and these wastes are considered hazardous.

3.13.3.1.0.1. If oils suspected to contain PCBs are identified, the samples will be collected per 40 CFR 761. Liquid samples for PCB analysis, if applicable, may be collected from equipment or sumps using a disposable drum thief. The liquid sample will be placed in the appropriate container. The sample label will be filled out and placed on the sample container. The sample container will then be placed in a sealable plastic bag to protect the sample label and placed into a cooler with ice.

3.13.3.1.0.2. The solid sample will be placed in the appropriate container. The sample container will then be placed in a sealable plastic bag to protect the sample label and placed into a cooler with ice.

3.13.3.1.0.3. EPA Method 8082 will be used to analyze liquids with detection limits of 1 microgram per liter and solids with detection limits of 33 micrograms per kilogram. If

dilutions are required for liquid samples, the solvents used during extraction will be used for the dilution

3.13.3.1.0.4. The sample chain-of-custody will then be filled out with the following information: sample identification number, matrix code, time collected, number of containers, preservative, and requested analysis. Samples for PCB analysis will be sent to Pace for chemical analysis.

3.13.3.2 Bulbs and Ballasts

3.13.3.2.0.0. The ORM survey will include an inventory of regulated light bulbs. The EPA classifies bulbs containing concentrations of mercury greater than or equal to 0.2 milligrams per liter (mg/L) as potentially hazardous waste.

3.13.3.2.0.1. The light bulbs identified at the project site may contain concentrations of mercury greater than 0.2 mg/L (fluorescent and HID bulbs) or concentrations less than 0.2 mg/L (with green end caps). The bulbs with low concentrations of mercury (low-mercury bulbs) (i.e., less than 0.2 mg/L) are typically clearly marked with either green printing or green end caps.

3.13.3.2.0.2. The fluorescent light bulbs that are not labeled with green caps will be presumed to contain mercury concentrations greater than 0.2 mg/L and both types of bulbs will be included in the inventory for materials to be removed and transported for recycling or disposal, prior to demolition.

3.13.3.3 Unknown/Unlabeled Chemicals

3.13.3.3.0.0. It is unlikely that unknown/unlabeled chemicals will be encountered. However, if they are, they will be addressed in the following manner. Characteristics of wastes are identified in several different ways. Visual inspections are conducted for all waste streams. This consists of characterizing the physical form, phase, and appearance (color, odor, etc.) for each container before moving them.

3.13.3.3.0.1. Chemical analysis is conducted to identify specific waste characteristics if a complete waste characterization has not already been performed based on acceptable process knowledge or previous analysis. Waste analysis parameters are selected to fulfill three criteria: waste identification, identification of incompatible/inappropriate wastes, and process and design considerations for container compatibility.

3.13.3.3.0.2. Some areas may contain unknown chemicals. These chemicals will be evaluated on a case- by-case basis as to which analytical parameters are required to characterize the chemical.

3.13.3.3.0.3. Analysis and procedural requirements for unknown chemicals may be necessary in special cases, specifically for ignitable, reactive, and incompatible wastes, and to comply with LDR requirements. Procedures to ensure that all of the requirements of 40 CFR 264.13(b)(6) are being met are as follows.

- Ignitable, Reactive, and Incompatible Wastes – The parameters for selecting ignitable, reactive, and incompatible wastes were chosen to ensure the proper storage, and ultimate disposal of these wastes IAW 40 CFR 264.17(b), by preventing reactions that:
    - Generate extreme heat or pressure, fire, explosions, or violent reactions;
    - Produce uncontrolled toxic or flammable fumes or gases;
    - Damage the structural integrity of the containers; and
    - Threaten human health or the environment.
- LDR – A determination if the waste has to be treated before it can be land disposed will need to be conducted. IAW the LDR regulations outlined in 40 CFR 268.7, hazardous wastes must meet the applicable LDR treatment standards contained in 40 CFR Part 268, Subpart D. This determination will be made by either acceptable process knowledge or testing.

    If it is known that the wastes do not meet applicable LDR treatment standards based on acceptable process knowledge or historical analytical results, no testing is necessary. Additional testing, if necessary, will be conducted only to certify that the waste meets LDR treatment standards.

    Each waste for which a treatment standard has been set will be evaluated for the applicable parameters in 40 CFR Part 268, Subpart D. In addition, for any wastes that exhibit the hazardous characteristics of ignitability, corrosivity, reactivity, or toxicity, the underlying hazardous constituents will be determined IAW 40 CFR 268.9. All analytical results completed in support of LDR requirements will be retained within the facility operating record.

3.13.3.3.0.4. Chemical wastes that exceed the applicable LDR treatment standards can be sent off-site to a permitted treatment facility during the demolition phase of the project.

3.13.3.3.0.5. Chemical wastes, if any, that are determined through analysis to meet treatment standards as specified in 40 CFR Part 268, Subpart D will be land disposed in a

permitted facility without further treatment. For these wastes, a hazardous waste manifest and an LDR certification, including data to support the certification as required by 40 CFR 268.7(a)(3), can be prepared and accompany the shipment of waste to the receiving facility.

3.13.3.3.0.6. An inventory list will be prepared for stored chemicals, and other substances and materials potentially regulated under the EPA hazardous waste regulations, or considered by OSHA as a hazardous substance. The assessment will consist of inventorying any stored chemicals throughout accessible portions of the buildings.

3.14 Lead-Based Paint Survey

As part of the Phase II EBS, CB&I will be performing a survey of lead-based paint (LBP) and PCB-containing paint. Details on the survey are provided in the subsections below.

3.14.1 Purpose and Objectives

LBP and PCB-containing paint may be present within AFP 59. The two primary objectives of the survey are to:

- Provide information to meet the applicable EPA RCRA and TSCA requirements as stated in 40 CFR 261 and 40 CFR 761
- Collect sufficient data to inventory painted surfaces to include locations and quantities that can be used for cost estimating purposes by the demolition contractor.

3.14.2 Walkthrough Inspection

3.14.2.0.0. The LBP survey will identify and quantify the following:

- LBP on surfaces (representative of various colors of paint from each area) in buildings
- PCB-containing paints on surfaces (representative of various colors of paint from each area) in buildings

3.14.2.0.1. A walkthrough inspection of accessible portions of the building will be performed to identify LBP and PCB-containing paint. During the walkthrough inspection, CB&I will note the color and texture of paint throughout the building. Additional details on sample collection and analysis are provided below.

3.14.3 Sample Collection and Analysis

3.14.3.0.0. During the walkthrough inspection, paint samples will be collected from painted surfaces such as walls, doors, trim, flooring, and piping systems in buildings planned to be demolished.

3.14.3.0.1. Sampling will be performed by a two-person team collecting paint chip and core samples of identified paint colors found throughout the facilities and submitting them for laboratory analysis. Core samples will be analyzed for PCBs and chip samples will be analyzed for lead. CB&I estimates that 77 sample locations will be necessary for lead and PCB analysis; however, additional samples will be collected if necessary. All sampling will be performed in Level C, using a negative-pressure full-face air purifying respirator. A scissor lift will be used to access elevated suspect paint, as necessary, for inspection and sampling. The lift operator will maintain documentation of aerial work platform training on-site during equipment use. The inspection team will compile a list of LBP and PCB-containing paint identified and the quantities of the materials found using the grid system established for the Production Complex and Plant Admin buildings. A list of LBP and PCB-containing paint identified with the other facilities will be based on room or similar designation. In addition, a map will be prepared indicating all locations of LBP and PCB-containing paint throughout the facilities. These two products will provide a detailed quantification of the LBP and PCB-containing paint identified during the survey.

3.14.3.0.2. Additional details on chip sampling and core sampling procedures are found in Sections 3.15.1 and 3.15.2, respectively.

3.15 Sampling Procedures

3.15.1 Screening Level Samples

3.15.1.0.0. CB&I will perform on-site total PCB screening to identify PCB laden materials found during the investigation. The PCB screening-level testing will be performed in accordance with immunoassay method USEPA SW-846 4020 using the Enviroguard Test kit System. This method is designed to provide semi-quantitative or qualitative field results, significantly cutting down on the number of samples requiring laboratory testing. The Enviroguard PCB test kits can be used in the field using a photometer at an on-site bench top by non-technical personnel. These test kits have a shelf life of one year and are temperature sensitive with operational temperature range between 64 and 81 degrees F. The basic principal of the Enviroguard PCB test kit system is after a methanol extraction, an enzyme conjugate reagent (antibody coated test tube) is added binding to immobilized anti-PCB antibody which “competes” with the PCB present in the sample. Next, the tubes are washed to remove any material not bound to the antibodies and a clear substrate/chromogen solution is added to each tube. After 5 minutes, any enzyme conjugate bound to the tubes colors the clear substrate blue and total PCBs are then measured using a photometer. A deeper shade of blue in the test tube indicates a lower PCB concentration. This method does not provide speciation of PCBs.

3.15.1.0.1. All proposed screening level samples will be collected from porous surfaces. Therefore, only screening-level chip sampling is proposed. Screening-level chip samples will be collected IAW Section 3.15.2. If non-porous materials are sampled, wipe samples will be collected IAW Wipe Sampling, Rev2, 1/23/12, SOP EI-FS-117;

3.15.2 Chip Sampling

A chisel and hammer or electric hammer drill will be used to chip the sampling area to a depth of no more than ½-inch. No chips will be more than ½-inch in size. All particles and dust will be transferred to a sample jar for analysis. After sampling is complete, the sampling equipment will be decontaminated or disposed. For additional details on the chip sampling procedures, refer to CB&I's SOP EI-FS-122: Chip Sampling, Rev2, 8/25/11.

3.15.3 Core Sampling

Core samples will be collected and analyzed for PCB-containing paint. A chisel and hammer (soft surfaces) or electric hammer drill (hard surfaces) will be used to generate a fine powder suitable for extraction and lead analysis. Samples will be collected at 1/2-inch depth intervals, which generates approximately 10 grams (20 mL) of powder. If additional sample volume is needed, multiple holes will be drilled. The dust/cuttings will be transferred to a sample jar for analysis. After sampling is complete, the sampling equipment will be decontaminated or disposed. For additional details on the core sampling procedures, refer to EPA Region 1 SOP for Sampling Porous Surfaces for PCBs, May 2011.

3.15.4 Soil Sampling

DPT sampling is proposed for the sub-slab soil. Direct push drilling creates a boring by the displacement of soil without cutting or grinding and without the production of cuttings. During the drilling, conductor casing will be used to prevent sidewall material from falling into the borehole. Once the drill rig reaches the proposed sample depth, a sample will be collected from the bottom of the borehole. Between sampling locations, CB&I will decontaminate the sampling equipment. All drilling and sampling will be performed IAW CB&I's SOP EI-GS021: Standards for Conducting Direct Push Drilling and Soil Sampling (Attachment 1 of QAPP).

3.15.5 Water Sampling

As part of the Phase II EBS, CB&I will be collecting a grab sample from the reservoir water. The grab sample will be collected by slowly submerging the sample container with minimal surface disturbance. Grab sampling will be performed IAW SOP EI-FS-113 (Attachment 1 of QAPP). If the sample technician is unable to reach the water, a bailer may be required to collect the water sample. The sample is collected by slowly lowering the bailer to the desired sampling depth, stopping briefly, and raising the bailer to the surface. The water is then

poured directly from the bailer to the sample containers. Sampling via bailer will be performed IAW SOP EID-FS-109. It should be noted that the reservoir building's roof is structurally unsound. No access to the roof is allowed.

3.15.6 Grab Samples

Dust, ash, sludge, and sediment identified during the Phase II EBS will be collected via grab sampling. Grab samples for VOC analysis will be collected via Terra Core samplers and pre-preserved vials. Grab samples for all other analyses will be collected using the trowel/spoon method. The trowel is used to collect the sample to the desired depth or until the blade is nearly covered. The media is then removed and placed into a stainless steel mixing bowl. Additional media is collected until the desired sample depth is reached. After the sample is collected, it is placed into a stainless steel mixing bowl and homogenized. The media is then placed in a sample container for analysis. Additional details on the trowel/spoon method can be found in CB&I's SOP EID-FS-101: Trowel/Spoon Surface Soil Sampling.

3.16 Worker Protection Program

3.16.0.0. A worker protection program is fully addressed in the SSHP (**Appendix D**) prepared in accordance with EM 385-1-1 and will include personal exposure monitoring, medical surveillance, and personal protection as required by applicable regulation for the ACM and ORM survey.

3.16.0.1. This section briefly discusses three key aspects of personal protection: 1) use of respiratory protection, 2) exposure assessment air monitoring, 3) use of protective clothing, 4) confined space entry, and 5) fall protection.

3.16.0.2. A written respiratory-protection program in the SSHP is necessary because personnel performing the ACM and ORM survey will wear negative-pressure respirators.

3.16.0.3. ACM and ORM survey personnel may have the potential to be exposed to asbestos fiber concentrations above the 8-hour time weighted average (TWA) limit. The 8-hour TWA limit and the excursion limit are to be described in more detail in the SSHP. In addition, the conditions in the structures may require personnel to wear disposable protective clothing.

3.16.1 Respiratory Protection

3.16.1.0.0. The selection of approved respirators, suitable for the hazards to which the worker is exposed, is only one aspect of the required respiratory-protection program. Other elements include written operating procedures for respirator use; outlining personnel responsibilities for respirator cleaning, storage, and repair; medical examination of workers

for respirator use; training in proper respirator use and limitations; respirator fit testing; respirator cleaning and care; and worksite supervision.

3.16.1.0.1. Only respirators approved by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration are permitted for use. If they are air-purifying respirators, the filtration device(s) must be High Efficiency Particulate Air rated. The applicable PPE requirements in the following standards and references will be followed during the ACM and ORM survey:

- NIOSH Guide to Industrial Respiratory Protection, 1987.
- NIOSH Publication Number 2005-100 "Respiratory Selection Logic 2004."
- A Guide to Respiratory Protection for the Asbestos Abatement Industry EPA/NIOSH.
- OSHA respirator standard (29 CFR 1910.134).
- OSHA asbestos and lead regulations (29 CFR 1910.1001, 1926.1101, and 1926.62).
- Occupational Exposure Sampling Strategy Manual NIOSH #77-173.

3.16.2 Personnel Exposure Assessment Air Monitoring

Personal air sampling (required by OSHA) is designed to measure an individual worker's exposure to asbestos fibers while the worker is conducting tasks that may disturb ACM. Lead dust air samples will also be collected to determine the concentration of airborne lead IAW EPA, OSHA, and NIOSH 7082 Method requirements.

The air sampling device is worn by the ACM and ORM survey personnel and positioned so that it samples air in the worker's breathing zone.

3.16.3 Protective Clothing

In addition to the use of respirators, some ACM and ORM survey procedures may require personnel to wear protective clothing to keep ACM debris or chemical residues off the body, to minimize the chance of bringing asbestos out of the work area and into the home, and to keep ORMs or other irritants from the skin. Protective clothing will typically consist of disposable coveralls, foot coverings, gloves, and head covering. These requirements will be discussed in further detail in the SSHP.

3.16.4 Fall Protection

CB&I policy mandates 100 percent fall protection whenever a worker is at a potential fall height of 6 ft or greater. Fall protection will be implemented with full body harnesses, self-retracting life lines, and rescue plans whenever an employee is in fall protection.

3.16.5 Confined Space Entry

There exists a potential that confined space entry may be required during the Phase II EBS. Prior to entry of any individual into a designated confined space, an entry permit will be completed. Training status of the designated personnel making the entry and standby rescue personnel will be verified as current. Personnel will also verify that the atmosphere within confined spaces is safe to enter, i.e., contains no harmful chemicals, no explosive atmosphere and has sufficient oxygen.

3.17 Decontamination

3.17.0.0. This chapter describes procedures for decontaminating equipment used during sampling activities. In addition to the procedures described below, decontamination activities should be conducted in an appropriate level of PPE for the task being performed. Field personnel will be familiar with, and abide by, all applicable health and safety regulations. In general, decontamination of equipment will occur during the following four stages:

- Before the arrival of equipment at the project site;
- Before sampling activities begin;
- Between sampling sites; and
- Before equipment leaves the project site.

3.17.0.1. ACM bulk sampling equipment that comes in contact with potentially contaminated materials will be cleaned before and after each use using alcohol wet wipes. Unknown liquid and solid materials that are suspected hazardous waste will be sampled with disposable samplers. Disposable samplers will be containerized for proper disposal. Expected IDW consists primarily of disposable samplers and PPE.

3.17.0.2. PCB-contaminated waste, if applicable, will be disposed of as non-regulated TSCA waste. All other used PPE will be decontaminated and disposed of as municipal refuse unless gross contamination is present. If PPE is grossly contaminated, it will be bagged and stored in labeled 55-gallon drums for disposal by the demolition contractor.

3.18 Quality Control Samples

3.18.0.1. For the environmental sampling, field QA splits with a QA laboratory are required for this scope and are to be collected at a frequency of 10 percent (1 per 10). In addition, field duplicates at 1 per 10 and matrix spikes/spike duplicates (MS/MSD) at 5 percent (1 per 20) of the total number of samples collected per matrix. Trip blanks will be sent for each transported cooler containing aqueous VOCs. Equipment (rinse) blanks will not be required if disposable or dedicated equipment is used; elsewhere, they will be required and collected at a rate of 1 equipment blank per media per equipment type at 5 percent frequency. Project specific QC including equipment blanks, trip blanks, field duplicates, field QA split samples, and MS/MSD pairs are not required for any on-site screening analysis or samples for disposition characterization.

3.18.0.2. Quality Control samples to confirm on-site PCB screening results will be collected in accordance with guidance provided in DER-10. Ten percent of the screening samples will have splits sent to an off-site laboratory for to evaluate detection limit accuracy, false positives and false negatives. It should be noted that the screening samples are semi-quantitative. They provide presence or absence above a detection threshold so comparison of numerical results against laboratory results is not possible.

3.19 Contingency Planning

Special procedures will be followed to minimize the potential for spread of asbestos fibers or other chemicals during the Phase II EBS. Under EPA and NYSDOH regulations for schools, a "major fiber release" is defined as one involving more than 3 square ft or linear ft of ACM. The procedures to be followed will vary according to the amount of ACM affected, the extent of fiber release from the ACM, and the relationship and accessibility of the release area to personnel. In general, for major fiber releases, the area should be isolated by closing doors and/or erecting temporary barriers to restrict airflow as well as access to the site. Signs should be posted as necessary immediately outside the fiber release site to prevent persons not involved in the cleanup operation from inadvertently entering the area. Similar procedures can be used for much smaller fiber release events.

Wherever liquids in piping systems cannot be accessed, or segments appear to have quantities of oils or other liquids, appropriate tap and/or drain points will be identified. Locations selected will include low-lying areas, low points on piping, etc. Valves may not close once opened and proper management of materials within the piping will be in place to respond to the estimated volume of liquid in that segment.

3.20 Recordkeeping

A summary table of HSAs and descriptions, locations, estimated ACM and ORM quantities, and laboratory results will be included in the field sampling forms. Personal air samples are those collected in the worker's breathing zone during performance of work involving asbestos exposure. This includes the dates, analytical methods used, number, and duration.

In addition, OSHA requires that employers provide to each employee their records of exposure and medical surveillance under the Records Access Standard (29 CFR 1910.20) and the Hazard Communication Standard (29 CFR 1910.1200). See the OSHA Construction Rule (29 CFR 1926.1101) or the EPA Worker Protection Rule (40 CFR 763 Subpart G) for more details of recordkeeping requirements.

3.21 Disposal of Wastes

3.21.0.0. CB&I will use a licensed subcontractor to complete waste transportation and disposal activities. The only waste generated during this investigation will be IDW from sampling activities (gloves, tyvek coveralls, filter cartridges, etc.) and residual waste from the on-site PCB screening effort.

Table 3-1
Data Quality Objectives

Step	Data Quality Objective
1. State the problem.	AFP 59 has manufactured aircraft-related products since 1942 and is currently unoccupied. Demolition of AFP 59 is now needed due to the extensive damage caused by flooding. During previous investigations, ACM, PCB contaminated items/materials, TCE contaminated soils, and other potential sources of contamination have been observed at AFP 59. Other regulated materials are also present in the building. In order to estimate demolition costs, contamination needs to be characterized, quantified, and delineated.
2. Identify the decision	Sample, identify, and quantify all ACM, ORMs, RCRA constituents, VOCs, and PCB contaminated items/materials in order to provide sufficient data to support delineation of those materials for demolition and soil remedial actions.
3. Identify inputs to the decision	Historical use of AFP 59 Previous Investigations EBS Field Activities - Asbestos Survey - LBP Survey - ORM Survey - Environmental Sampling (PCBs, VOCs, SVOCs, Metals, and Full TCLP/RCRA Characterization Parameters)
4. Define the study boundaries	The EBS will cover the footprint of the nine facilities identified in the PWS as well as the four OWSs, and one Neutralization Tank.
5. Develop decision rules	Asbestos Survey - If suspect ACM not previously identified is found, a minimum of three bulk samples of each suspect ACM will be collected to determine the presence of asbestos, per AHERA sampling protocol - If at least one sample result contains greater than 1% asbestos, the item will be considered ACM. - Per New York State regulations, all ACM will be identified and removal will be required prior to demolition. Lead Based Paint Survey - If lead concentrations equal to or exceeding 1.0 milligram per square centimeter or 0.5% by weight or 5,000 ppm by weight, it will be considered LBP. - If PCB contamination is present in excess of 50 mg/kg in core samples it will be considered bulk product waste Other Regulated Materials - If ORM are identified, the item will be compiled into a list. - If ORM with the potential for contamination (i.e., pump oils) are identified, the item will be sampled in order to characterize for disposal. Environmental Sampling - If the potential for contamination exists (i.e., known areas of contamination, floor staining, foreign material, etc.), environmental sampling will be performed for the COCs and compared to residential standards. - If initial sampling indicates that contamination is present, follow-on delineation and characterization of materials for disposal will be performed, as required.

Step	Data Quality Objective
6. Specify tolerable limits on decisions	Environmental samples will be collected and analyzed IAW the applicable methodologies. Validation of analytical data will be performed per DoD Quality System Manual for data evaluation. Additional details on Step 6 are provided in the QAPP (Appendix E).
7. Optimize the design for obtaining data	- When appropriate, previous investigation will be used to guide sample locations. - In areas where contamination is expected, VSP "Locate Hot Spot" module was run to determine the appropriate number of samples. - Samples will be biased to locations most likely to contain contamination (i.e., stained floors)

Table 3-2
General Types and Physical Characteristics of Asbestos

Type	Name	Uses/Characteristics
Serpentine	Chrysotile (white asbestos)	Most common—90% of all use, including soundproofing, fireproofing, insulation, blankets, gaskets, brakes, etc.
Amphibole	Crocidolite (blue asbestos)	Asbestos-cement pipe.
	Amosite (brown asbestos)	Insulation on pipes, boilers, turbines.
	Anthophyllite, Tremolite, and Actinolite	All 3 are rare and occasionally found as contaminants.

Table 3-3
Typical Suspect Asbestos-containing Materials

Name	Name	Name
Acoustical plaster	Adhesives	Asphalt floor tile
Base flashing	Blown-in insulation	Boiler insulation
Breaching insulation	Caulking/Putties	Ceiling tiles and lay-in panels
Cement pipes	Cement siding	Cement wallboard
Chalkboards	Construction mastics (floor tile, carpet, ceiling tile, etc.)	Cooling towers
Decorative plaster	Ductwork flexible fabric connections	Electrical cloth
Electrical panel partitions	Electrical wiring insulation	Elevator brake shoes
Elevator equipment panels	Fire blankets	Fire curtains
Fire doors	Fireproofing materials	Flooring backing
Heating and electrical ducts	High-temperature gaskets	HVAC duct insulation
Joint compounds	Laboratory hoods/Table tops	Magnesite (cementous type) flooring
Packing materials (for wall/floor penetrations)	Pipe insulation (corrugated air-cell, block, etc.)	Roofing felt
Roofing shingles	Spackling compounds	Spray-applied insulation
Taping compounds (thermal)	Textured paints/coatings	Thermal paper products
Vinyl floor tile	Vinyl sheet flooring	Vinyl wall coverings
Wallboard		

Table 3-4
Sampling Summary Table

Area	Source	Work Plan Reference	Estimated Number of Samples	Analytical Method
Production Complex and Plant Admin (Facilities #0001 and #0002)	ACM	Sections 3.2.1 and 3.12	100	Asbestos by PLM
			22	Asbestos by TEM
	ORM	Sections 3.2.2 and 3.13	10	PCBs
			2	PCBs, VOCs, SVOCs, metals, pesticides, and herbicides
			2	TCLP
	Paints and Coatings	Sections 3.2.3 and 3.14	77	Lead and PCBs
	Roof Trusses	Section 3.2.4.1	70 screening-level	PCBs
			139	
	Flooring	Section 3.2.4.2	153 screening-level	PCBs
			128 (97 for additional delineation and 31 for stained areas)	
	Transformer Pad	Section 3.2.4.3	4	PCBs
	Courtyard	Section 3.2.4.4	3	PCBs
	PCB- Contaminated Soil	Section 3.2.5.1	34 (24 initial and 10 additional)	PCBs
	VOC-Contaminated Soil	Section 3.2.5.2	40 (20 initial and 20 additional)	VOCs
	Potential Buried Waste Material	Section 3.2.5.3	1	TCLP
	Dust Collection Systems	Section 3.2.6	23	TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs
			1	Gamma Spectroscopy
	Classified Documents Incinerator	Section 3.2.7	1	TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs
	Former Gun Range	Section 3.2.8	3 (chip)	TCLP metals
			1 (dust)	TCLP metals
Loading and Unloading Platform (Facility #0003)	Flooring	Section 3.3	1 (if no staining is observed)	TCLP metals, TCL PCBs, TCLP VOCs, and TCLP SVOCs

Area	Source	Work Plan Reference	Estimated Number of Samples	Analytical Method
Water Supply, Water Storage, Asphalt/Concrete Parking Areas (Facilities #0007, #0028, #0034)	Soil	Section 3.4	6	VOCs
	Reservoir Water		1	TCL VOCs, TCL SVOCs and TAL metals
Hazardous Material Storage (Facility #0025)	Flooring	Section 3.5	1	TCLP metals, TCL PCBS, and TCLP SVOCS
	Blind Sump		1	TCLP metals, TCL PCBS, and TCLP SVOCS
Oil Water Separators, Neutralization Tank	OWS sludge	Section 3.6	5	TCLP VOCs, TCLP SVOCs, TCLP metals, and TCLP PCBs
	OWS liquid		5	TCLP VOCs, TCLP SVOCs, TCLP metals, and TCLP PCBs
	OWS soil		5	VOCs, SVOCs, metals, and PCBs

Site / Facility Boundary

Aerial photo source: NYS Statewide Digital Orthoimagery Program (NYSDOP), 2011. Web map service (WMS) provided by NYS ITS GIS Program Office.

0 250 500 1,000 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

U.S. AIR FORCE

FIGURE NUMBER
3-1

AIR FORCE PLANT 59
SITE LAYOUT
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, NJ 07856

Created by: JCP Date: 5/23/2014 File Path: G:\AFP_59\GIS_Documents\Project_Maps\AFP59_004_Fig3-1_AFP59_Layout_EBS_WP.mxd

Project Number: 500184

N

Former Transformer

Former transformer locations within catwalk system source: 1942 drawing 846-1-A1A.
Former transformer location within the courtyard source: 1943 drawing 846-31-PA1.

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER HUNTSVILLE

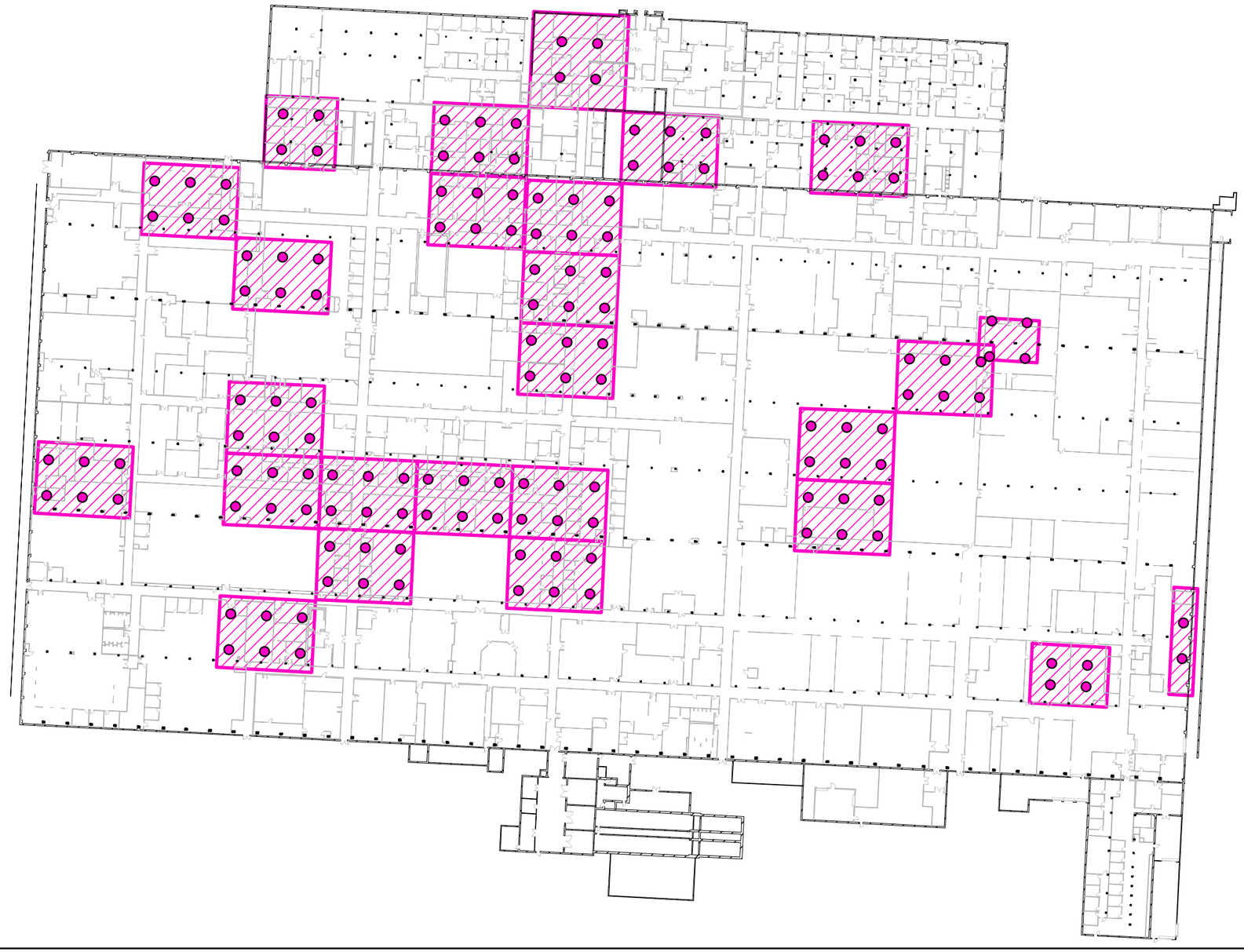
FIGURE NUMBER 3-2

AIR FORCE PLANT 59
FORMER TRANSFORMER LOCATIONS
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

Project Number: 500179

N



Proposed Initial Screening Level Floor Sample Location

PCB Containing Flooring / Restricted Work Area

Restricted work areas source: PCB Management Plan (O'Brien & Gere, 2005).

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER HUNTSVILLE

U.S. AIR FORCE

FIGURE NUMBER 3-3

AIR FORCE PLANT 59
PROPOSED INITIAL SCREENING LEVEL FLOOR SAMPLE LOCATIONS
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

Generated By: JCP Date: 05/14/14 File Path:G:\AFP_59\GIS_Documents\Project_Maps\AFP59_006_Fig3-3_Proposed_Initial_Floor_PCB_Screening_Samp_Locs_EBS_WP.mxd

Project Number: 500179

N

Potential VOC Source

Potential VOC source areas obtained from: 1942 engineering drawing 846-1-SK8.

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

U.S. AIR FORCE

FIGURE NUMBER 3-4

AIR FORCE PLANT 59
POTENTIAL VOC SOURCES
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

N

Proposed DPT Sample Location

Potential VOC Source

TCE Sub-Slab Concentration Area > 250 ug/m3

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER HUNTSVILLE

FIGURE NUMBER 3-5

AIR FORCE PLANT 59
PROPOSED PRELIMINARY DPT
SAMPLE LOCATIONS (VOCS)
ENVIRONMENTAL BASELINE SURVEY WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

N

F23

METAL RECLAMATION AREA

Exhaust Opening

Area Potentially Containing Pneumatic Piping (Sub-Slab)

Metal Reclamation Area

Exhaust opening locations source: 1943 drawing 846-11-A28.
Areas potentially containing pneumatic piping source: 1942 drawing 846-4-AA.

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

U.S. AIR FORCE

FIGURE NUMBER 3-6

AIR FORCE PLANT 59
DUST COLLECTION SYSTEM
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

Generated By: JCP Date: 05/14/14 File Path:G:\AFP_59\GIS_Documents\Project_Maps\AFP59_009_Fig3-6_Dust_Collection_System_EBS_WP.mxd

Project Number: 500179

N

DP001		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	281
TCE	ND	ND

DP002		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	1.41 J	2.1 J
TCE	102	186

DP003		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	3.98 J	79.6
TCE	23.5	585

DP004		
	Depth: 3 ft bgs	Depth: 7 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6700	1920
TCE	13200	389

DP005		
	Depth: 4 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.55 J
TCE	2.94 J	8.87

DP006		
	Depth: 7 ft bgs	Depth: 14 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	1.81 J	ND
TCE	ND	0.574 J

DP007		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	24.2	ND
TCE	12.1	70.9

DP008		
	Depth: 4 ft bgs	Depth: 10 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	0.578 J	0.536 J

DP009		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.32 J
TCE	ND	ND

DP009 DUP	
	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)
TCA	ND
TCE	ND

DP010		
	Depth: 4 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	198 J	0.484 J

DP011		
	Depth: 2 ft bgs	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP012		
	Depth: 4 ft bgs	Depth: 11 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP013		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	269	1.15 J

DP014		
	Depth: 5 ft bgs	Depth: 10 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	3 J	227

DP014 DUP	
	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)
TCA	ND
TCE	2.04 J

DP015		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	108	ND

DP016		
	Depth: 2 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	2.9 J	4.46 J
TCE	6.61	5.66

DP017		
	Depth: 3 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	0.846 J	7.35

DP018		
	Depth: 3 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	17.1	3.54 J
TCE	22.3	17.3 J

DP018 DUP	
	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)
TCA	110 J
TCE	385 J

DP019		
	Depth: 4 ft bgs	Depth: 10 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6.82	65.3
TCE	18.7	263

DP020		
	Depth: 4 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	57.7	ND
TCE	227	222

DP021		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	14.2	234
TCE	ND	32.8 J

DP022		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	2260	3.69 J
TCE	422 J	6.18 J

DP023		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	11.3	6.55
TCE	8.56	5.3

DP024		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	53	3.04 J
TCE	22.5	11.4

DP025		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	12.6	4.32
TCE	71.3	48.70

DP026		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6.37 J	6.33
TCE	12.1	4.68 J

DP026 DUP	
	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)
TCA	9.31
TCE	8.86 J

DP027		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	364	ND
TCE	259	3.26 J

DP028		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP029		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	3.34 J	ND
TCE	ND	ND

DP029 DUP	
	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)
TCA	ND
TCE	ND

DP030		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	15.9
TCE	ND	52.8

DP031		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	880	1.08 J
TCE	387	1.84 J

DP032		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	18	3.48 J
TCE	45.1	5.12

DP032 DUP	
	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)
TCA	4.13 J
TCE	6.15

DP033	
	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)
TCA	141 J
TCE	ND

DP034		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	9.19	1.5
TCE	29.4	76.6

DP035	
	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)
TCA	16.2
TCE	ND

DP036		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.92 J
TCE	ND	2.14 J

DP015 DP031 DP036 DP014 DP020 DP009 DP005 DP012 DP013 DP030 DP002 DP001 DP021 DP023 DP016 DP022 DP029 DP025 DP004 DP026 DP024 DP003 DP017 DP006 DP027 DP028 DP018 DP032 DP019 DP034 DP007 DP008 DP033 DP035 DP010 DP011

Fire Suppression Reservoir

TCE Concentrations
- 0 - 10 µg/kg
- 10 - 100 µg/kg
- 100 - 1,000 µg/kg
- 1,000 - 13,200 µg/kg

AIR FORCE PLANT 59 VAPOR INTRUSION INVESTIGATION

FIGURE 5.3-3
Direct Push Soil Sampling Locations and Results
Fire Suppression Reservoir Area

PROJECT NO	TASK NO
60134438	04
DESIGNED BY: M.Kline	DRAWN BY: M.Kline
CHECKED BY: D. Pane	DATE: September 2010
SCALE: 1" = 50'	SHEET: 1 of 1

Figure_5.3-3.mxd

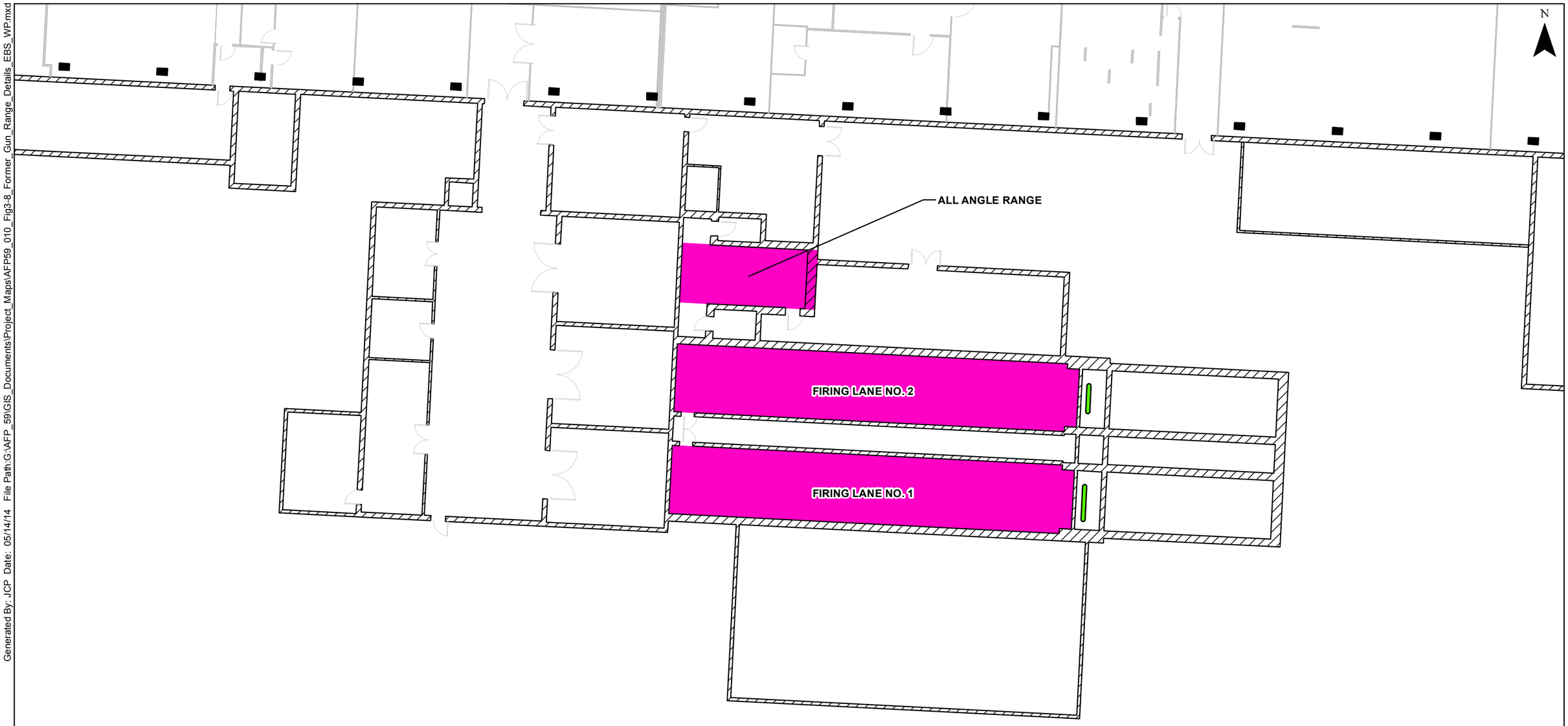
Source: Vapor Intrusion Remedial Investigation Report, Air Force Plant 59, Johnson City, New York, Final, AECOM, April 2011.

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

FIGURE NUMBER 3-7

AIR FORCE PLANT 59
DIRECT PUSH SOIL SAMPLING
LOCATIONS AND RESULTS
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856



Former Line of Target

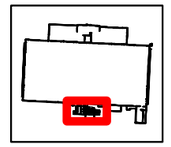
Building Column

Building Interior Wall

Building Exterior Wall

Former Range Area

Former range areas and line of targets source: drawing A-3.



0 20 40 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER HUNTSVILLE

FIGURE NUMBER 3-8

AIR FORCE PLANT 59
FORMER GUN RANGE DETAILS
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

Project Number: 500179

Created by: JCP Date: 5/23/2014 File Path: G:\AFP_59\GIS_Documents\Project_Maps\AFP59_011_Fig3-9_Proposed_OWS_Sample_Locs_EBS_WP.mxd

Project Number: 500184

- Proposed DPT Sample Location
- Proposed Water & Sludge Sample Location
- Approximate Oil Water Separator Location
- Approximate Neutralization Tank Location
- Air Force Plant 59 Property Boundary

0 250 500 1,000 Feet

Projection: NAD 1983 UTM Zone 18N

Aerial photo source: NYS Statewide Digital Orthoimagery Program (NYSDOP), 2011. Web map service (WMS) provided by NYS ITS GIS Program Office.

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

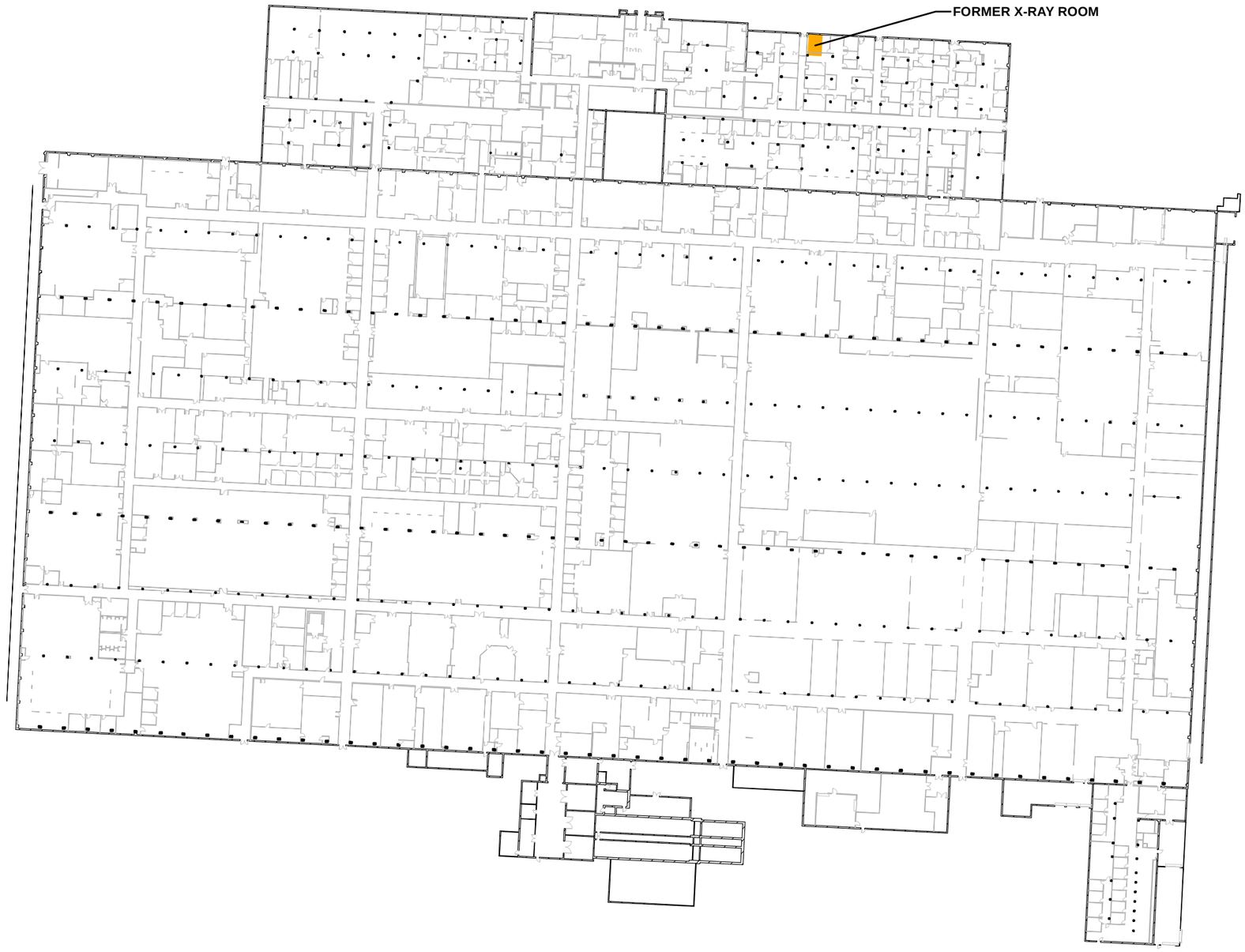
U.S. AIR FORCE

FIGURE NUMBER
3-9

AIR FORCE PLANT 59
PROPOSED OIL WATER SEPARATOR SAMPLE LOCATIONS
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, NJ 07856

N



Former X-Ray Room

Former x-ray room source: 1942 drawing 846-1-SK-25.

0 100 200 Feet

Projection: NAD 1983 UTM Zone 18N

U.S. ARMY ENGINEERING SUPPORT CENTER HUNTSVILLE

FIGURE NUMBER 3-10

AIR FORCE PLANT 59
FORMER LOCATION OF X-RAY ROOM
PHASE II EBS WORKPLAN
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

4.0 QUALITY CONTROL PLAN

4.1 Three-Phase Control System

4.1.0.0. The field quality system that CB&I will utilize for all AFP 59 activity is the three-phase control system for construction elements or definable features of work (DFW). The measures required to verify that the quality of work performed is in compliance with the specified requirements include inspection of materials and workmanship before, during, and after each DFW. The inspections phases consist of preparatory, initial, and follow-up inspections.

4.1.0.1. ***Preparatory Inspections.*** The preparatory inspections will be performed prior to start-up and will examine training, procedures, equipment and materials, work plans and documents, and overall readiness to perform work. The results of the Preparatory inspections are included in the DQCR. Any checklists used during this inspection will be included as an attachment to the DQCR.

4.1.0.2. ***Initial Inspection.*** Initial inspections will be performed when work begins on a particular feature of work and will include an examination of the quality of workmanship and a review of control testing for compliance with contract and work plan requirements. Checklists and inspections results will be included in the DQCR.

4.1.0.3. ***Follow-Up Inspections.*** The follow-up phase provides continuous checks to ensure requirements of the contract are being met. Daily quality assurance (QA) inspections (follow-up inspections) are performed and the results of all inspections, testing, and surveillances performed are recorded on the DQCR. Any checklists used during this inspection will be included as an attachment to the DQCR.

4.1.1 Definable Features of Work

DFWs are established in the scope of work and iterated below. The Site QA/QC Specialist shall implement the three-phase control system for each DFW:

- TPP: TPP 1 scoping meeting and TPP memorandum, TPP 2 Work Plan Review meeting and memorandum, and TPP 3 Report Review meeting and memorandum.
- Planning Documents: Production of the Work Plan, UFP-QAPP, and APP in draft and final format. Production of the draft QA Surveillance Plan (QASP).
- GIS Development: Development of a GIS for the installation to be populated with all data obtained during the investigation.

- Phase II EBS Implementation: Collection of field data IAW the PWS to fulfill project objectives.

- Reporting: Production of a report including all acquired data.

4.1.2 Nonconformance

Findings of products or processes that do not meet the project document requirements are nonconformances and shall be recorded on the Nonconformance Report. Nonconformances shall be evaluated and a disposition determined primarily by the Project QA/QC Officer; however, consultation with the PM or technical resources within the program may be necessary.

4.1.3 Records Management

4.1.3.0.0. Hard copies of field records and data will be recorded on the CB&I-provided Field Activity Daily Log (FADL) and on the applicable field forms. All FADL entries must be made in indelible black or blue ink. Erasures or artificial cover-up (i.e. Liquid Paper®, White-out®) will not be accepted. If an incorrect entry is made, the data will be crossed out with a single strike mark, initialed, and dated. The field person responsible for the data entries will sign and date the FADL and the associated field forms. Generated field records will be review at the close of each day in which the record was generated but no later than 24 hours following generation. The records will be reviewed for accuracy prior to storage. Any errors that are found during the review process will be returned to the original record generator for correction. All field records that have passed review will be copied. The copied record will be retained on-site as a working copy and evidence of work completed. The original will be forwarded to the project office in Mt. Arlington, New Jersey.

4.1.3.0.1. PDA's will be utilized to record sample IDs, sample collection coordinates and the identification of associated photographs. Data from PDAs will be downloaded to PCs each day. The data will then be forwarded to the GIS analyst for incorporation into the GIS. The GIS are stored on a specific CB&I designated server as document backup in the event a disaster should occur. The servers are backed up daily for information that has been revised or newly entered. A full server backup is conducted each Friday evening.

4.1.3.0.2. Records should be maintained in a controlled manner. CB&I's Record Coordinator is responsible for organizing, filing, and indexing in a manner that allows for easy retrieval, should the record be needed as evidence of work completed. Retrieval of the records is restricted to authorized personnel only. A drop-in, oversized sign-in placard may be used to identify record check-outs. The placard will be inserted in the space occupied by the borrowed file folder and should include information that identifies the individual using

the record, his/her affiliation, and the date on which the record was borrowed. The record shall be returned in the same condition in which it was borrowed.

4.1.3.0.3. Field records generated as a result of field data collection process (i.e., drilling, sampling, field screening, etc.) may be designated to be retained in electronic media. After submittal and receiving the thorough QC review described previously, the original record that was forwarded to the CB&I project management office is scanned using a commercial grade industrial copier/scanner. The record is saved as a portable document format file and the electronic images are stored on a specific CB&I designated server as document backup in the event a disaster should occur. The servers are backed up daily for information that has been revised or newly entered. A full server backup is conducted each Friday evening. The record's original hard copy is retained on-site in a central file location. CB&I currently uses Ricoh® copier/scanner equipment (model numbers AFICIO MP C5000 and 7000) for all scanning and copying purposes. Only authorized records may be scanned and posted on electronic media (i.e., SharePoint) as official records. The PM is responsible for ensuring that guidelines have been established for the proper control of the records that may be posted for electronic review.

4.1.4 Quality Objectives and Metrics

Quality objectives and metrics to be tracked on this project including the following:

- Deliverables Management – CB&I's Contract Office (Alexandria, Virginia) will submit all programmatic deliverables such as contractual documents. CB&I's Mt. Arlington, New Jersey, office will submit all technical deliverables.
- Three-Phase Control – Preparatory and initial meetings will be held and documented for each DFW.
- Construction Deficiencies – All Nonconformance Reports will be recorded on the Nonconformance Report Log and submitted to the Project QA/QC Officer for trending and analysis. All nonconformance actions or materials will be tracked on an Nonconformance Report Log and submitted to the appropriate CB&I QA Manager for tracking and trending purposes.

4.2 Data Collection Strategy

4.2.0.0. The project UFP-QAPP was prepared IAW USACE EM-200-1-3 (USACE, 2001). All procedures/methodologies will be in full compliance with DoD Quality Systems Manual Version 4.2 (DoD, 2010).

4.2.0.1. Data collected as part of the Phase II EBS will be used to delineate contaminated building materials and environmental media in order to accurately estimate the

demolition and remediation costs. A complete tally of the anticipated number of samples is presented in **Table 3-4**.

4.3 Data Uses Quality Control Sampling

4.3.0.0. Data collected as part of the Phase II EBS will be used to identify areas of contaminated building materials and environmental media. Samples of building materials will be collected in order to determine waste disposal options and quantities of material to be disposed of as a particular waste class. Soil samples will be collected to determine the nature and extent of soil contamination as compared to NYSDEC Residential Soil Cleanup Objectives.

4.3.0.1. Analytical data for building material and soil samples will meet the defined decision statements developed by the DQO process. To ensure that the data meet these objectives, QC samples will be collected during the field activities. All QC sampling will follow the requirements and procedures provided in the UFP-QAPP (Appendix E).

4.3.0.2. Samples collected during the Phase II EBS will be either be screened on-site (PCB core or PCB wipes) or sent for off-site analysis to a procured fixed-base laboratory. The fixed-base analytical laboratory will be responsible for analyzing the QC samples and for conforming to the laboratory procedures presented in the UFP-QAPP. This document provides the methods and procedures that will assess the precision, accuracy, and completeness of the data. Field duplicate samples equal to approximately 10 percent of the number of field samples (or a minimum of one sample) will be sent for QC analysis. Field duplicate samples will not be collected and analyzed for samples collected for disposal purposes. All data collected will be stored in an electronic database for management and reporting.

4.3.0.3. Table 3-4 presents the list and number of samples to be collected and the analyses to be performed for all samples collected during the field activities. The rationales for selection of sample analyses and sampling approach, in addition to the procedures that will be used during the Phase II EBS, are discussed in the following sections.

4.4 Rationale for Selection of Sample Analyses

4.4.0.0. Suspect ACM will be analyzed by PLM and or TEM methods to determine asbestos content. Samples will be analyzed by PLM initially. TEM reanalysis will be performed for re-analysis of PLM non-detect results for non-organically bound samples per NYS requirements. If at least one sample contains 1% asbestos the item will be considered ACM.

4.4.0.1. Painted surfaces will be analyzed at an off-site laboratory to determine lead content. If lead concentrations equal or exceed 1 milligram per square centimeter or 0.5% by weight it will be considered LBP. Cores of painted surfaces will be collected and analyzed at an off-site laboratory for TCL PCBs. If contamination is present at 50 mg/kg or greater it will be considered Bulk Product Waste.

4.4.0.2. Potentially contaminated oils will be analyzed by applicable TCLP methods to determine potential waste disposal methodologies,

4.4.0.3 Building materials potentially contaminated with PCBs as a result of a spill, leak or other release will be analyzed by the screening laboratory to delineate areas contaminated in excess of 25 mg/kg. Areas contaminated in excess of 25 mg/kg will be sampled in accordance with the mega rule. Samples will be analyzed at an off-site laboratory to determine if the material is contaminated in excess of 50 mg/kg and constitutes PCB remediation waste.

4.4.0.4 Building materials potentially contaminated with materials other than PCBs will be analyzed by TCLP methods, compared to RCRA standards for disposal to determine potential disposal options.

4.4.0.5 Soil samples will be collected beneath the building slab and analyzed for TCL PCBs in areas where the slab has been shown to be contaminated in excess of 25 mg/kg. Soil samples will be collected beneath the slab and analyzed for VOCs in areas of potential use of volatiles. Soil will be compared to NYSDEC Residential SCOs.

4.4.0.6 Dust samples will be collected from the former dust collection system and will be analyzed by TCLP methods and compared to RCRA standards for disposal to determine potential disposal options.

4.4.0.7 Building materials and residuals from the exhaust system will be analyzed for TCLP metals and compared to RCRA standards for disposal to determine potential disposal options.

4.5 Sampling and Field Procedures

The UFP-QAPP provides detailed instructions for sample collection and data acquisition activities that will be used during the sampling events

4.6 Quality Control Sampling

To ensure the reliability of field sampling procedures and materials, field QC samples will be collected or prepared in accordance with the UFP-QAPP.

4.7 Sample Custody and Tracking Procedures

Sample custody is a vital aspect of the environmental investigation. Samples must be traceable from the time of sample collection. All sample custody and tracking procedures, including laboratory notification, field custody procedures, identification, and shipping, will be performed as specified in the UFP-QAPP.

4.8 Inspection

4.8.0.0. Inspections of site area will be performed by the CB&I Site Manager and SSHO to verify that procedures for proper storage, handling, and transport of materials are being followed. Inspection and monitoring methods will be through visual observation. The construction/excavation area will be inspected regularly.

4.8.0.1. Other areas and items that will be monitored and noted in the site logbook include:

- Effectiveness of housekeeping practices
- Various shipping and storage containers used throughout the site
- Staging area
- Proper placards and labeling of truck and tank contents.

4.8.1 Equipment Maintenance

All construction equipment will be properly maintained and inspected to facilitate safe operation. Equipment (especially trucks) will be properly maintained to minimize spillage or leakage that may occur during on-site transport operations. Maintenance of heavy equipment is performed by the equipment vendor, who will dispose of waste oil. Spill kits will be ready and available during all maintenance activities.

4.8.2 Calibration of Monitoring Equipment

It is important that all environmental monitoring equipment be calibrated so that accurate readings of potential spilled or leaked materials may be detected upon inspection. Calibration frequency and procedures will be followed as per the manufacturer's recommendations. CB&I will retain calibration records on site.

4.9 Worker Training

4.9.0.0. All employees with the potential of exposure to hazardous substances will be required to attend and complete the OSHA 40-hour Health and Safety course (Hazardous Waste Operations and Emergency Response) as per 29 CFR 1910-120. All site employees

requiring 40-hour health and safety training will be current with respect to 8-hour annual refresher training.

4.9.0.1. A site-specific training program will involve:

- Response to fires and explosions
- Site evacuation procedures

4.9.0.2. In addition, the employee training program will address other aspects of the environmental protection section, such as preventive maintenance, inspection and monitoring, housekeeping practices, etc.

4.9.0.3. Job-specific environmental protection and health and safety instructions will be reviewed before beginning each new phase of work. If conditions require, the SSHO or Site Superintendent will conduct follow-up training related to a change in operations or any other training deemed necessary by the SSHO. CB&I will hold daily safety meetings (tailgate safety meetings) at the beginning of each shift to discuss current considerations.

4.10 Documentation

All field activities shall be documented in an official logbook to maintain a record of the progress of the fieldwork and to allow the reconstruction of events that occur during the Phase II EBS activities. Field documentation forms to be used, in addition to the official logbook, sample collection log, and analysis request/chain-of-custody record. The sample collection log and location information for samples collected within the building will be performed using PDAs or tablets. Location information for samples collected outside the building will be obtained by GPS.

4.11 Data Management

4.11.0.0. The data management process includes all aspects of data review and data validation. All data associated with the Phase II EBS will undergo several evaluations in the laboratory and by CB&I personnel prior to release to an end data user.

- ***Data Packages.*** Laboratory data packages will undergo internal review by the analyst and a peer or supervisor review prior to submittal to CB&I. The project chemist will review the data and compare it to the planned objectives in the work plan and to QC sample data to evaluate the validity of the results.
- ***Data Validation.*** A thorough evaluation of the data will be conducted to determine whether the project objectives have been met. Specific issues to be addressed include

precision, accuracy, and representativeness, such as duplicate results, matrix spike/matrix spike duplicate, and blank sample results. An evaluation of completeness will be performed and data deficiencies will be identified and rectified or documented for the report. An overall assessment will be made with respect to the decision statements identified by the DQO process to determine that the data meet the objectives.

4.11.0.1. Data validation will take place for 100 percent of the collected samples sent to off-site laboratories. Data validation will be based on the DoD QSM 4.2, QC acceptance criteria specified in the UFP-QAPP and will follow the QC guidance outlined in *Test Methods for Evaluation of Solid Waste* (EPA, 1986). Data qualifiers will be applied following the logic of the EPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA, 2004) and the EPA *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2008).

4.11.0.2. Following completion of the data validation, the validator will compile the data review notes and assemble them into a standardized data validation report format. The project chemist or a designee will review all data and assess the usability of the data based on the validation effort findings.

5.0 EXPLOSIVES MANAGEMENT PLAN

This sub-plan is not required for this task order.

6.0 ENVIRONMENTAL PROTECTION PLAN

6.1 On-Site Materials

The suspect constituents that potentially could be encountered are VOCs, SVOCs, metals, PCBs, and ACM. On-site materials consist of (but are not limited to) contaminated soil and anticipated waste streams (i.e., PPE and sample screening waste).

6.1.1 Fuel and Flammable Liquid Storage

CB&I may store on-site fuels and oils for construction vehicles during implementation of the project. The types of materials that may be stored at the site include:

- Diesel fuel
- Gasoline
- Motor transmission oils
- Greases
- Hydraulic fluid

6.1.2 Material Compatibility

The materials potentially stored on site are not anticipated to be mixed or combined during site operations and will be stored in a manner to prevent accidental mixing in the event of a spill/release.

6.2 Organic Vapor Releases

6.2.0.0. Organic vapor releases could occur during sub-slab soil sampling activities. Organic vapor concentrations in the air during these activities will be monitored using air-monitoring equipment such as a PID. Air monitoring requirements are described in the APP (**Appendix D**).

6.2.0.1. ***Air Monitoring Requirements.*** Air monitoring will be performed as required in the APP (**Appendix D**). A PID, dust meter and lower explosive limit/O2 will be used to provide real-time, semi-quantitative data on total organic vapor concentrations in and around the breathing zone of workers. In case of outdoor DPT sampling activities, monitoring will take place in the breathing zone. In the unlikely case of detections within the breathing zone, monitoring will also be conducted downwind of activities at the perimeter of the site. These instruments will be calibrated daily, and organic vapor concentration will be monitored during site activities. In all cases where internal combustion engines will be used in the building carbon monoxide monitoring will be conducted. Additionally, where possible

engines will be vented to the outdoors. If direct venting is not possible air circulators will be set up.

6.2.0.2. The APP (**Appendix D**) identifies additional air monitoring instrumentation (i.e., dust monitor) and requirements. The APP (**Appendix D**) also defines action levels for upgrading employee protection and instituting emergency actions. The air monitoring will determine concentrations of site contaminants within the ambient air and workers' breathing zones. The air monitoring measurements will be compared to OSHA standards, which are the basis for defining the site action levels. The SSHO will make the decision regarding equipment upgrades and emergency action based on the air quality measurements.

6.3 Emergency and Decontamination Equipment

This section presents the types of emergency equipment that will be used in the event of a spill or other emergency situation.

6.3.1 Small-Scale Emergency Equipment

6.3.1.0.0. Small-scale emergency equipment will include the following:

- Dry chemical, ABC-rated fire extinguishers
- Spill control equipment
- Absorbent materials
- Decontamination equipment
- Air-purifying respirators
- Radio and telephone equipment

6.3.1.0.1. This equipment will be made accessible to all on-site workers.

6.3.2 Large-Scale Emergency Equipment

Large-scale emergency equipment may be obtained from the local fire department or other emergency response agencies, if required.

6.3.3 Decontamination Equipment

6.3.3.0.0. Equipment necessary for decontamination activities will be provided, installed, and verified in working order prior to any site operations. Equipment for the decontamination area includes the following items:

- Decontamination pad and sump
- Clean water supply

- Detergent solution
- Containers for used decontamination solution and decontamination residues/solids
- Brushes
- Waste containers

6.3.3.0.1. The decontamination pad will be a polyvinyl-lined platform and frame constructed of wood. Because the equipment will be operated on concrete or asphalt, decontamination will be limited to the downhole equipment and backhoe bucket.

6.4 Spill Control and Prevention

This section discusses the techniques that will be utilized to minimize the potential for spills and will describe the measures that will be implemented in response to a spill. The following sections include the detailed CB&I procedures for activities that include containment, collection, and material disposal or reuse.

6.4.1 Small Spillage

Small spills (less than 10 gallons) may include solid materials or liquid materials being mishandled, dumped, leaked, knocked over, etc. Any material spillage will be immediately contained and collected and placed on the decon pad for later disposal. Work will be performed such that exposed source materials remain within the limits of the construction. All spilled liquids will be contained and collected by absorbent materials and the materials taken to the decontamination pad area. CB&I will notify the USACE in the event of a spill greater than 10 gallons. The spill will be cleaned up IAW NYSDEC requirements.

6.4.2 Fuel Storage

Vehicle fuels and oils are not expected to be stored on-site due to the short duration of the EBS. A pick-up truck mounted tank containing diesel will be used to fuel the backhoe. Portable steel safety-cans will be used to fuel generators with gasoline. Steel safety cans will be stored outdoors in a flammable materials locker.

6.4.3 On-Site Material Transportation

All materials will be transported on and around the site via site roads. Practices for preventing material spills will include not overfilling trucks, and driving at posted speeds. Additional information is provided in the APP (**Appendix D**).

6.5 Storage Areas and Temporary Facilities

Temporary facilities, such as personnel trailers, and temporary waste staging areas will be staged so as to minimize disturbance of native vegetation or interference to Broome County

Security Personnel. All temporary storage and facilities will be removed upon completion of the field activities.

6.6 Protection of Natural Resources

6.6.0.0 No clearing and grubbing is expected to be required to complete the EBS. In the event that damage is done to the landscape that affects existing drainage patterns, the affected area or feature will be restored to the satisfaction of the client's representative. Although no work on the levee is anticipated, any damage to the levee will be repaired.

6.6.0.1 AFP 59 is located in an urban area on land that is almost entirely developed. No natural plant or animal communities are present at the site; the wildlife habitat is negligible. Small stands of second-growth hardwood forest are located adjacent to AFP 59 along Little Choconut Creek and the Susquehanna River (EarthTech, 1995). No sampling is planned for these areas. There are no known threatened or endangered species known to be present at AFP 59 (USAF, 2013). However if wildlife is encountered (i.e. nesting birds) it will be avoided and if necessary a wildlife biologist consulted to determine the species. Should threatened or endangered species be encountered, the USACE PM and Contracting Officer will be notified.

6.6.1 Dust Control

During all intrusive field work inside the building, dust masks or air-purifying respirator will be required. Dust control during sample core collection may include wetting the area while drilling. Determination of the need for dust control will be the responsibility of the SSHO, as dictated by changes in site conditions on a continuing basis.

6.7 Protection of Cultural Resources

6.7.0.0 The proposed action is to demolish the AFP 59 complex including the manufacturing building which is a National-Register eligible structure. However the New York State Historic Preservation Office has stated that the manufacturing facility is not suitable for rehabilitation and that demolition is acceptable provided that a suitable Memorandum of Agreement which outlines procedures to be taken to document the historic characteristics of the building. The USAF and State Historic Preservation Office have agreed to the terms and conditions of the Memorandum of Agreement and it has been signed. The USAF will implement the provisions of the Memorandum of Agreement prior to demolition of the building (USAF, 2013).

6.7.0.1 An archaeology report was finalized in 1996 which concluded that there was a low probability of archaeological resources at the plant. The State agreed with this finding (EarthTech, 2000).

6.7.0.2 Therefore there are no cultural resources anticipated to be impacted by the Phase II EBS investigation activities.

6.8 Housekeeping Program

CB&I's housekeeping program includes neat and orderly storage of materials and equipment, proper truck and tank placards, prompt removal of spillage, regular refuse pickup and disposal, and maintenance of roads and surfaces.

6.9 Noise

Limited excess noise will be generated during the project in the form of running vehicles, backhoe, backup alarms, and DPT rig. As much of the work will be performed within the building excess noise to the surrounding community will be minimal. In the case of DPT borings performed outside the building, work will be limited to start times after 8:00 am to avoid disturbing the public.

7.0 PROPERTY MANAGEMENT PLAN

This sub-plan is not required for this task order.

8.0 INTERIM HOLDING FACILITY SITING PLAN FOR RECOVERED CHEMICAL WARFARE MATERIEL PROJECTS

This sub-plan is not required for this task order.

9.0 PHYSICAL SECURITY PLAN FOR RECOVERED CHEMICAL WARFARE MATERIEL PROJECTS

This sub-plan is not required for this task order.

10.0 REFERENCES

AECOM, 2011. *Vapor Intrusion Remedial Investigation Report Air Force Plant 59, Johnson City, New York.* April.

AECOM, 2012. *Supplemental Vapor Intrusion Remedial Investigation Report and Focused Feasibility Study Air Force Plant 59, Johnson City, New York.* July.

CH2MHill. 1984. *Installation Restoration Program Records Search for Air Force Plant 59, Johnson City, New York*. October.

Defense Logistics Agency, 1998. *Memorandum on Newly Identified Potential Environmental areas of Concern at Air Force Plant #59.* 10 March.

Department of Defense (DoD). 2010. *DoD Quality Systems Manual for Environmental Laboratories, Final Version 4.2.* Prepared by DoD Environmental Data Quality Work Group. October 25, 2010.

Earth Tech, 1995. *Environmental Baseline Survey for Air Force Plant 59, Broome County, New York.* Prepared for United States Air Force. February.

Earth Tech, 1999. *Record of Decision for Air Force Plant 59, Johnson City, New York.* September.

Earth Tech, 2000. *Environmental Baseline Survey Addendum, Air Force Plant 59, Johnson City, New York.* January.

Earth Tech, 2005. Letter Report "Manufacturing Building East Basement Soil Excavation, Air Force Plant 59 (AFP 59), Johnson City, NY". 8 December.

Energy Research Systems, Argonne National Laboratory (Argonne). 1995. *Supplemental Site Inspection for Air Force Plant 59, Johnson City, New York, Volume 1: Investigation Report*. August.

Geosyntec, 2011. Assessment of Subsurface Volatile Organic Compounds and Vapor Intrusion Risks, AFP 59, Johnson City, New York. 2 September

Independent Asbestos Labs, 1990. *Asbestos Management Plan.* December.

Innovative Technical Solutions, Inc. (ITSI), 2009. *Final Modified Comprehensive Site Evaluation Phase I Report, Air Force Plant 59, NY.* April.

Lockheed Martin, 1998. *Draft Letter on Environmental Baseline Survey, USAF Plant #59.* 3 February.

National Oceanic and Atmospheric Administration (NOAA). *Climatography of the United States No. 81 1971-2000.* Website: http://hurricane.ncdc.noaa.gov/climatenormals/clim81/NYnorm.pdf.

O'Brien and Gere, 2005. *PCB Management Plan, BAE Systems, Johnson City, NY.* March.

United States Air Force (USAF), 2000. *Environmental Baseline Survey Addendum for Air Force Plant 59, Broome County, New York.* January.

USAF, 2013. *Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) Demolitions of Air Force Plant 59, Johnson City, New York.*

U.S. Army Corps of Engineers (USACE). 2001. Engineer Manual (EM) 200-1-3. *Requirements for the Preparation of Sampling and Analysis Plans.*

United States Army Engineering and Support Center (USAESCH), 2013a. *Final Environmental Assessment for the Proposed Demolition of Air Force Plant 59, Johnson City, New York.* Prepared for United States Air Force. October.

USAESCH, 2013b. *Visual Inspection Report.* 14 June.

Appendix A

Performance Work Statement

Section C - Descriptions and Specifications

PWS DATED 11MAR2014

Performance Work Statement
Environmental Baseline Survey -Phase 2(EBS II)
Air Force Plant 59 - Johnson City, NY
11 March 2014

1.0 OBJECTIVE:
The objective of this task order is to perform a Phase II Environmental Baseline Survey in accordance with Department of Defense, Air Force, USACE and State Regulations for the sites listed in Tables 1 and 2.

Table 1 –FACILITIES

FACILITY NUMBER	DESCRIPTION	SIZE (SF)	GROUND COVER
0001	Production Complex	534,754	Slab
0002	Plant Admin	97,727	Slab
0003	Load/Unload Platform	1 ea	Slab
0007	Water Supply	3881	Grass
0025	Haz Materials Storage	876	Slab
0028	Water Storage	250,000 GAL	
0032	Railroad Track w/Trestle	1/4 mile	Grass
0034	Asphalt/concrete parking areas- 4” to 6” depth.	45,000 SY	Asphalt
0039	Steam Line	350 LF	Grass
Oil-Water Separators	3 each	Size unknown; depths below ground surface, approx. 10’, 13’ 15’	Asphalt
Neutralization Tank	*1 each*	*Size unknown; depth below ground surface is approx one foot*	*Asphalt*
TOTAL FACILITIES: 9		**637,238 SF; plus other elements**	

Table 2: OPTION 1 – ADDITIONAL FACILITIES, OFF SITE

FACILITY NUMBER	DESCRIPTION	SIZE (SF)	GROUND COVER
Oil-Water Separator, un-numbered –Off-Site in parking area	1 each	Size unknown; depths below ground surface – unknown: estimated at 2’ ?	Asphalt
Off-Site Parking Lot	Paved parking	10,650 SY	Asphalt

2.0 BACKGROUND:

2.1 Work under this Performance Work Statement (PWS) falls within the property transfer program for Active Air Force.

2.2 Location and Current Condition. Air Force Plant 59 is located in Johnson City, Broome County, New York. Since originally constructed in 1941, the facilities have been refurbished and renovated on several occasions in past years. Lead Paint and Asbestos Containing Materials are known to exist in the facilities. PCB's, metals, asbestos, POL's, VOC's, SVOCs, and other hazardous wastes associated with past operations maybe present. The site has recently been flooded on two (2) previous occasions causing damage to the extent that the facility was determined to be not cost effective for repair. All electrical power has been shut off. No explosives are known to exist on the installation. An Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) have been prepared for the proposed action at AFP-59. An Administrative Record exists for AFP-59 and covers activities prior to the decision to demolish the plant.

2.3 Security Requirements. The Contractor will be required to comply with all U.S. Air Force entrance and security requirements. The plant is closed and there are no tenants. Plant security is currently furnished by the Broome County Industrial Development Agency (BCIDA).

2.4 Additional available Site Specific information will be provided with the request for proposal for contractor review and use via either a designated Internet site or delivery of recorded data on CD/DVD. This information may include but is not limited to general site history, previous investigations and other documentation.

3.0 GENERAL REQUIREMENTS:

3.0.1 Contractor Methods: This is a performance based task order. The performance objectives and standards included herein are the basis of the task order requirements. The technical approach and level of effort expended to achieve task order objectives and standards are solely up to the contractor to select and adjust as necessary through the life of the task order. Government recognizes the contractor's right to change the technical approach and level of effort from that proposed with the understanding that the contractor shall still meet all project objectives and gain government Quality Assurance acceptance in order to receive payment. Given the short time available during the pre-award phase to evaluate the site it is possible that after award and refinement of the conceptual site model and data needs that the contractor will wish to adjust the investigation strategy. If after the TPP but before the field work begins an adjustment in the quantities or types of field investigations are required to achieve the performance standard or the Government determines that the performance standard must be adjusted the Government at its discretion may choose to modify the contract with the price adjustment based upon the prorated unit prices proposed in the accepted offer. Once these adjustments are complete the contractor shall be obligated to deliver the required performance standard making adjustments in the field strategy as may be necessary to achieve the standard without a change in price.

3.0.2 Quality monitoring and measurement: The contractor will be evaluated periodically during performance of this task order to ensure compliance with the proposed and accepted performance goals, regulations, guidance and DIDs, and to document that acceptance criteria (AC), delivery schedule, and the overall completion date are being met. This evaluation will be performed according to *the* Quality Assurance Surveillance Plan (QASP). A programmatic QASP will be provided by the government as a starting point for the contractor prepared Draft QASP per Task 2. The government will finalize the contractor's Draft QASP. This final QASP will be supplied to the contractor and used by the government to evaluate the contractor's performance. Failure to adequately complete any service or submittal to at least a satisfactory level of quality or timeliness may result in a repeat of the work, or a poor performance evaluation, or both.

3.0.3 Performance Requirements. Performance requirements are addressed in each task and summarized in the Performance Requirements Summary (PRS) provided in Attachment A. Performance metrics are provided in Attachment B. If discrepancies or ambiguity exists between the documents, the order of precedence is 1) the Task; 2) Performance Requirements Summary; 3) Performance Metrics

3.0.4 Task pricing: A pricing schedule is provided in Attachment C which will be used as a basis for negotiation of price increase or decrease due to government changes in the specified performance objectives.

3.1 Task 1, Technical Project Planning (TPP): This is a Firm Fixed Price task.
Objective: Implement the four-phase TPP process.

Performance Standard: Achieve the objectives of each TPP phase as listed in EM 200-1-2, and EM 1110-1-4009. Facilitate meetings in a professional and organized manner.

Acceptance Criteria (AC): Acceptance of TPP documents (meeting presentations, agenda, handouts, Conceptual Site Model (CSM) and memorandums) with up to one (1) revision. Meetings held are organized; accomplish requirements of the TPP process; and are conducted in a professional manner. Zero letters of reprimand, grievances, or formal complaints.

Measurement / Monitoring: A TPP checklist for each phase will be used to measure and document progress; guidance cited will be used to evaluate content of documents for acceptance / non-acceptance. The Government will attend and evaluate organization and facilitation of the meetings, and professional nature of the meetings.

Incentives/Disincentives: Satisfactory or greater Contractor Performance Assessment Reporting System (CPARS) rating/poor CPARS rating and/or re-performance of work at contractor's expense.

Specific Task Requirements: The contractor shall utilize the TPP process to obtain consensus on specific Data Quality Objectives (DQOs) that the contractor intends to achieve in pursuit of the established performance requirement that were proposed and accepted. The Contractor shall plan for meetings to occur as follows: first meeting, EBS Work Plan with resulting DQOs, and TPP Memorandum; second meeting, to EBS Work Plan with resulting TPP addendum; third meeting, verify all data gaps have been filled and finalize a Site Specific Investigative Final Report(s) with TPP addendum. ***The first meeting will be on-site; the second and the third meetings can be teleconferences.*** The contractor shall organize and coordinate all meetings: 1) identify and involve all stakeholders; and 2) be responsible for the logistics of these meetings to include, but not limited to, providing a facilitator, obtaining meeting location, and sending invitation letters (pending government review and acceptance). The Contractor shall prepare, submit for review, and gain acceptance of a TPP memorandum or addendum for each meeting. If a site visit is planned prior to acceptance of a Work Plan, the Contractor shall prepare and submit for acceptance an Abbreviated Accident Prevention Plan (AAPP). The Contractor shall utilize statistical methods, such as Visual Sample Plan (VSP) ***as appropriate***.

3.2 Task 2, Work Plan (WP), Uniform Federal Policy for Quality Assurance Project Plan (UFP-QAPP) and QASP: This is a Firm Fixed Price task.
Objective: Prepare, submit and gain acceptance of a WP, and UFP-QAPP and QASP that are detailed and comprehensive plans covering all aspects of project execution utilizing existing environmental data as applicable. UFP-QAPP is only required for environmental sampling.

Performance Standard: Prepare the WP using DID WERS-001.01 and other applicable DIDs for sub plans and EM 1110-1-4009 for guidance, and EM 385-1-1, NESHAPs 40 CPR part 61, Federal and State regulatory guidance, as appropriate. Prepare the UFP-QAPP Intergovernmental Data Quality Task Force UFP-QAPP Manual, and State regulatory guidance, as appropriate. UFP-QAPP content shall also meet the requirements of DoD Quality Systems Manual for Environmental Laboratories (current version). Draft QASP shall meet the requirements described in guidance. The QASP shall include systematic methods used to monitor performance and to identify the required documentation and the resources to be employed to include monitoring Quality Control requirements in guidance, DIDs and the contractor's Quality Control Plan.

AC: Acceptance of WP and UFP-QAPP with two revisions. Draft QASP reflects requirements of the WP and the Quality Control Plan (QCP) with one revision required.

Measurement / Monitoring: Review of WP, UFP-QAPP and QASP to verify that the minimum acceptable content has been provided and meets applicable guidance.

Incentives/Disincentives: Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

Specific Task Requirements: Incorporate all decisions pursuant to the TPP process.
- *T*he WP and UFP-QAPP shall include the Contractor's phased approach, address contaminants of interest, sample media (soil/sediment/surface water/air), and methods that will be utilized to ensure that data generated are of an acceptable quality for its intended use. The contractor shall discuss quantity, quality and the methods used to verify adherence to the PARCCS parameters for sample collection, handling, laboratory analysis, verification and validation. The Contractor shall provide a discussion on data evaluation. The Contractor will attend the on-board review ***locally or via telecon*** for ***the EBS*** WP of the initial review comments at a location near AFP-59 with all parties to the work. The Contractor shall be prepared to address and resolve all comments, and incorporate all required changes at that meeting. A Final Work Plan with all sub-plans shall be provided within 45 working days as per the project schedule.

3.3 Task 3, GeoSpatial Data: This is a Firm Fixed Price task.
Objective: Utilize a geographic information system (GIS) to maintain and manage all project and geospatial data.

Performance Standard: Manage and maintain project data in GIS IAW DID WERS-007.01, EM 200-1-2, EM 1110-1-4009 and applicable Interim Guidance Documents.

AC: Acceptance of GeoSpatial Data submissions, which also meet quality and formatting requirements.

Measurement / Monitoring: Review by Government using cited guidance to determine acceptability.

Incentives/Disincentives: Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

Specific Task Requirements: The GeoSpatial Data shall include:
- A pre and post-project response action geospatial data analysis will be performed using a GIS.
- All available existing data that is applicable to the project will be consolidated into the GeoDatabase and analyzed to relay pertinent information to the Project Delivery Team (PDT). If an existing GIS database is available, it will be provided by the government.
- The information attained through the pre-assessment analysis will be documented in the work plan.
- The information attained in the post-assessment analysis will be documented in the final reports.
- The post- assessment analyses may detail the areas of concern, survey requirements, environmental concerns, milestones and/or other factors that affect product delivery and future action planning.
- The GeoDatabase shall be a living repository that is refined throughout the life of the project.
- Incorporate layers that overlay on maps of the site that identify physical features, and areas of contamination found during the investigation. Examples include: streets, anomalies, sampling locations, cultural resources, environmental, biological, and socio-economic variables.
- Perform civil surveys IAW EM 1110-1-4009 and DID WERS-007.01
- Final GIS deliverable shall include all documentation, reports, meeting minutes databases, etc. created developed or modified under this task order in original and PDF format. This deliverable shall meet QA acceptance prior to payment of final invoice.

3.4 Task 4, EBS Field Activities: This is a Firm Fixed Price task.
Objective: Conduct an EBS in accordance the accepted work plan, meeting the project DQOs as defined during the TPP process. This task shall include all field activities necessary to execute this task. Collect sufficient data that meets the project DQOs as defined during the TPP process, of known quality and quantity to delineate all areas of contamination within and under the facilities in Table 1.

Performance Standard: Field work, data quantity and quality, and analysis of said data provides the following results in the EBS report:
- Demonstrate that the work was performed in accordance with the applicable laws, regulations, and guidance documents;
- Demonstrate that data gaps in hazardous building materials (Lead Paint and Asbestos, etc) location have been filled.
- Demonstrate that other materials with contamination have been delineated, horizontally for slab and sub-slab and vertically for sub-slab, with a statistical level of confidence of 90%.
- Demonstrate that quantities/volume of contaminated Building Materials are established for proper disposal and pricing.
- Perform the field activities in accordance with the accepted Work Plan and UFP-QAPP.
- Meet the project DQOs as defined by the TPP process.

AC: Conduct the field activities in accordance with the accepted/approved WP and UFP-QAPP. Sampling field work and data meets established criteria within the accepted UFP-QAPP and Work Plan.
- All final data and QC tests/documentation submitted. Government QA acceptance of QC tests/documentation gained.
- No more than 4 CARs/948s for non-critical violations and/or 1 CAR/948 for critical violation. No unresolved Corrective action requests.
- No Class "A" Safety accidents, contractor at fault;
- Major safety violations, No Class "B", contractor at Fault, no more than 1 non-explosive Class "C" accident; and <2 non-explosive related Class "D" accidents, IAW AR 385-40..
- Minor safety violations, no more than 2 safety violations.
- Zero letters of reprimand, grievances, or formal complaints.

Measurement / Monitoring: Periodic inspection/review of field work and data. Verify compliance with accepted WP, UFP-QAPP. Quality control tests/documentation submitted per the QASP for government review. Additionally, statistical confidence will be calculated using the Visual Sampling Plan software or some other statistical method.

Incentives/Disincentives: Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

Specific Task Requirements:
- The Contractor shall sample, identify, and quantify all ACM, Other Regulated Materials (ORM), RCRA constituents, and PCB contaminated items/materials in order to provide sufficient data to support delineation of those materials for demolition and soil remedial actions. All contaminated wood and machinery shall be marked in a color-coded manner related to concentration levels for disposal under the Toxic Substance Control Act (TSCA).
- Collect sufficient data to inventory remaining hazardous materials/wastes that will include location and quantities that can be used for cost estimating purposes by the demolition contractor.
- Sub-slab soil sampling shall be conducted prior to building demolition.
- Any deviations from the accepted UFP-QAPP shall be documented in the Daily Quality Control Reports (DQCR) and conveyed to USAESCH personnel immediately.
- The contractor is responsible for subcontracting an independent laboratory to analyze QA samples separate from the contractor's primary laboratory. Additionally, contractor shall validate primary and QA samples. Both laboratories used shall be DOD Environmental Laboratory Accreditation Program (ELAP) certified for all the laboratory methods to be used: **http://www.denix.osd.mil/edqw/Accreditation/index.cfm.** For this project all laboratories involved must also have any current certification from the State of New York necessary for the relevant analytical methods.
- The contractor shall expedite lab results from the EBS sampling.
- Personnel shall be certified where required by Federal, State and local laws, e.g. asbestos sampling shall be performed by an AHERA certified inspector.

3.5 Task 5, EBS Report: This task is a Firm Fixed Price task.

Objective: Prepare, submit and gain acceptance of an EBS report that quantifies building materials and sub-slab media that are contaminated.

Performance Standard: The EBS report shall document the results of the EBS and previous environmental assessments and investigations. The report shall clearly describe methods used to perform the EBS and quantify materials and areas that are contaminated.

AC: Acceptance of report with two revisions.

Measurement / Monitoring: Review of report against guidance to verify that the minimum acceptable content has been provided.

Incentives/Disincentives: Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

Specific Task Requirements: The report shall include an inventory of remaining hazardous materials/wastes that can be used for cost estimating purposes by the demolition contractor.

4.0 SUBMITTALS:

4.1 Submittal Format.

Even though a draft submittal ***is*** requested, the term "draft" shall not reflect upon the quality of the submittal being provided by the Contractor. Submittals shall include all supporting materials including supporting data whether electronic or hardcopy. Submittals not meeting the requirements of referenced guidance or Data Item Descriptions or missing supporting data may be rejected and revised by the contractor at the contractor's own expense.

a) Distribution. The Contractor is responsible for reproduction and distribution of all documents. The Contractor shall furnish copies of submittals to the Project Manager. Submittals are due at the addressees not later than the close of business on the dates shown in paragraph 7.1. After NTP, the Contractor shall forward all submittals through the on-site Corps of Engineers COR or other designated Government personnel. The on-site Government staff will forward copies to the Huntsville Engineering and Support Center project manager for review and action as needed.

b) Partial Submittals. Partial submittals will not be accepted without prior written authorization of the Contracting Officer.

c) Cover Letters. A cover letter shall accompany each document and indicate the contract number, project, project phase, the date comments are due, to whom comments are submitted, the date and location of the review conference, etc., as appropriate. (Note that depending on the recipient, not all letters will contain the same information.) The contents of the cover letters should be coordinated with the CEHNC PM prior to the submittal date. The cover letter shall not be bound into the document.

d) ***Reproducible***. All submittals shall be provided on CD in Microsoft Word or Adobe PDF format and in compliance with DID Preparation of submittals and work plans.

e) Mailing Address. All Submittals shall be submitted in CD format to the U.S. Army Corps of Engineers, Engineering and Support Center, Huntsville and shall be mailed to the address below:

Electronic Versions of Work Plan

Submit in sections as needed to: **FDworkplans@usace.army.mil**

Hard Copies and CD Copies:

CEHNC Project Manager (PM):

Department of the Army
U.S. Army Engineering and Support Center, Huntsville
ATTN: CEHNC-ISP-FD (Shah Alam)
P.O. Box 1600
Huntsville, AL 35807-4301
256-895- ***1349***
Shah.Alam@usace.army.mil

CEHNC Contracting Officer (KO):
Department of the Army
U.S. Army Engineering and Support Center, Huntsville
ATTN: CEHNC-CT-E (Ms. Janice Jamar)
P.O. Box 1600
Huntsville, AL 35807-4301
256-895-1343
Mail to: **janice.a.jamar@usace.army.mil**

Contractor to obtain and/or verify addresses.

4.2 Submittals and Due Dates.
The Contractor shall submit 1 copy of the entire submittal on a CD with each hard copy of a submittal (Reports, Plans, etc) in accordance with DID WERS-007.01. Hardcopies shall be printed on both sides of the paper whenever possible.

Table 4-1 List of Submittals

Submittal	**Due Date (Calendar Days)**
Meeting minutes for Kickoff phone conference	7 days after Kickoff phone conference
Proposed Schedule	7 days after kickoff conference call
Pre-TPP Meeting Materials	14 Days prior to TPP meetings
AAPP (If required)	7 days prior to site visit
Draft TPP Memorandum	***7*** days after first TPP meeting
Final TPP Memorandum	7 days after acceptance of comment responses
Draft Work Plan w/ GIS on DVD	***7*** days after acceptance of TPP memorandum
Final Work Plan	***7*** days after acceptance of comment responses and TPP meeting
Draft QASP	with Draft Work Plan
Quality Control Documents	**As required by Regulation, guidance, DIDs, QCP, QASP, or agreed to in project schedule, to include the following**:
Daily QC Report for Environmental Sampling	Daily during Sampling Activities
Analytical Data Submittal for QA Evaluation	30-60 days after completion of fieldwork
Electronic Laboratory Data Submittal	30-60 days after completion of fieldwork
Preliminary Lab data for above ground materials	***14 days after completion of fieldwork***
Draft EBS Report (GIS on DVD)	30 days after completion of field work
Final EBS Report	7 days after acceptance of comment responses and TPP meeting
Final GIS Files on CD	End of Project

4.3 Submittal Quantities
Provide the number of submittals shown in Table 4-2 to the addressees given in Section 4.2. No documents shall be released to the regulatory community ***without*** government***'s permission***.

Table 4-2 Submittal Guidance

Recipient	Number of Copies - CD	Number of Copies -	Number of Copies -

			Electronic		Paper
	Draft	Final	Draft	Final	Final Plans and Reports
PM	3	3	1	1	1
Air Force	3	3			5
~~Regulatory Agencies~~	~~4~~	~~4~~			~~4~~
Total	6	6	1	1	6

4.4 Review Period: The contractor shall include at least a minimum 14 calendar day review period for USAESCH/Air Force.

4.5 Period of Performance: The Completion Date for this Task Order is 31 December 2014.

5.0 MILESTONE PAYMENTS: (for firm fixed price tasks): Milestones will be considered met or completed when the required QC documentation has been submitted, QA completed and the submittal and/or product is accepted. Any payment vouchers submitted that do not coincide with the final accepted milestones or do not have the appropriate QC documentation will be rejected. All payments will be made utilizing an agreed upon Payment Milestone Schedule. The Contractor shall provide suggested milestones for payment. Milestones for payment shall be shown on the project schedule.

5.1 The following is a list of potential milestones for payment:
- Final Submittals: upon government acceptance, for example: Final WP
- Field Work: for defined units and activities completed and QA review and acceptance.
- Meetings: after completion of meetings with government acceptance of meeting minutes, for example: Final TPP meeting transcripts.

6.0 REFERENCES:

6.1 Refer to "Base Contract."

6.2 Data Items Descriptions

6.3 Government Provided Project Documentation.

a) Pre Demolition Survey(s)

b) Facility drawings (as may be available).

6.4 All applicable Federal and State regulations. It shall be the contractor's responsibility to adhere to all applicable federal and state regulations pertaining to the specific work site.

7.0 GENERAL CONDITIONS: See the Base Contract Section C, Section 10 General Conditions and the following addendums:

7.1 This is a performance based task order. The inclusion of unit prices in the proposal shall in no way be construed to mean that the Government is procuring a specified number of units of any given service.

7.2 Government acceptance of the proposed technical approach and/or price does not relieve the Contractor from full responsibility for the viability, productivity, and efficiency of the approach used to meet the performance requirements of the PWS at the price proposed. The task order is for the provision of services that ultimately meet the performance requirements of this task. If the contractor must adjust its technical approach or perform more field

work than anticipated in order to achieve the proposed performance goal then the contractor will do so with no change in task order price.

7.3 If the Government at its sole discretion chooses to modify the performance standard the parties to this task order will assess the impact on the estimated amount of field work required to achieve the new performance standards and will negotiate a price adjustment based upon the unit prices providing as price proposal supporting documentation (See Attachment D).

7.4 The Contractor attests that it applied due diligence in the research and development of its proposal has priced reasonable estimates of the site conditions and the associated risks into the price. The Contractor accepts full and sole responsibility for identifying and considering all factors that may affect the cost to execute the work. The act of signing this task order signifies that the Contractor has been given ample opportunity to assess the conditions under which the work will be performed and the Contractor either fully understands those conditions or has factored the risk into the price.

7.5 The Government provided the Contractor with historical documents and documents from previous site activities. The Contractor attests it interpreted the data utilizing an experienced understanding of how the data of this type is collected, analyzed, interpreted, and presented.

8.0 ARMY CONTRACTOR MANPOWER REPORTING:

8.1 Implementation.

8.1.1 The Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs) operates and maintains a secure Army data collection site where the contractor will report contractor manpower information (including subcontractor manpower information) required for performance of this contract. The contractor shall submit all the information required in the format specified at the following web address: **https://cmra.army.mil/default.aspx**

8.1.2 The Contractors shall fill in the required information on the website, fields are shown below:

- Contract Number
- Delivery Order Number (if applicable)
- Task Order Number (if applicable)
- Requiring Activity Unit Identification Code (UIC)
- Command
- Contractor Contact Information
- Federal Service Code (FSC)
- Direct Labor Hours
- Direct Labor Dollars
- Location Information (where contractor and subcontractors (if applicable) performed the services

8.1.3 Reporting period will be the period of performance not to exceed 12 months ending September 30 of each government fiscal year and must be reported by 15 October of each calendar year.

8.1.4 If your particular contract crosses fiscal years, 2 entries must be made to capture the data for the contract period; for example if the contract start date is 1 January 2007 and ends 31 December 2007, the data for the period from 1 January 2007 through 30 September 2007 shall be entered not later than 15 October 2007 and the period 1 October 2007 through 31 December 2007 shall be entered not later than 15 January 2008.

Attachment A
Performance Requirements Summary:

A.1 The Contractor shall meet the following performance requirements. Performance requirements are addressed in each task and summarized in the following Performance Requirements Summary. If discrepancies or ambiguity exists between the documents, the order of precedence is 1) the Task; 2) Performance Requirements Summary; 3) Performance Metrics

Table A-1 Performance Requirements Summary

Task Application	Objective	Performance Standard	Minimum Acceptable Criteria	Measurement / Monitoring	Incentive/ Disincentive
1	Implement the four-phase TPP process.	Achieve the objectives of each TPP phase as listed in EM 200-1-2, and EM 1110-1-4009. Facilitate meetings in a professional and organized manner.	Acceptance of TPP documents (meeting presentations, agenda, handouts, Conceptual Site Model (CSM) and memorandums) with up to one (1) revision. Meetings held are organized; accomplish requirements of the TPP process; and are conducted in a professional manner. Zero letters of reprimand, grievances, or formal complaints	TPP checklist for each phase as provided in the EM 200-1-2, EM 1110-1-4009 and applicable Interim Guidance Documents will be used to measure and document successful progress; guidance cited will be used to evaluate content of documents for acceptance / non-acceptance. Government will attend and evaluate organization and facilitation of the meetings, and professional nature of the meetings.	Satisfactory or greater Contractor Performance Assessment Reporting System (CPARS) rating/poor CPARS rating and/or re-performance of work at contractor's expense.
2	Prepare, submit and gain acceptance of a WP, and UFP-QAPP and QASP that are detailed and comprehensive plans covering all aspects of project execution utilizing existing environmental data as applicable. UFP-QAPP is	Prepare the WP using DID WERS-001.01 and other applicable DIDs for sub plans and EM 1110-1-4009 for guidance, and EM 385-1-1, NESHAPs 40 CPR part 61, Federal and State regulatory guidance, as appropriate. Prepare the UFP-QAPP Intergovernmental Data Quality Task Force UFP-QAPP Manual, and State regulatory guidance,	Acceptance of WP and UFP-QAPP with two revisions. Draft QASP reflects requirements of the WP and the Quality Control Plan (QCP) with one revision required. One additional revision is acceptable to incorporate EM-CX.	Review of WP, UFP-QAPP and QASP to verify that the minimum acceptable content has been provided and meets applicable guidance.	Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

	only required for environmental sampling.	as appropriate. Prepare a risk assessment work plan as part of the overall project work plan incorporating implementation of the risk assessment and methodologies per USEPA Risk Assessment Guidance (RAGS), State regulatory guidance and USACE EM 200-1-4, Volumes I and II, as appropriate. UFP-QAPP content shall also meet the requirements of DoD Quality Systems Manual for Environmental Laboratories (current version).			
3	Utilize a geographic information system (GIS) to maintain and manage all project and geospatial data.	Manage and maintain project data in GIS IAW DID WERS-007.01, EM 200-1-2, EM 1110-1-4009 and applicable Interim Guidance Documents.	Acceptance of GeoSpatial Data submissions, which also meet quality and formatting requirements.	Review by Government using cited guidance to determine acceptability.	Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.
4	Conduct a EBS in accordance the accepted work plan, meeting the project DQOs as defined during the TPP process.	Field work, data quantity and quality, and analysis of said data provides the following results in the EBS report: - Demonstrate that the work was performed in accordance with the applicable laws, regulations, and guidance documents; - Demonstrate that data gaps in hazardous building materials (Lead Paint and Asbestos, etc) location have been filled. - Demonstrate that other materials with	Conduct the field activities in accordance with the accepted/approved WP and UFP-QAPP. Sampling field work and data meets established criteria within the accepted UFP-QAPP and Work Plan. - All final data and QC tests/documentation submitted. Government QA acceptance of QC tests/documentation gained. - No more than 4 CARs/948s for non-critical violations	Periodic inspection/review of field work and data. Verify compliance with accepted WP, UFP-QAPP. Quality control tests/documentation submitted per the QASP for government review. Additionally, statistical confidence will be calculated using the Visual Sampling Plan software or some other statistical method.	Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor's expense.

		contamination have been delineated, horizontally for slab and sub-slab and vertically for sub-slab, with a statistical level of confidence of 90%. - Demonstrate that quantities/volume of contaminated Building Materials are established for proper disposal and pricing. - Perform the field activities in accordance with the accepted Work Plan and UFP-QAPP. - Meet the project DQOs as defined by the TPP process.	and/or 1 CAR/948 for critical violation. No unresolved Corrective action requests. - No Class “A” Safety accidents, contractor at fault; - Major safety violations, No Class “B”, contractor at Fault, no more than 1 non-explosive Class “C” accident; and <2 non-explosive related Class “D” accidents, IAW AR 385-40.. - Minor safety violations, no more than 2 safety violations. - Zero letters of reprimand, grievances, or formal complaints.		
5	Prepare, submit and gain acceptance of a EBS report that quantifies building materials and sub-slab media that are contaminated.	The EBS report shall document the results of the EBS and previous environmental assessments and investigations. The report shall clearly describe methods used to perform the EBS and quantify materials and areas that are contaminated.	Acceptance of report with two revisions.	Review of report against guidance to verify that the minimum acceptable content has been provided.	Satisfactory or greater CPARS rating/poor CPARS rating and/or re-performance of work at contractor’s expense.

Attachment B
PERFORMANCE METRICS

B.1 Performance Metrics for Performance Assessment Record (PAR)

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
PAR Category: Quality of Product or Service					
Performance indicator: Document reviews					
Draft Plans, Reports, and documents [Plans, documents and reports are considered draft until accepted as final by the Government]	All contract-milestone documents accepted as submitted	No substantive comments (i.e. limited to grammar, spelling, terminology) to any of the documents, but a few exceptions were noted and corrected	Contractor met Acceptance Criteria	One or more documents required revisions to be resubmitted for approval prior to proceeding. Two backchecks were required on one or more documents before original comments were resolved satisfactorily.	One or more documents did not comply with contract requirements, or one or more documents required more than two backchecks before original comments were resolved satisfactorily, or more than one document was rejected.
Performance indicator: Project Execution					
Process Compliance	Zero Corrective Action Requests (CAR) or 948s	{1-2} CARs/948s for non-critical violations to WP requirements	Contractor met Acceptance Criteria	{5-6} CARs/948s for non-critical violations and/or {2} CARs/948 for critical violations	{>6} CARS for non-critical violations and/or {>2} CARs/948s for critical violations, or any unresolved CARs
Project Execution	Zero letters of reprimand, grievances, or formal complaints AND one or more unsolicited letters of commendation		Contractor met Acceptance Criteria	{One} letter of reprimand, grievance or formal complaint that was resolved through negotiation	More than {one} letter of reprimand, grievance or formal complaint that were resolved through negotiation
Task Completion			Contractor met Acceptance Criteria		Final data and QC documentation submitted but not accepted
PAR Category: Schedule					
Performance indicator: Timely completion of tasks					
Final Plans and	All document	Project closed	Project closed	Project closed	Project closed

	Exceptional	**Very Good**	**Satisfactory**	**Marginal**	**Unsatisfactory**
Reports, project milestones, T.O. invoices	submittals and task order milestones and invoices complete and accepted by T.O date, project closed out/final invoice approved ahead of schedule	out/final invoice accepted ahead of schedule	out/final invoice accepted on T.O. date	out/final invoice accepted within 30 calendar days after T.O. date.	out/final invoice accepted more than 30 calendar days after T.O. date.
Project status reports accurate			Yes		No
Performance indicator: Impacts to schedule					
Impacts caused by Contractor or other causes identified, in writing to HNC CO/ PM, in a timely manner to apply acceptable corrective actions.			Yes		No
PAR Category: Cost Control (Not Applicable for Firm Fixed Price)					
Performance indicator: No unauthorized cost overruns					
Unauthorized cost overruns			No		Yes
Total Project Costs	Total contract invoices less than 98% of T.O. authorized amount	Total contract invoices greater than 98% but less than 99.99%of T.O. authorized amount	Total contract invoices between 99.99% and 100% of T.O. authorized amount	Total contract invoices greater than 100% but less than 105% of T.O. authorized amount	Total contract invoices greater than or equal to 105% of T.O. authorized amount
Performance indicator: Monthly cost report					
Monthly cost reports accurate			Yes		No
Performance indicator: Impacts to cost					
Impacts caused by Contractor or other causes identified, in writing to HNC CO/PM, in a timely manner to apply acceptable corrective actions.			Yes		No
PAR Category: Business Relations					
Performance indicator: Met contractual obligations					
Corrective			Yes		No

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
Actions taken were timely and effective (Refer to CARs issued to Contractor)					
Performance indicator: Professional and Ethical Conduct					
Meetings and correspondences with Public, project delivery team and other stakeholders	Zero letters of reprimand, grievances, or formal complaints AND one or more unsolicited letters of commendation		Contractor met Acceptance Criteria	One letter of reprimand, grievance or formal complaint that was resolved through negotiation	More than one letter of reprimand, grievance or formal complaint that were resolved through negotiation OR removal of one or more project personnel as a results of a letter of reprimand, grievance or formal complaint.
Performance indicator: Customer has overall satisfaction with work performed					
Customer survey results for rating period	4.0-5.0	3.0-3.9	2.0-2.9	1.0-1.9	<1.0
Performance indicator: Personnel responsive and cooperative					
Key personnel responsive, and cooperative	Always		Most Times		Almost Never
PAR Category: Management of Key Personnel and Resources					
Performance indicator: Personnel knowledgeable and effective in their areas of responsibility					
Personnel assigned to tasks	All personnel proposed by Contractor were assigned to project, some personnel were substituted by higher qualified individuals.		All personnel proposed by Contractor were assigned to project, some personnel were substituted by equally qualified individuals.	All personnel proposed by Contractor were assigned to project, some personnel were substituted by equally qualified individuals, Letter of reprimand received for personnel conduct from HNC.	All personnel proposed by Contractor were assigned to project, some personnel were substituted by lesser qualified individuals or HNC requested, in writing, removal of assigned personnel for poor performance.
Performance indicator: Personnel able to manage resources efficiently					
Instances when	0	1-2	3-4	5-6	>6

	Exceptional	Very Good	Satisfactory	Marginal	Unsatisfactory
resource management had negative impact on project execution					
PAR Category: Safety					
Performance indicator: Accidents and Violations					
*No Class A Accidents, Contractor at fault	0 No class A accidents IAW AR 385-40	No class A accidents IAW AR 385-40	Contractor met Acceptance Criteria	{<2} non-explosive related Class C accidents, or {1} non-explosive Class B accident, IAW AR 385-10	{1} Any Class A accident IAW AR-385-10, or Any explosive related accident.
*Major safety violations	0 accidents/injuries No safety violations	0 accidents/injuries No safety violations		{2} non-explosive safety violations.	{>1} any violation of procedures for handling, storage, transportation, or use of explosives IAW the WP, and all Federal, State and local laws/ordinances.
*Minor safety violations	No safety violations	1 safety violation		{3} safety violations	{>3} safety violations

Classes of Accidents:

- **Class A:** Fatality or permanent total disability (Government Civilian, Military Personnel, and/or Contractor), or >$2,000,000 property damage.

- **Class B:** Permanent partial disability or impatient hospitalization of 3 or more persons (Government Civilian, Military Personnel, and/or Contractor), $500,000< $2,000,000 property damage.

- **Class C:** Lost Workday (Contractor) or Lost Time (Government Civilians), $50,000< $500,000 property damage.

- **Class D:** $2000 < $50,000 property damage.

* From Section C of Solicitation Number W912DY-04-R-0003, Amendment 000 W912DY-08-R-0016, Amendment 0007 (may be included but are not limited to these).

The following guidelines are provided for issuing ratings that are subjective in nature, these ratings will be supported by the weight of evidence documented during the government's surveillance efforts:

Exceptional: Performance *meets* contractual requirements and *exceeds many* to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with *few minor problems* for which corrective actions taken by the Contractor were *highly effective*.

Very Good: Performance *meets* contractual requirements and *exceeds some* to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with *some minor problems* for which corrective actions taken by the Contractor were *effective*.

Satisfactory: Performance *meets* contractual requirements. The contractual performance of the element or sub-element contains *some minor problems* for which corrective actions taken by the Contractor *appear or were satisfactory*.

Marginal: Performance *does not meet all* contractual requirements. The contractual performance of the element or sub-element being assessed reflects a *serious problem* for which the Contractor has *not yet identified corrective actions*. The Contractor's proposed actions appear only *marginally effective or were not fully implemented.*

Unsatisfactory: Performance *does not meet most* contractual requirements and *recovery is not likely* in a timely manner. The contractual performance of the element or sub-element contains *serious problems* for which the Contractor's corrective actions *appear or were ineffective.*

Attachment C

Price Spreadsheet

Firm Fixed Price Lump Sum Prices offered and accepted are the sole basis of this contract. Unit Prices included herein have no bearing on the task order price and are proposed only to provide a basis for determining a fair and reasonable price if the Government in its sole discretion chooses to modify the performance requirements of this task order. This is a performance based task order and the inclusion of unit prices in the proposal shall in no way be construed as the Government procuring a specified number of units of any given service. The contract is for the provision of services that ultimately meet the performance requirements of each task.

Task, Title, Type	Qty	Unit	Unit Price	Total
1, Technical Project Planning, FFP	1.0	LS		
2, Work Plan, FFP	1.0	LS		
3, GIS, FFP	1.0	LS		
4, EBS Field Activities, FFP	1.0	LS		
5, EBS Report, FFP	1.0	LS		
Contractor **shall** *add relevant fixed unit pricing for review and acceptance by the Government.*				
			Total	

- Note: Use RSMeans, most recent version, for applicable unit pricing using applicable location factors.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 31-MAR-2014 TO 31-DEC-2014	N/A	SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE SEE SCHEDULE AA 256-895-1110 FOB: Destination	W912DY

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 21420500000 088130 2540H292B570000000000 E314 01110
AMOUNT: $423,664.28
CIN W31RYO408764460001: $423,664.28

Appendix B

Site Maps from Previous Investigations

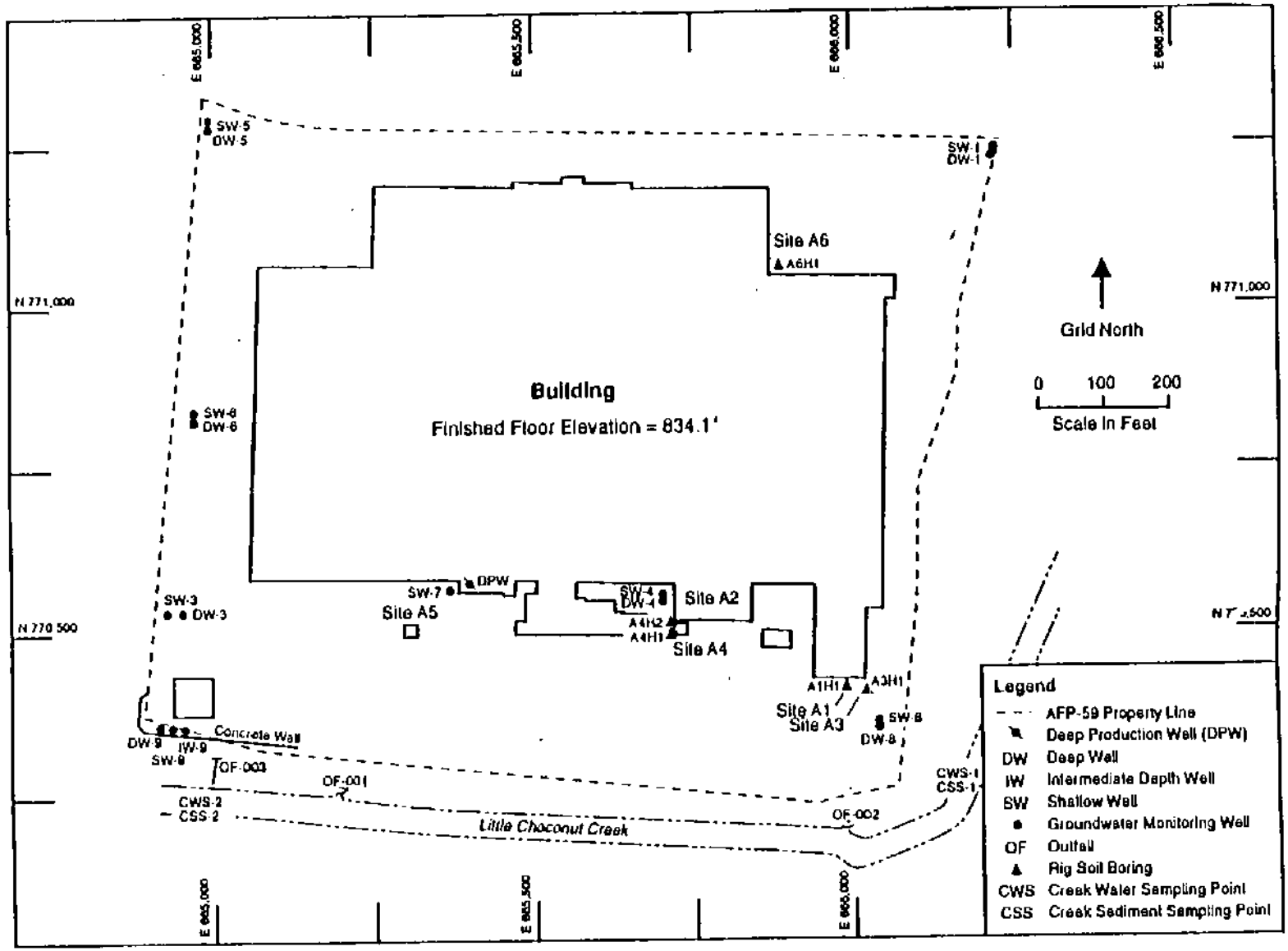


FIGURE 1.2 Site Map of AFP 59 Showing Locations of Potentially Contaminated Sites, Test Borings, Sampling Points, and Groundwater Monitoring Wells (see Plate 1 for details)

DP2	Depth 6'	Depth 15'	Units
1,1,1-TCA	n/d	0.191	mg/Kg
Carbon Tetrachloride	n/d	0.393	mg/Kg
TCE	n/d	**5.48**	mg/Kg

EB1-E15-N5	Surface	Depth 3'	Units
1,1-Dichloroethane	n/t	**2.4**	mg/Kg
TCE	n/t	**9.5**	mg/Kg
Methylene Chloride	**0.99**	n/t	mg/Kg

EB1-E20-N5	Surface	Depth 3'	Depth 6'	Units
Methylene Chloride	**0.18**	**7.2**	n/t	mg/Kg
TCE	n/t	**21.0**	**48**	mg/Kg

EB1-E5-N3	Surface	Depth 3'	Units
1,1-Dichloroethane	**0.85**	**24.0**	mg/Kg
1,1,1,-TCA	n/t	**5.7**	mg/Kg
TCE	n/t	**4.6**	mg/Kg

EB1-E20	Surface	Depth 3'	Depth 6'	Units
Methylene Chloride	n/t	**0.26**	**0.14**	mg/Kg
1,1,1-TCA	**4.4**	n/t	n/t	mg/Kg
TCE	**8.7**	n/t	n/t	mg/Kg
PCE	**1.4**	n/t	n/t	mg/Kg
Toluene	**5.6**	n/t	n/t	mg/Kg
m-xylene & p-xylene	**9.9**	n/t	n/t	mg/Kg
o-xylene	**2.5**	n/t	n/t	mg/Kg

EB1-E5	Surface	Depth 3'	Depth 6'	Units
TCE	**0.72**	**1.8**	n/t	mg/Kg
Methylene Chloride	n/t	n/t	**0.18**	mg/Kg

DP1	Depth 6'	Depth 15'	Units
--	n/d	n/d	mg/Kg

EB1-N5	Depth 3'	Units
Methylene Chloride	**0.17**	mg/Kg
TCE	**3.4**	mg/Kg

EB1-N30	Depth 1'	Depth 6'	Units
1,1,1-TCA	0.0015	n/d	mg/Kg
TCE	0.050	n/d	mg/Kg

EB1-N50	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

DP3	Depth 6'	Depth 15'	Units
TCE	0.0008	n/t	mg/Kg

EB1-N110	Depth 1'	Depth 6'	Units
TCE	n/d	0.0006	mg/Kg

EB1-N110-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N130	Depth 1'	Depth 6'	Units
1,1,1-TCA	0.0009	n/d	mg/Kg
TCE	0.0046	n/d	mg/Kg

EB1-N130-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N170	Depth 1'	Depth 6'	Units
1,1,1-TCA	n/d	0.002	mg/Kg

EB1-N170-E5	Depth 1'	Depth 3'	Units
--	n/d	n/d	mg/Kg

EB1-S20	Depth 1'	Depth 3'	Depth 6'	Units
1,1,1-TCA	n/d	**1.69**	0.0368	mg/Kg
Carbon Tetrachloride	n/d	0.614	0.0033	mg/Kg
TCE	n/d	**4.24**	0.0809	mg/Kg
Chloroform	n/d	n/d	0.0008	mg/Kg

EB1-N50-E5	Depth 1'	Depth 6'	Units
	n/d	n/d	mg/Kg

EB1-N30-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N150	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N150-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N210	Depth 1'	Depth 6'	Units
1,1,1-TCA	n/d	0.008	mg/Kg
1,2,3-Trichlorobenzene	n/d	0.0006	mg/Kg
1,4-Dichlorobenzene	n/d	0.0007	mg/Kg
Carbon Tetrachloride	n/d	0.0011	mg/Kg
Naphthalene	n/d	0.0017	mg/Kg

EB1-E5-S5	Depth 3'	Units
Methylene Chloride	**0.31**	mg/Kg

EB1-N70-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N70	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-E15	Surface	Depth 3'	Units
Methylene Chloride	0.3	**1.1**	mg/Kg
TCE	n/t	**31**	mg/Kg

EB1-N90	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N90-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

78'-4"

NOTES:

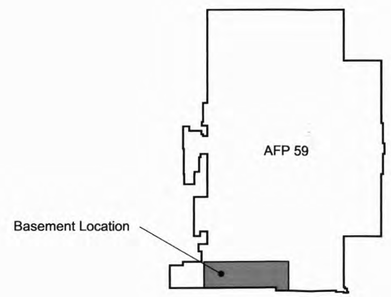
Although they may NOT exceed contamination limits, all sampling results are shown; exceedances are highlighted in yellow.

CONTAMINATION LIMITS:

Recommended Soil Cleanup Goals Per TAGM #4046	
1,1,1-Trichloroethane	0.8 mg/Kg
Trichloroethene (TCE)	0.7 mg/Kg
Tetrachloroethene (PCE)	1.4 mg/Kg
Toluene	1.5 mg/Kg
m-xylene & p-xylene	1.2 mg/Kg
Methylene Chloride	0.1 mg/Kg
Chloroform	0.3 mg/Kg
1,1-Dichloroethane	0.2 mg/Kg
1,2,3-Trichlorobenzene	N/A
1,4-Dichlorobenzene	8.5 mg/Kg
Naphthalene	13.0 mg/Kg
Carbon Tetrachloride	0.6 mg/Kg

LEGEND:

- DIRECT PUSH SAMPLE LOCATION (from 1st floor) BY EARTH TECH
- HAND AUGER SAMPLE LOCATION BY EARTH TECH
- PREVIOUS HAND AUGER SAMPLE LOCATION BY BAE
- SAMPLED SOIL PILE
- /// AREA OF SOIL EXCEEDING TAGM LEVELS TO BE REMOVED
- n/d NON-DETECT
- n/t NO SAMPLE TAKEN



Key Plan

0' 5' 10' 15'
SCALE: 3/32" = 1'-0"

N

NO.	REVISIONS	BY	DATE

E A R T H T E C H
675 North Washington Street, Suite 300, Alexandria, Virginia 22314
Telephone 703.549.8728 Facsimile 703.549.9134
www.earthtech.com

AFP-59 Johnson City, New York

Figure 4

East Basement Soil Contamination

DESIGNED BY	DWG SCALE
P. Granger	See Dwg
DRAWN BY	CONTRACT NO.
C. Moran	--
CHECKED BY	DATE
J. Dixon	12-27-04
CAD FILE NAME	
Figure 1.dwg	

REVISION	DATE
0	06/21/94
1	10/15/94
2	02/01/95

Avon Street

Main Street

Office Building (01)

AOC 1

TFLEA01 TFLEA02 TFLEA03 TFLEA04 TFLEA05 TFLEA06 TFLEA07 TFLEA07 TFLEA0314

Manufacturing Building (02)

Transformer Pad

AOC 2

Kerosene Building (10)

Range Building (11)

Plating Building (05) and IRP 5

IRP 6

Special Programs Facility (04)

AOC 3

Covered Drum Storage and IRP 2

IRP 1

Pump House (06)

Outfall 3

Outfall 2

Outfall 1

Little Choconut Creek

Plant Boundary

Fenceline

Aboveground Storage Tank

Underground Storage Tank

Oil/Water Separator

IRP 6 — Study Area

CATEGORY 1 PROPERTY
Uncontaminated property

CATEGORY 2 PROPERTY
Hazardous substance or petroleum product stored, No release

CATEGORY 3 PROPERTY
Hazardous substance or petroleum product release, Below action level

CATEGORY 4 PROPERTY
Hazardous substance or petroleum product release, All actions have been taken

CATEGORY 5 PROPERTY
Hazardous substance or petroleum product release, Not all actions have been taken

CATEGORY 6 PROPERTY
Hazardous substance or petroleum product release, No actions taken

CATEGORY 7 PROPERTY
Areas requiring additional evaluation

NOTE: Parking Lot #5, AFP59 property, excluded from map

50 25 0 50 100 150
SCALE IN FEET

EARTH TECH
1420 KING STREET SUITE 600, ALEXANDRIA, VIRGINIA 22314

PLATE 3-1
PROPERTY CATEGORIZATION
AIR FORCE PLANT 59
BROOME COUNTY, NEW YORK

DRAWN BY: JGC	DESIGNED BY: N/A	SCALE: 1" = 50'
CHECKED BY: ME	APPROVED BY: BY	DATE: 02/01/95
EARTH TECH PROJECT NUMBER 911029-01	DRAWING NUMBER SHEET 1 OF 1	REV. NO. 2

C:\EBS\AFP59\DWG\AFP59EBS.DWG

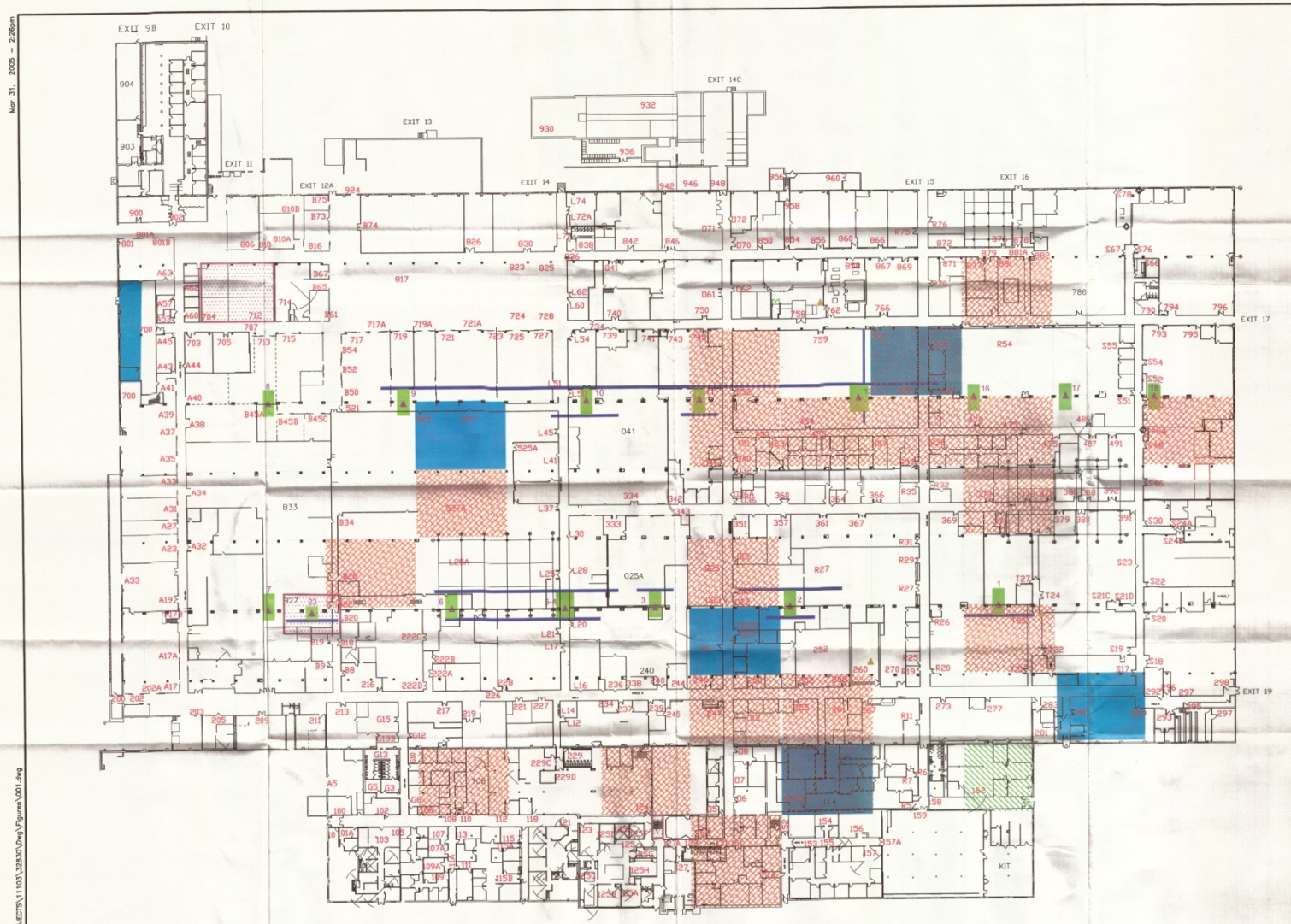


FIGURE 1

LEGEND

- REMEDIATED CATWALK
- FORMER TRANSFORMER PLATFORM
- FORMER TRANSFORMER
- AC UNIT
- ENCAPSULATED FLOOR
- LOWER SUBFLOOR PCB IMPACTED AREA (>10, <100ug/100 sq cm
- UPPER SUBFLOOR PCB IMPACTED AREA (>10, <100ug/100 sq cm
- UPPER SUBFLOOR PCB IMPACTED AREA (>100ug/100 sq cm)

BAE SYSTEMS CONTROLS
JOHNSON CITY, NEW YORK

PCB MANAGEMENT PLAN

RESTRICTED WORK ACTIVITY AREAS

1"=40' 40 0 40

FILE NO. 11103.32830.001
MARCH 2005

O'BRIEN & GERE ENGINEERS, INC.

DRAWING SOURCE: DRAWING ADAPTED FROM BAE SYSTEMS U.S. AIR FORCE PLANT 58 PRELIMINARY PCB DELINEATION DRAWING 25008, IT UPPER SUBFLOOR PCB IMPACT LOCATIONS DRAWING 808348-D3, AND IT LOWER SUBFLOOR PCB DELINEATION DRAWING 808348-D3.

Mar 31, 2005 - 2:26pm

I:\DWG\PROJECTS\11103\32830\Dwg\Figures\001.dwg

Appendix C

Points of Contact

Points of Contact			
Name	**Organization**	**Title/Role**	**Phone/Email**
Shah Alam	USAESCH	Project Manager	(256) 895-1874 Shah.Alam@usace.army.mil
Kevin Healy	USAESCH	Engineering for Demolition	(256) 895-1627 Kevin.W.Healy@usace.army.mil
Brett Frazier	USAESCH	Engineer for Environmental	(256) 895-1847 Brett.W.Frazier@hnd01.usace.army.mil
Randy Battaglia	USACE, New York	Project Manager	(607) 869-1523 randy.w.battaglia@usace.army.mil
George Walters	USAF AFCEC	Team Lead	(937) 938-4089 george.walters@us.af.mil
David Kovacs	USAF AFLCMC	Project Manager	(937) 938-4797 david.kovacs.3@us.af.mil
Doug Schicho	CB&I	Project Manager	(973) 770-5306 douglas.schicho@cbifederalservices.com
George Csordas	CB&I	Asbestos and Lead Based Paint Lead	(513) 782-4794 george.csordas@cbifederalservices.com
Laura O'Donnell	CB&I	Project Engineer	(410) 273-7242 laura.odonnell@cbifederalservices.com
Jeff Tarr	CB&I	Site Manager	(865) 405-1984 Jeffrey.tarr@cbifederalservices.com
	Broome County Security	Site Security	(607) 778-2107
Brian Jankauskas	NYSDEC	Case Manager	(518) 402-9620 bfjankau@gw.dec.state.ny.us

Appendix D

Accident Prevention Plan

Appendix E

Uniform Federal Policy Quality Assurance Project Plan

Appendix F

Contractor Forms

500179 AFP 59

Former AFP 59 Project Site
600 Main Street, Johnson City, NY

VISITOR LOG

DATE	TIME IN	TIME OUT	NAME (please print)	SIGNATURE	COMPANY / PHONE NUMBER

O S D
Over, Short, or Damage Report

From:_____ (Preparer Name) To:_____ (Buyer for Project) Vendor / Shipper: _____ Pt of Origin: _____ Rec. Point:_____ Carrier Name: _____ Unit No._____ (Trucking, Railroad, Airline, Vessel Name) (Truck, Car, flight or voyage No) Carrier's No _____ Date Rec'd_____ (Frt. Bill, Waybill, B/L, Etc.)	Report No _____ Date _____ P.O. No_____ Job No_____ MRR No_____

ABOVE SHIPMENT RECEIVED IN FOLLOWING CONDITION

☐ Overage ☐ Substitution ☐ Acceptable ☐ Not Acceptable

☐ Shortage Description

_____

_____

☐ Damaged Visible Damage to Equipment or Material

_____

_____

GIVE DETAILS OF OVER, SHORT OR DAMAGE ITEMS – DESCRIBE DAMAGE

P.O. Item	Qty Shipped	Qty Received	Unit Cost	Description of Material and Damage

Exception Taken on Delivery Document ☐ Yes ☐ No Carrier Notified On

DO NOT DISPOSE OF CONTAINERS OR PACKING UNTIL AFTER INSPECTION BY CLAIM AGENT.

Prepared by _____Approved by _____

Uncontrolled when printed

1) NCR Number:	**2) Project Name and Number (include location):**	**3) Date:**

4) Nonconformance Description And Reference: (Specification __ Drawing __ Code __)

Identified by: _____ **Date**_____

Reviewed By: _____ **Date**_____

(Project Quality Representative)

5) Disposition of Nonconforming Condition (Indicate disposition type):
1) Rework, 2) Repair, 3) Use As Is, 4)Reject/Scrap (Note: Use-As-Is or Repair determinations must be technically justified)5)Other (e.g., Return to Supplier)

Evaluated by: _____ **Date**_____

Responsible Manager

Concurrence: _____ **Date** _____

Quality Representative

6) Corrective Action(s) to be taken (include date when action(s) will be complete):

Corrective Action to be Performed by: _____**Due Date**_____

Responsible Manager: _____**Date**_____

Reviewed by: _____ **Date** _____

Quality Representative

7) Client Notification Required: _____ **Yes** _____**No** **Date Notified:** _____

8) Corrective Action Completion

Comments:

Responsible Manager: _____**Date**_____

9) Corrective Action(s) Completion Verification and Date:

Comments:

Reviewed and Closed By: _____ **Date**_____

(Project Quality Representative)

SHAW ENVIRONMENTAL & INFRASTRUCTURE, INC.
Lost, Damaged & Destroyed Report

Contract No.		**Project No.**	
Item Description:		**Date of Loss:**	
Vendor:		**Condition at Time of LDD:**	
PO Number:		**Date of Last Inventory:**	
Order Date:		**Estimated Cost of Repair/Replacement:**	
Property ID:		**Cost of Item:**	
Manufacturer:		**Serial No:**	

Report of Incident

Corrective Action

Investigation Performed By:

Signature Title

Review/Approval By:

Signature Title

Field Work Variance No. 500179-

Page _____ of _____

FIELD WORK VARIANCE

Project Name/Number **AFP 59 Phase II EBS** Task Order **0010**

Applicable Document Date

Problem Description:

Recommended solution:

Impact on present and completed work:

Requested by:

Recommended solution disposition:

Clarification ☐ Minor Change ☐ Major Change ☐

Signature _____ Date _____

Technical Reviewer

Shaw Environmental Inc, Approvals: *If Major Change:*

Signature _____ Date _____ Signature _____ Date _____

Technical Manager *Project Manager*

Signature _____ Date _____

QC Manager

USACE Approval:

Approved ☐ Rejected ☐ Signature _____ Date _____

SEDA Approval (*If Major Change:*

Approved ☐ Rejected ☐ Signature _____ Date _____

Final Description

Signature Date

_____ _____

Field Work Variance No. 144717-

Page _____ of _____

FIELD WORK VARIANCE CONTINUATION SHEET

Continue FWV discussions below by noting section title(s) to be continued (i.e., Problem Description, Solution/disposition, Final Disposition, etc). Use additional continuation sheets as needed.

PROBLEM DESCRIPTION:

RECOMMENDED SOLUTION:

Attachments:

References:

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)

(Read Instructions before completing this form.)

This form applies to all vehicles which must be marked or placarded in accordance with Title 49 CFR.

1. BILL OF LADING/TRANSPORTATION CONTROL NUMBER

SECTION 1 - DOCUMENTATION	ORIGIN a.	DESTINATION b.
2. CARRIER/GOVERNMENT ORGANIZATION		
3. DATE/TIME OF INSPECTION		
4. LOCATION OF INSPECTION		
5. OPERATOR(S) NAME(S)		
6. OPERATOR(S) LICENSE NUMBER(S)		
7. MEDICAL EXAMINER'S CERTIFICATE*		

8. *(X if satisfactory at origin)*

a. HAZMAT ENDORSEMENT		d. ERG OR EQUIVALENT COMMERCIAL:		YES		NO	
b. VALID LEASE*		e. DRIVER'S VEHICLE INSPECTION REPORT*					
c. ROUTE PLAN		f. COPY OF 49 CFR PART 397					

9. CVSA DECAL DISPLAYED ON COMMERCIAL EQUIPMENT*

	YES	NO
a. TRUCK/TRACTOR		
b. TRAILER		

SECTION II - MECHANICAL INSPECTION

All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.

10. TYPE OF VEHICLE(S)

11. VEHICLE NUMBER(S)

12. PART INSPECTED *(X as applicable)*	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT		ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
a. SPARE ELECTRICAL FUSES					k. EXHAUST SYSTEM					
b. HORN OPERATIVE					l. BRAKE SYSTEM*					
c. STEERING SYSTEM					m. SUSPENSION					
d. WINDSHIELD/WIPERS					n. COUPLING DEVICES					
e. MIRRORS					o. CARGO SPACE					
f. WARNING EQUIPMENT					p. LANDING GEAR*					
g. FIRE EXTINGUISHER*					q. TIRES, WHEELS, RIMS					
h. ELECTRICAL WIRING					r. TAILGATE/DOORS*					
i. LIGHTS AND REFLECTORS					s. TARPAULIN*					
j. FUEL SYSTEM*					t. OTHER *(Specify)*					

13. INSPECTION RESULTS *(X one)* **ACCEPTED** ☐ **REJECTED** ☐

(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)

14. SATELLITE MOTOR SURVEILLANCE SYSTEM: *(X one)* **ACCEPTED** ☐ **REJECTED** ☐

15. REMARKS

16. INSPECTOR SIGNATURE *(Origin)*

17. INSPECTOR SIGNATURE *(Destination)*

SECTION III - POST LOADING INSPECTION

This section applies to Commercial and Government/Military vehicles. All items will be checked prior to release of loaded equipment and shall be checked on all incoming loaded equipment.

	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR					
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT					
20. SEALS APPLIED TO CLOSED VEHICLE; TARPAULIN APPLIED ON OPEN EQUIPMENT					
21. PROPER PLACARDS APPLIED					
22. SHIPPING PAPERS/DD FORM 2890 FOR GOVERNMENT VEHICLE SHIPMENTS					
23. COPY OF DD FORM 626 FOR DRIVER					
24. SHIPPED UNDER DOT SPECIAL PERMIT 868					

25. INSPECTOR SIGNATURE *(Origin)*

26. DRIVER(S) SIGNATURE *(Origin)*

27. INSPECTOR SIGNATURE *(Destination)*

28. DRIVER(S) SIGNATURE *(Destination)*

INSTRUCTIONS

SECTION I - DOCUMENTATION

General Instructions.

All items (2 through 9) will be checked at origin prior to loading. Items with an asterisk (*) apply to commercial operators or equipment only. Only Items 2 through 7 are required to be checked at destination.

Items 1 through 5. Self explanatory.

Item 6. Enter operator's Commercial Driver's License (CDL) number or Military OF-346 License Number. CDL and OF-346 must have the HAZMAT and other appropriate endorsements IAW 49 CFR 383.

Item 7. *Enter the expiration date listed on the Medical Examiner's Certificate.

Item 8.a. Hazardous Materials Certification. In accordance with applicable service regulations, ensure operator has been certified to transport hazardous materials. Check the expiration date on driver's HAZMAT Certification.

b. *Valid Lease. Shipper will ensure a copy of the appropriate contract or lease is carried in all leased vehicles and is available for inspection. (49 CFR 376.12 and 376.11(c)(2)).

c. Route Plan. Prior to loading any Hazard Class/Division 1.1, 1.2, or 1.3 (Explosives) for shipment, ensure that the operator possesses a written route plan in accordance with 49 CFR Part 397. Route Plan requirements for Hazard Class 7 (Radioactive) materials are found in 49 CFR 397.101.

d. Emergency Response Guidebook (ERG) or Equivalent. Commercial operators must be in possession of an ERG or equivalent document. Shipper will provide applicable ERG page(s) to military operators.

e. *Driver's Vehicle Inspection Report. Review the operator's Vehicle Inspection Report. Ensure that there are no defects listed on the report that would affect the safe operation of the vehicle.

f. Copy of 49 CFR Part 397. Operators are required by regulation to have in their possession a copy of 49 CFR Part 397 (Transportation of Hazardous Materials Driving and Parking Rules). If military operators do not possess this document, shipper will provide a copy to operator.

Item 9. *Commercial Vehicle Safety Alliance (CVSA) Decal. Check to see if equipment has a current CVSA decal and mark applicable box. Vehicles without CVSA, check documentation of the last vehicle periodic inspection and perform DD Form 626 inspection.

SECTION II - MECHANICAL INSPECTION

General Instructions.

All items (12.a. through 12.t.) will be checked on all incoming empty equipment prior to loading. All UNSATISFACTORY conditions must be corrected prior to loading. Items with an asterisk (*) shall be checked on all incoming loaded equipment. Unsatisfactory conditions that would affect the safe off-loading of the equipment must be corrected prior to unloading.

SECTION II *(Continued)*

Item 12.a. Spare Electrical Fuses. Check to ensure that at least one spare fuse for each type of installed fuse is carried on the vehicle as a spare or vehicle is equipped with an overload protection device (circuit breaker). (49 CFR 393.95)

b. Horn Operative. Ensure that horn is securely mounted and of sufficient volume to serve purpose. (49 CFR 393.81)

c. Steering System. The steering wheel shall be secure and must not have any spokes cracked through or missing. The steering column must be securely fastened. Universal joints shall not be worn, faulty or repaired by welding. The steering gear box shall not have loose or missing mounting bolts or cracks in the gear box mounting brackets. The pitman arm on the steering gear output shaft shall not be loose. Steering wheel shall turn freely through the limit of travel in both directions. All components of a power steering system must be in operating condition. No parts shall be loose or broken. Belts shall not be frayed, cracked or slipping. The power steering system shall not be leaking. (49 CFR 396 Appendix G)

d. Windshield/Wipers. Inspect to ensure that windshield is free from breaks, cracks or defects that would make operation of the vehicle unsafe; that the view of the driver is not obscured and that the windshield wipers are operational and wiper blades are in serviceable condition. Defroster must be operative when conditions require. (49 CFR 393.60, 393.78 and 393.79)

e. Mirrors. Every vehicle must be equipped with two rear vision mirrors located so as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. Mirrors shall not be cracked or dirty. (49 CFR 393.80)

f. Warning Equipment. Equipment must include three bidirectional emergency reflective triangles that conform to the requirements of FMVSS No. 125. FLAME PRODUCING DEVICES ARE PROHIBITED. (49 CFR 393.95)

g. Fire Extinguisher. Military vehicles must be equipped with one serviceable fire extinguisher with an Underwriters Laboratories rating of 10 BC or more. (Commercial motor vehicles must be equipped with one serviceable 10 BC Fire Extinguisher). Fire extinguisher must be located so that it is readily accessible for use and securely mounted on the vehicle. The fire extinguisher must be designed, constructed and maintained to permit visual determination of whether it is fully charged. (49 CFR 393.95)

h. Electrical Wiring: Electrical wiring must be clean and properly secured. Insulation must not be frayed, cracked or otherwise in poor condition. There shall be no uninsulated wires, improper splices or connections. Wires and electrical fixtures inside the cargo area must be protected from the lading. (49 CFR 393.28)

INSTRUCTIONS

SECTION II *(Continued)*

i. Lights/Reflectors. (Head, tail, turn signal, brake, clearance, marker and identification lights, Emergency Flashers). Inspect to see that all lighting devices and reflectors required are operable, of proper color and properly mounted. Ensure that lights and reflectors are not obscured by dirt or grease or have broken lenses. High/Low beam switch must be operative. Emergency Flashers must be operative on both the front and rear of vehicle. (49 CFR 393.24, 25, and 26)

j. Fuel System. Inspect fuel tank and lines to ensure that they are in serviceable condition, free from leaks, or evidence of leakage and securely mounted. Ensure that fuel tank filler cap is not missing. Examine cap for defective gasket or plugged vent. Inspect filler necks to see that they are in completely serviceable condition and not leaking at joints. (49 CFR 393.83)

k. Exhaust System. Exhaust system shall discharge to the atmosphere at a location to the rear of the cab or if the exhaust projects above the cab, at a location near the rear of the cab. Exhaust system shall not be leaking at a point forward of or directly below the driver compartment. No part of the exhaust system shall be located where it will burn, char or damage electrical wiring, fuel system or any other part of the vehicle. No part of the exhaust system shall be temporarily repaired with wrap or patches. (49 CFR 393.83)

l. Brake System (to include hand brakes, parking brakes and Low Air Warning devices). Check to ensure that brakes are operational and properly adjusted. Check for audible air leaks around air brake components and air lines. Check for fluid leaks, cracked or damaged lines in hydraulic brake systems. Ensure that parking brake is operational and properly adjusted. Low Air Warning devices must be operative. (49 CFR 393.40, 41, 42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, and 55)

m. Suspension. Inspect for indications of misaligned, shifted or cracked springs, loosened shackles, missing bolts, spring hangers unsecured at frame and cracked or loose U-bolts. Inspect for any unsecured axle positioning parts, and sign of axle misalignment, broken torsion bar springs (if so equipped). (49 CFR 393.207)

n. Coupling Devices (Inspect without uncoupling). Fifth Wheels: Inspect for unsecured mounting to frame or any missing or damaged parts. Inspect for any visible space between upper and lower fifth wheel plates. Ensure that the locking jaws are around the shank and not the head of the kingpin. Ensure that the release lever is seated properly and safety latch is engaged. Pintle Hook, Drawbar, Towbar Eye and Tongue and Safety Devices: Inspect for unsecured mounting, cracks, missing or ineffective fasteners (welded repairs to pintle hook is prohibited). Ensure safety devices (chains, hooks, cables) are in serviceable condition and properly attached. (49 CFR 393.70 and 71)

o. Cargo Space. Inspect to ensure that cargo space is clean and free from exposed bolts, nuts, screws, nails or inwardly projecting parts that could damage the lading. Check floor to ensure it is tight and free from holes. Floor shall not be permeated with oil or other substances. (49 CFR 393.84)

p. Landing Gear. Inspect to ensure that landing gear and assembly are in serviceable condition, correctly assembled, adequately lubricated and properly mounted.

SECTION II *(Continued)*

q. Tires, Wheels and Rims: Inspect to ensure that tires are properly inflated. Flat or leaking tires are unacceptable. Inspect tires for cuts, bruises, breaks and blisters. Tires with cuts that extend into the cord body are unacceptable. Thread depth shall not be less than: 4/32 inches for tires on a steering axle of a power unit, and 2/32 inches for all other tires. Mixing bias and radial on the steering axle is prohibited. Inspect wheels and rims for cracks, unseated locking rings, broken, loose, damaged or missing lug nuts or elongated stud holes. (49 CFR 393.75)

r. Tailgate/Doors. Inspect to see that all hinges are tight in body. Check for broken latches and safety chains. Doors must close securely. (49 CFR 177.835(h))

s. Tarpaulin. If shipment is made on open equipment, ensure that lading is properly covered with fire and water resistant tarpaulin. (49 CFR 177.835(h))

t. Other Unsatisfactory Condition. Note any other condition which would prohibit the vehicle from being loaded with hazardous materials.

Item 14. For AA&E and other shipments requiring satellite surveillance, ensure that the Satellite Motor Surveillance System is operable. The DTTS Message Display Unit, when operative, will display the signal "DTTS ON". The munitions carrier driver, when practical, will position the DTTS message display unit in a manner that allows the shipping inspector or other designated shipping personnel to observe the "DTTS ON" message without climbing aboard the cab of the motor vehicle.

SECTION III - POST LOADING INSPECTION

General Instructions.

All placarded quantities items will be checked prior to the release of loaded equipment. Shipment will not be released until deficiencies are corrected. All items will be checked on incoming loaded equipment. Deficiencies will be reported in accordance with applicable service regulations.

Item 18. Check to ensure shipment is loaded in accordance with 49 CFR Part 177.848 and the applicable Segregation or Compatibility Table of 49 CFR 177.848.

Item 19. Check to ensure the load is secured from movement in accordance with applicable service outload drawings.

Item 20. Check to ensure seal(s) have been applied to closed equipment; fire and water resistant tarpaulin applied on open equipment.

Item 21. Check to ensure each transport vehicle has been properly placarded in accordance with 49 CFR 172.504.

Item 22. Check to ensure operator has been provided shipping papers that comply with 49 CFR 172.201 and 202. For shipments transported by Government vehicle, shipping paper will be DD Form 2890.

Item 23. Ensure operator(s) sign DD Form 626, are given a copy and understand the hazards associated with the shipment.

Item 24. Applies to Commercial Shipments Only. If shipment is made under DOT Special Permit 868, ensure that shipping papers are properly annotated and copy of Special Permit 868 is with shipping papers.

Item 26. Ensure driver/operator signs DD Form 626 at origin.

Item 28. Ensure driver/operator signs DD Form 626 at destination.

Uncontrolled when printed

PROJECT OR ACTIVITY:	**CORRECTIVE ACTION REQUEST**	CAR No. (Assigned by Quality):

CONDITION DESCRIPTION:

COMPLETED BY: _____

Name/Signature/Title Date Employee No.

ASSIGNED TO: _____ _____ _____

Name/Signature/Title Date Employee No.

CAUSE, CORRECTIVE & PREVENTIVE ACTION:

DUE DATE for Completion: _____

RESPONSIBLE MANAGER: _____

Name/Signature Date Employee No.

QUALITY MANAGER APPROVAL: _____

Name/Signature Date Employee No.

CORRECTIVE AND PREVENTIVE ACTION VERIFICATION:

Comments:

_____ _____ _____

Name/Signature/Title Date Employee No.

QUALITY MANAGER CLOSE OUT:

Comments:

_____ _____ _____

Name/Signature Date Employee No.

Appendix G

Explosive Safety Submission (not used)

Appendix H

Contractor Personnel Qualifications Letter (not used)

Appendix I

TPP Memoranda

TECHNICAL PROJECT PLANNING 2 MEMORANDUM
MAY 22, 2014
PHASE II ENVIRONMENTAL BASELINE SURVEY FOR AIR FORCE PLANT 59

Date: 5/22/14
Time: 2:30 PM EST to 3:30PM EST
Place: Teleconference
Attendees (Name – Affiliation):

- David Kovacs – Project Manager, Air Force Life Cycle Management Center (AFLCMC)
- Shah Alam – Project Manager, US Army Engineering Support Center, Huntsville (USAESCH)
- Kevin Healy – Engineer for Demolition, USAESCH
- Brett Frazier – Engineer for Environmental, USAESCH
- Michael D'Auben – Project Chemist, USAESCH
- Donnie Butler – Health and Safety, USAESCH
- Randy Battaglia – US Army Corps of Engineers (USACE) New York District
- Doug Schicho – Project Manager, CB&I
- Laura O'Donnell – Project Engineer, CB&I
- George Csordas – Asbestos and Lead Based Paint Lead, CB&I
- Eric Malarek – Project Chemist, CB&I

Introduction:

Shah Alam facilitated a brief introduction of people on the call. Shah Alam and Doug Schicho guided the rest of the meeting. Doug Schicho stated that comments were received on the work plan, APP, QASP, and UFP-QAPP. Prior to the meeting, Doug Schicho sent an email listing each document and the comments received to that document (see attachment #1). Shah reminded the group that in addition to the Air Force and USACE comments listed in Doug's email; comments were also distributed from Brian Jankauskas of NYSDEC. In the answers to questions provided during the solicitation, the government stated that regulatory review of work plans and reports by the regulatory agencies would not be required. Doug stated that he was not expecting to receive comments from the NYSDEC. This topic was tabled until later in the meeting.

Doug Schicho also stated that the CB&I project team was reviewing all comments and that the goal of this meeting was to address any outstanding comments and/or issues prior to modifying the planning documents. Formal responses will be provided for all USACE and Air Force comments received. Additionally, a tracked changes version of the modified text and complete PDF version will accompany the response to comments. Shah mentioned that comments had been received from Randy Battaglia. These comments were not distributed to CB&I. The Air Force is reviewing the comments to determine if they want to distribute them to CB&I.

UFP-QAPP

CB&I received comments from Michael D'Auben on the UFP-QAPP. There were a few general comments discussed on the call. A synopsis of the discussion is presented here. The full responses are included in the response to comment document.

Comment #1 stated that the UFP-QAPP indicated the laboratories were compliant with DoD QSM version 5.0. Eric Malarek explained that currently version 4.2 and 5.0 are both acceptable. He further explained that both the primary and QA laboratory were compliant with version 5.0. Michael

said that was fine, he mainly wanted to make sure the QAPP accurately reflected which version the laboratory was using.

Comment #3 asked if the text was correct in stating that samples from the dust collection system would be run for TCL Metals, TCL PCBs, … Eric stated that TCL Metals was a typographical error which should have read TCLP Metals. The text will be corrected. TCL PCBs is correct.

Comment #4 requested that the "laboratory limits" be included in the UFP-QAPP. Eric agreed and will incorporate the laboratory limits in the final QAPP.

Comment #16 indicated that the laboratory limits exceed some of the project action levels. Eric indicated that standard laboratory methods were being used and in some cases they cannot achieve all project action levels. Additionally the compounds affected were not target compounds for the investigation. Michael agreed with the approach to the response. This information will be added to the final QAPP.

QASP

CB&I received comments from David Kovacs and Brett Frazier on the QASP. These comments were straightforward and will be incorporated in the final QASP.

APP

CB&I received comments from David Kovacs and Donnie Butler on the APP. David Kovacs indicated that his comments were minor and did not need to be discussed on this call. Donnie Butler would like to see more site-specific information in the APP. The APP lacked an explanation of how some of the work would be performed. He indicated that the AHAs did not describe the sampling activities in sufficient detail to allow review. He would like to see a specific AHA for each different sampling activity. This information will be incorporated in the final APP. The APP will be presented for back check in tracked changes format along with a complete PDF version.

Work Plan

CB&I received comments from Kevin Healy, Brett Frazier, and David Kovacs on the work plan. While discussing the work plan, several issues arose:

- Mr. Healy indicated that the work plan lacked sufficient rationale for the collection of each sample. He indicated that not placing this additional rationale in the work plan was acceptable, however he would like to see this additional detail presented in the report.
- Brett Frazier stated that "Dig Safely New York" would only have information on public utilities and would not provide mark out for utilities within the building or on the property surrounding the building. Doug indicated he was aware of the issue and asked if Brett or anyone else on the team knew of any other active utilities except the fire protection loop, sewer line under the western part of the building and those along Main Street. Brett indicated that he was concerned with the storm drain lines associated with the oil water separators south of the building. Doug asked if there were any utilities within the building that were of concern. Brett did not know of any. Donnie Butler stated that although it is believed all of the utilities have been disconnected from the building, each line has to be approached as if it is live until shown to be otherwise. He stated that the APP needed a hazardous energy control plan and each electrical line would need to be evaluated by a competent person prior to contacting it. This plan must state the types of lifts and ladders to be used.
- David Kovacs indicated that he had some drawings showing the location and construction of the oil water separators. Doug asked if they could be provided. David provided them immediately after the teleconference. CB&I will review these drawings and use them for utility avoidance while performing DPT work in the area of the OWS.
- Brett indicated that although the work plan appeared complete, a final check of the work plan requirements should be conducted to be sure.

- Randy Battaglia asked if the x-ray room was still present. Doug indicated it was located using a drawing from the 1940s and that it was most likely gone. Randy suggested that any x-ray rooms (if identified) be inspected for the presence of photographic developing chemicals.
- All other comments/issues were minor and will be incorporated in the next iteration of the QASP.

Other Issues:

During the proposal Q&A, the client said NYSDEC review of the document was not required. However, NYSDEC commented on the work plan and suggested moving some samples and collecting additional samples during the field effort. Doug is to evaluate the comments to determine if any of the requested work is out of scope.

Schedule:

- CB&I anticipates submittal of RTCs and revised planning documents on Friday May 30, 2014. The back check of the documents will have to be conducted expeditiously to allow the field mobilization on schedule.
- The project team is on schedule to get in the field on June 9.

Follow-up Items:

- Shah Alam to provide Randy Battaglia's comment regarding radiological concerns to CB&I, if applicable.
- Shah Alam and Doug Schicho to determine if NYDEC comments will require a change order.
- CB&I will revise all planning documents incorporating the RTCs and results of the TPP discussions.

Schicho, Douglas

From: Schicho, Douglas
Sent: Thursday, May 22, 2014 2:22 PM
To: 'Alam, Shah HNC'; Butler, Donnie R HNC; Csordas, George; O'Donnell, Laura; Malarek, Eric
Cc: 'david.kovacs.3@us.af.mil'; Randy Battaglia (randy.w.battaglia@usace.army.mil); Frazier, Brett W HNC (Brett.W.Frazier@hnd01.usace.army.mil); 'Healy, Kevin W HNC'
Subject: RE: Air Force Plant 59 Weekly Meeting: TPP2 Meeting (UNCLASSIFIED)

Shah,

Here is a listing of the comments we have received thus far:

Work Plan – Healy, Frazier, Kovacs

APP – Kovacs, Butler

QASP – Frazier, Kovacs

UFP QAPP – D'Auben

Talk to you in a few minutes.

Doug

Douglas L. Schicho, PE, PMP
Project Manager 2
Federal Services
Tel: 973.770.5306
Cell: 973.508.7468
Fax: 973.770.5315
Douglas.Schicho@CBIFederalServices.com

CB&I
111 Howard Boulevard, Suite 110
Mt. Arlington, NJ 07856
USA
www.cbi.com

-----Original Appointment-----
From: Alam, Shah HNC [mailto:Shah.Alam@usace.army.mil]
Sent: Wednesday, May 14, 2014 11:59 AM
To: Alam, Shah HNC; Butler, Donnie R HNC; Schicho, Douglas; Csordas, George; O'Donnell, Laura; Malarek, Eric
Subject: Air Force Plant 59 Weekly Meeting: TPP2 Meeting (UNCLASSIFIED)
When: Thursday, May 22, 2014 2:30 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: CONF-CT Small Conference Room

Classification: UNCLASSIFIED
Caveats: NONE

Agenda

TPP2 Meeting for EBS2.

HNC Team will meet at CT Small Conference Room.

Teleconference call in number, 1-888-675-2535, access code 7315850, security code 1234

Shah Alam
(256) 895-1349 Desk
(256) 698-0481 Mobile

Classification: UNCLASSIFIED
Caveats: NONE

TECHNICAL PROJECT PLANNING 1 MEMORANDUM
APRIL 24, 2014
PHASE II ENVIRONMENTAL BASELINE SURVEY FOR AIR FORCE PLANT 59

Date: 4/24/14
Time: 10:00AM EST to 4:00PM EST
Place: Air Force Plant 59, Johnson City, NY
Attendees (Name – Affiliation):

- George Walters – Team Lead, Air Force Civil Engineer Center (AFCEC)
- David Kovacs – Project Manager, Air Force Life Cycle Management Center (AFLCMC)
- Shah Alam – Project Manager, US Army Engineering Support Center, Huntsville (USAESCH)
- Kevin Healy – Engineering for Demolition, USAESCH
- Brett Frazier – Engineer for Environmental, USAESCH
- Randy Battaglia – US Army Corps of Engineers (USACE) New York District
- Doug Schicho – Project Manager, CB&I
- Laura O'Donnell – Project Engineer, CB&I
- George Csordas – Asbestos and Lead Based Paint Lead, CB&I

Introduction:

George Walters, AFCEC Team Lead, and David Kovacs, Air Force Project Manager, provided a brief introduction to the project. Doug Schicho, following the attached Power Point presentation, guided the rest of the meeting. The detailed information is captured on the presentation, with a summary provided below along with the content of discussion points and all decisions made. Additionally, the presentation has been updated based on the changes made during this TPP meeting.

Technical Project Planning (TPP) Process:

The presentation provided a brief overview of the TPP process including the four phases: 1) Identification of current project area, 2) Determination of data needs, 3) Development of data collection options, and 4) Finalization of the data collection program.

Project Stakeholders:

The presentation provided a list of project stakeholders. It was noted that USACE New York District and Air Force Civil Engineer Center (AFCEC) should be added to the list of project stakeholders. The revised presentation has been modified accordingly. New York Department of Environmental Conservation (NYDEC) will not provide formal reviews/approvals of work plans or reports, but wants to be informed of the progress of the project. Additionally, the NYSDEC will participate in the TPP 2 meeting. Broome County Industrial Development Agency (BCIDA) involvement will be limited to being briefed by the Air Force, providing security detail and logistical interaction while providing building access during sampling activities.

Project Overview:

The presentation provided a review of the project objectives, site history, and pertinent site characteristics, with additional information provided at the meeting. Most notable information regarding the site:

- Air Force Plant 59 (AFP 59), which has produced aircraft components since 1942, was closed in 2011 after severe flooding associated with Hurricane Irene and Tropical Storm Lee. The building is set to be demolished and the land transferred to BCIDA.

- The goal of the Phase II Environmental Baseline Survey (EBS) is to collect sufficient data to inventory remaining hazardous materials/wastes to include locations and quantities that can be used for cost estimating purposes by the demolition contractor.
- Over the years, numerous investigations have been performed at AFP 59. George Walters provided a CD containing the Administrative Record. It should be noted that compliance documents and PCB documents are not located within the IRP Administrative Record. A CD containing scanned documents was also provided by Brett Frazier during the pre-bid site walk. These documents included all available IRP and compliance documents.

Conceptual Site Model:

The presentation provided a review of the conceptual site model and identified the source areas at AFP 59. The following additional details were provided during the CSM discussion.

- CSM Access:
    - Security guards patrol the area, but do not access buildings. During their patrol, they check entry points.
- CSM Source:
    - Doug Schicho, CB&I Project Manager, asked whether CSM source discussions can be grouped by contaminant of concern (COC), rather than by each facility, in the work plan and report. Kevin Healy USAESCH Engineer for Demolition and Brett Frazier, USAESCH Engineer for Environmental, stated that discussions should be separated by facility due to the potential for phased demolition.
    - It was noted that PCB Contaminated building material should be added as an additional source area at the Production Complex and Plant Admin (Facilities #0001 and #0002). The presentation has been modified accordingly. Randy Battaglia, USACE New York District, stated that hydraulic fluids and pump oils could be a potential PCB source. Doug Schicho agreed and stated that CB&I will sample identified hydraulic fluids and pump oils.
    - ACM: Kevin Healy, USAESCH Engineering for Demolition, stated that floor tile and mastic are examples of the category of ACM materials that may not have to be abated prior to demolition since they do not have a high probability of becoming friable during the demolition effort. However, USAESCH policy is to remove all ACM regardless. Therefore these materials should not be skipped over during the asbestos survey. George Csordas, stated that CB&I plans to inventory all ACM, regardless of its category. NYDEC requires removal of all ACM, regardless of its category, prior to demolition. Kevin also suggested that when estimating the quantities of ACM in the building to be conservative in estimating materials that cannot be accessed. Being conservative will minimize the potential for unnecessary change orders at the abatement phase of the project.
    - Other Regulated Materials (ORM): It was noted that Thermostats, glycol systems, and smoke detectors should be added as potential sources. The presentation was modified accordingly.
    - The participants had a thorough discussion of the soil contamination underneath the production complex. The following information was discussed:
        - George Walters stated that TCE contaminated soil still remains behind the wall on the eastern portion of the basement in the Production Complex and at one location within the basement where excavation was stopped due to structural integrity concerns. It is unclear how TCE contamination was released in and

around the eastern basement, but the follow-on sampling should focus on determining the extent of the TCE contaminated soil in the area.

- CB&I will comply with State Law and use the one call system for drilling and excavations outside of the building; however it is believed that the only active utilities on the property are the sewer line beneath the buildings west side and the fire protection loop around the building's exterior. In the western portion of the basement, the sewer line is exposed. Elsewhere, paint lines mark the location of the sewer line from a previous mark out.
- Shah Alam, USAESCH Project Manager, to send CB&I the groundwater LTM data from the most recent round of sampling. (action item completed on 29 April 2014).
- George Walters brought up concern about the soil in the area of the former Plating Building, which was closed under the IRP. Former IRP sites have not been the subject of the proposed sampling because they are closed out. However this area could be a potential contributor to VOC contamination in soil. Brett Frazier recommended moving some borings to the area. The sampling proposed in the work plan will relocate some DPT borings from within the building to the area downgradient from the former plating area.
- George Walters had some concern about characterizing any fly ash present. If DPTs show possible fly ash, CB&I proposes to dig a test pit. The location of the test pit will be selected based on the DPT borings. If the borings indicated buried material a test pit may be used to further examine the nature of the buried material.

o Air Duct System:

- CB&I received a 1998 memorandum indicating that residue from the dust collection system had exceedances of NYS cleanup standards for oil, grease, arsenic, cadmium, chromium, and lead. However no quantitative results or laboratory package was included with the memo.
- Sampling of the cyclone system will be performed. The method of obtaining the system will be determined in the field; however sampling may be possible from cleanouts on the cyclones. If cleanouts are not accessible, CB&I will propose confined space entry if something is identified within the air duct system that requires additional characterization. Additionally, if "sampleable" material is not present/accessible in the floor ducts then destructive sampling to locate material in the ducts will be considered.

o Former Gun Range: Randy Battaglia recommended sampling for lead and barium because barium is a constituent in primers and propellant for small arms. TCLP metals should be run on any dust or residual material as lead, mercury and barium are common in priming compounds.

o Loading and Unloading Platform and Hazardous Material Storage: David Kovacs provided the location of these areas. See attached figure for the location.

o Water Supply:

- David Kovacs stated that fuel will be found within the reservoir pump and the presence of fuel should be confirmed during the inspection.
- The outside fire hydrants and the fire suppression loop are the only water supply sources that are pressurized.

- Active Sewer Line: A note will be added to the final report telling the demolition/remediation contractor that they will have to coordinate with the local sewer authority for proper backfilling of the sewer line exposed in the west basement.

Data Quality Objectives:

The presentation provided a review of the Data Quality Objectives at AFP 59. The following additional details were provided during the DQO discussion.

1. State the problem
2. Identify the decision
3. Identify inputs to the decisions
   - CB&I will use previous investigations as a guide, but will perform a complete pre-demolition survey.
4. Define study boundary
5. Develop decision rules
   - Asbestos Survey: CB&I will perform the asbestos survey IAW NY standards. As required, CB&I will perform destructive sampling to estimate ACM. The stakeholders would prefer an overestimate of ACM in order to minimize the potential for a change order for the Asbestos Abatement Contractor.
   - CB&I will sample the trestle for the presence of ACM.
6. Specify tolerable limits on decisions
7. Optimize the design

Proposed Field Work:

The presentation provided a review of the Proposed Field Work at AFP 59. The following additional details were provided during the discussion.

- Painted Surfaces:
  - Doug Schicho proposed the removal of chip sampling from the PCB paint sampling investigation and focusing PCB sampling on core samples alone. Kevin Healy agreed with this approach but stated that one sample will be required for each independent paint history identified during the LBP survey. The presentation has been modified accordingly.
- Sub-slab Soil:
  - The Air Force would like the soil samples biased to the eastern portion of the basement where TCE was previously identified, but not entirely removed. Sampling will go deeper in these areas.
  - Shah Alam to send the May 2011 Geosyntec Report to CB&I. This report recalculated the vapor intrusion (VI) area. This revised vapor intrusion area was based on a more rigorous analysis than the Earth Tech document and should be factored into the initial Geoprobe sample location placement.
  - The number of sub-slab soil borings within the building may be reduced in order to place some soil borings down gradient from the former metal plating facility.
  - As the synthetic precipitation leaching procedure (SPLP) method is to evaluate the potential for contamination to leach from soil into groundwater, it is believed that totals analysis of soil is the most appropriate method for comparison to NYSDEC SCOs. The method of analysis will be presented in detail in the UFP-QAPP for the project.
- Dust Collection System:

  - CB&I plans to use a remote camera system to look at the cyclone vents. The cameras will be used to determine the location of the auger systems and to determine if there is adequate quantities of material to sample. The project team agreed with that approach. Destructive sampling will be performed to attempt to access augers should there be an adequate amount of material that cannot be sampled by another method.
  - Randy Battaglia raised a potential concern over a Magnesium-Thorium alloy that was used in manufacturing in the past and can be radioactive. Although there is no documentation that it was used at AFP 59; if it was used the alloy could be present in the dust. CB&I will research the issue further and consider a field screening for RAD if it appears to be a concern for this building.

- Loading/Unloading and Hazardous Material Storage
  - George Walters and David Kovacs identified the location of these two features on the building map.
- Water Supply
  - Doug indicated that based on a review of the administrative record it appeared that there were only two data gaps associated with TCE contaminated soil in the area of the water supply. The first data gap was depth delineation in the area of samples DP003 and DP025. The second data gap is horizontal delineation in the area east-northeast of sample DP003. Direct push borings will be placed in these areas in order to close these gaps. See the attached map for the locations of previous sampling locations DP0003 and DP025.

Schedule:

- The project team had concerns about the schedule. Since the demolition contract has to be awarded this fiscal year, the Air Force needs the EBS Report for the contractors to base their bid. Therefore the schedule must be expedited whenever possible. The most crucial date is the delivery of the draft report on 20 August 2014. The delivery of the draft report must not extend past this date
- In order to expedite the schedule, the project team would prefer to receive digital copies of the draft work plan. They will also cut their review period down to 5 days. Reducing the review time by 5 days moves the field work and reporting up by 5 days. The project schedule has been revised and is attached to this TPP 1 memorandum.
- The project team has no issues with CB&I getting into the building early for surveying. However, CB&I must have an approved APP before starting any fieldwork.
- The aboveground demolition and soil remediation effort may be awarded as two separate contracts or a single contract. CB&I plans to focus on the aboveground aspect of the site first. Shah Alam agreed with this approach.

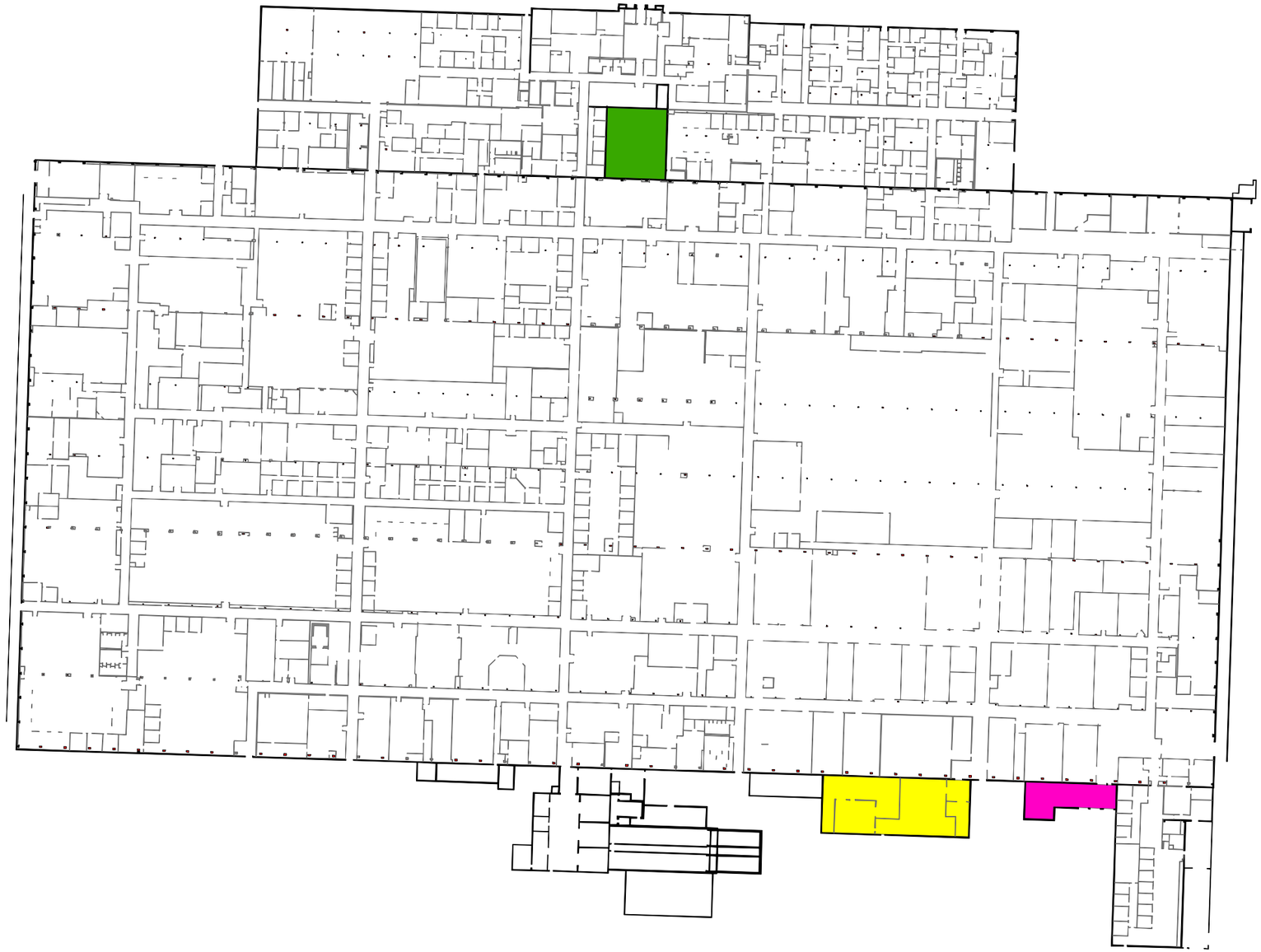
Follow-up Items:

- Shah Alam to send CB&I groundwater LTM data from the most recent sampling round (action item completed on 29 April 2014).
- Shah Alam to send the May 2011 Geosyntec Report to CB&I.
- Doug Schicho to provide the Xnet location site to project team.
- Shah Alam to give CB&I the conference call number for the weekly conference call. (completed on 30 April 2014)

- Shah Alam to determine whether CB&I needs a second notice to proceed.
- Shah Alam to ask the safety office if they will review the APP prior to receiving the Work Plan.
- CB&I will develop a work plan incorporating the information presented and results of discussions.

Attached: Revised TPP Presentation, figure showing site features pointed out during the meeting, figure showing previous DPT sample results in the reservoir area, figure depicting DPT sampling previously conducted in the area of the east basement, and revised schedule.

N



Buliding Column
Building Interior Wall
Building Exterior Wall
COURTYARD
FORMER PLATING FACILITY
LOADING DOCK AND HAZARDOUS MATERIALS STAGING AREA

0 100 200 Feet

Projection : NAD_1983_StatePlane_New_York_Central_FIPS_3102_Feet

U.S. ARMY ENGINEERING SUPPORT CENTER
HUNTSVILLE

FIGURE NUMBER X-X

AIR FORCE PLANT 59
BUILDING FLOOR PLAN
INTERNAL USE
JOHNSON CITY, NY

CB&I Federal Services LLC
111 Howard Blvd., Suite 110
Mt. Arlington, New Jersey 07856

Generated By: JCP Date: 04/29/14 File Path:G:\AFP_59\GIS_Documents\Project_Maps\AFP59_001_FigX-X_Building_Floorplan_InternalUse.mxd

Project Number: 500179

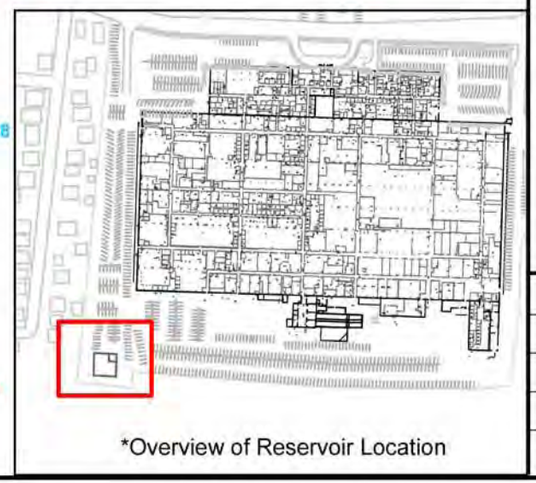
DP015
DP031
DP036
DP014
DP020
DP009
DP005
DP012
DP030
DP013
DP002
DP001
DP021
DP023
DP016
DP022
DP026
DP004
DP025
DP024
DP003
DP029
Fire Suppression Reservoir
DP017
DP006
DP027
DP028
DP008
DP007
DP032
DP018
DP034
DP019
DP033
DP035
DP010
DP011

Direct Push Sampling Point November'09

Direct Push Sampling Point August '09

N

0 25 50 100 150 200 Feet



*Overview of Reservoir Location

AECOM

AIR FORCE PLANT 59 VAPOR INTRUSION INVESTIGATION

FIGURE 5.3-1

Fire Suppresion Reservoir Sample Locations

PROJECT NO 60134438	TASK NO 04
DESIGNED BY M.Kline	DRAWN BY M.Kline
CHECKED BY D. Parse	DATE September 2010
SCALE 1" = 50'	SHEET 1 of 1

Figure_5.3-1.mxd

DP001		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	281
TCE	ND	ND

DP002		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	1.41 J	2.1 J
TCE	102	186

DP003		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	3.98 J	79.6
TCE	23.5	585

DP004		
	Depth: 3 ft bgs	Depth: 7 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6700	1920
TCE	13200	389

DP005		
	Depth: 4 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.55 J
TCE	2.94 J	8.87

DP006		
	Depth: 7 ft bgs	Depth: 14 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	1.81 J	ND
TCE	ND	0.574 J

DP007		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	24.2	ND
TCE	12.1	70.9

DP008		
	Depth: 4 ft bgs	Depth: 10 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	0.578 J	0.576 J

DP009			DP009 DUP
	Depth: 4 ft bgs	Depth: 8 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.32 J	ND
TCE	ND	ND	ND

DP010		
	Depth: 4 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	198 J	0.484 J

DP011		
	Depth: 2 ft bgs	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP012		
	Depth: 4 ft bgs	Depth: 11 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP013		
	Depth: 3 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	269	1.15 J

DP014			DP014 DUP
	Depth: 5 ft bgs	Depth: 10 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND	ND
TCE	3 J	227	2.04 J

DP015		
	Depth: 5 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	108	ND

DP016		
	Depth: 2 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	2.9 J	4.46 J
TCE	6.61	5.66

DP017		
	Depth: 3 ft bgs	Depth: 5 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	0.846 J	7.35

DP018			DP018 DUP
	Depth: 3 ft bgs	Depth: 6 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	17.1	3.54 J	110 J
TCE	22.3	17.3 J	385 J

DP019		
	Depth: 4 ft bgs	Depth: 10 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6.82	65.3
TCE	18.7	263

DP020		
	Depth: 4 ft bgs	Depth: 6 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	57.7	ND
TCE	227	222

DP021		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	14.2	234
TCE	ND	32.8 J

DP022		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	2260	3.69 J
TCE	42.2 J	6.18 J

DP023		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	11.3	6.55
TCE	8.56	5.3

DP024		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	53	3.04 J
TCE	22.5	11.4

DP025		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	12.6	432
TCE	71.3	4870

DP026			DP026 DUP
	Depth: 4 ft bgs	Depth: 8 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	6.37 J	6.33	9.31
TCE	12.1	4.68 J	8.86 J

DP027		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	364	ND
TCE	259	3.26 J

DP028		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	ND
TCE	ND	ND

DP029			DP029 DUP
	Depth: 4 ft bgs	Depth: 8 ft bgs	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	3.34 J	ND	ND
TCE	ND	ND	ND

DP030		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	15.9
TCE	ND	52.8

DP031		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	880	1.08 J
TCE	387	1.84 J

DP032			DP032 DUP
	Depth: 4 ft bgs	Depth: 8 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)	Concentration (µg/kg)
TCA	18	3.48 J	4.13 J
TCE	45.1	5.12	6.15

DP033	
	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)
TCA	141 J
TCE	ND

DP034		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	9.19	15
TCE	29.4	76.6

DP035	
	Depth: 4 ft bgs
Analyte	Concentration (µg/kg)
TCA	16.2
TCE	ND

DP036		
	Depth: 4 ft bgs	Depth: 8 ft bgs
Analyte	Concentration (µg/kg)	Concentration (µg/kg)
TCA	ND	1.92 J
TCE	ND	2.14 J

DP015 DP031 DP036 DP014 DP020 DP009 DP005 DP012 DP013 DP001 DP021 DP002 DP016 DP023 DP022 DP029 DP004 DP026 DP024 DP025 DP003 DP017 DP006 DP027 DP028 DP018 DP032 DP019 DP034 DP007 DP008 DP033 DP035 DP010 DP011

Fire Suppression Reservoir

TCE Concentrations
- 0 - 10 µg/kg
- 10 - 100 µg/kg
- 100 - 1,000 µg/kg
- 1,000 - 13,200 µg/kg

N

0 25 50 100 150 200 Feet

AECOM

AIR FORCE PLANT 59 VAPOR INTRUSION INVESTIGATION

FIGURE 5.3-3

Direct Push Soil Sampling Locations and Results
Fire Suppression Reservoir Area

PROJECT NO	TASK NO
60134438	04
DESIGNED BY M.Kline	DRAWN BY M.Kline
CHECKED BY D. Parse	DATE September 2010
SCALE 1" = 50'	SHEET 1 of 1

Figure_5.3-3.mxd

DP2	Depth 6'	Depth 15'	Units
1,1,1-TCA	n/d	0.191	mg/Kg
Carbon Tetrachloride	n/d	0.393	mg/Kg
TCE	n/d	**5.48**	mg/Kg

EB1-E15-N5	Surface	Depth 3'	Units
1,1-Dichloroethane	n/t	**2.4**	mg/Kg
TCE	n/t	**9.5**	mg/Kg
Methylene Chloride	**0.99**	n/t	mg/Kg

EB1-E20-N5	Surface	Depth 3'	Depth 6'	Units
Methylene Chloride	**0.18**	**7.2**	n/t	mg/Kg
TCE	n/t	**21.0**	**48**	mg/Kg

EB1-E5-N3	Surface	Depth 3'	Units
1,1-Dichloroethane	**0.85**	**24.0**	mg/Kg
1,1,1,-TCA	n/t	**5.7**	mg/Kg
TCE	n/t	**4.6**	mg/Kg

EB1-E20	Surface	Depth 3'	Depth 6'	Units
Methylene Chloride	n/t	**0.26**	**0.14**	mg/Kg
1,1,1-TCA	**4.4**	n/t	n/t	mg/Kg
TCE	**8.7**	n/t	n/t	mg/Kg
PCE	**1.4**	n/t	n/t	mg/Kg
Toluene	**5.6**	n/t	n/t	mg/Kg
m-xylene & p-xylene	**9.9**	n/t	n/t	mg/Kg
o-xylene	**2.5**	n/t	n/t	mg/Kg

EB1-E5	Surface	Depth 3'	Depth 6'	Units
TCE	**0.72**	**1.8**	n/t	mg/Kg
Methylene Chloride	n/t	n/t	**0.18**	mg/Kg

DP1	Depth 6'	Depth 15'	Units
--	n/d	n/d	mg/Kg

EB1-N5	Depth 3'	Units
Methylene Chloride	**0.17**	mg/Kg
TCE	**3.4**	mg/Kg

EB1-N30	Depth 1'	Depth 6'	Units
1,1,1-TCA	0.0015	n/d	mg/Kg
TCE	0.050	n/d	mg/Kg

EB1-N50	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

DP3	Depth 6'	Depth 15'	Units
TCE	0.0008	n/t	mg/Kg

EB1-N110	Depth 1'	Depth 6'	Units
TCE	n/d	0.0006	mg/Kg

EB1-N110-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N130	Depth 1'	Depth 6'	Units
1,1,1-TCA	0.0009	n/d	mg/Kg
TCE	0.0046	n/d	mg/Kg

EB1-N130-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N170	Depth 1'	Depth 6'	Units
1,1,1-TCA	n/d	0.002	mg/Kg

EB1-N170-E5	Depth 1'	Depth 3'	Units
--	n/d	n/d	mg/Kg

EB1-S20	Depth 1'	Depth 3'	Depth 6'	Units
1,1,1-TCA	n/d	**1.69**	0.0368	mg/Kg
Carbon Tetrachloride	n/d	0.614	0.0033	mg/Kg
TCE	n/d	**4.24**	0.0809	mg/Kg
Chloroform	n/d	n/d	0.0008	mg/Kg

EB1-N50-E5	Depth 1'	Depth 6'	Units
	n/d	n/d	mg/Kg

EB1-N30-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N150	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N150-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N210	Depth 1'	Depth 6'	Units
1,1,1-TCA	n/d	0.008	mg/Kg
1,2,3-Trichlorobenzene	n/d	0.0006	mg/Kg
1,4-Dichlorobenzene	n/d	0.0007	mg/Kg
Carbon Tetrachloride	n/d	0.0011	mg/Kg
Naphthalene	n/d	0.0017	mg/Kg

EB1-E5-S5	Depth 3'	Units
Methylene Chloride	**0.31**	mg/Kg

EB1-N70-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N70	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-E15	Surface	Depth 3'	Units
Methylene Chloride	0.3	**1.1**	mg/Kg
TCE	n/t	**31**	mg/Kg

EB1-N90	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

EB1-N90-E5	Depth 1'	Depth 6'	Units
--	n/d	n/d	mg/Kg

78'-4"

NOTES:

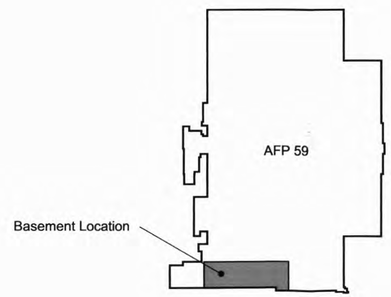
Although they may NOT exceed contamination limits, all sampling results are shown; exceedances are highlighted in yellow.

CONTAMINATION LIMITS:

Recommended Soil Cleanup Goals Per TAGM #4046	
1,1,1-Trichloroethane	0.8 mg/Kg
Trichloroethene (TCE)	0.7 mg/Kg
Tetrachloroethene (PCE)	1.4 mg/Kg
Toluene	1.5 mg/Kg
m-xylene & p-xylene	1.2 mg/Kg
Methylene Chloride	0.1 mg/Kg
Chloroform	0.3 mg/Kg
1,1-Dichloroethane	0.2 mg/Kg
1,2,3-Trichlorobenzene	N/A
1,4-Dichlorobenzene	8.5 mg/Kg
Naphthalene	13.0 mg/Kg
Carbon Tetrachloride	0.6 mg/Kg

LEGEND:

- DIRECT PUSH SAMPLE LOCATION (from 1st floor) BY EARTH TECH
- HAND AUGER SAMPLE LOCATION BY EARTH TECH
- PREVIOUS HAND AUGER SAMPLE LOCATION BY BAE
- SAMPLED SOIL PILE
- /// AREA OF SOIL EXCEEDING TAGM LEVELS TO BE REMOVED
- n/d NON-DETECT
- n/t NO SAMPLE TAKEN



Key Plan

0' 5' 10' 15'
SCALE: 3/32" = 1'-0"

N

NO.	REVISIONS	BY	DATE

E A R T H T E C H
675 North Washington Street, Suite 300, Alexandria, Virginia 22314
Telephone 703.549.8728 Facsimile 703.549.9134
www.earthtech.com

AFP-59 Johnson City, New York

Figure 4

East Basement Soil Contamination

DESIGNED BY	DWG SCALE
P. Granger	See Dwg
DRAWN BY	CONTRACT NO.
C. Moran	--
CHECKED BY	DATE
J. Dixon	12-27-04
CAD FILE NAME	
Figure 1.dwg	

Phase II

Environmental Baseline Survey

Technical Project Planning Meeting 1

Revised based on TPP Meeting

Douglas Schicho, PE PMP, CB&I Federal Services

April 24, 2014

Presentation Outline

- Project Stakeholders
- Project Objectives
- Site Location
- Site History
- Pertinent Previous Investigations
- Conceptual Site Model
- Data Quality Objectives
- Proposed Field Work
- Proposed Screening Levels
- Schedule






Project Stakeholders

- Air Force Life Cycle Management Center
- US Army Engineering Support Center Huntsville
- New York State Department of Environmental Conservation
- Broome County Industrial Development Agency
- Air Force Civil Engineer Center
- US Army Corps of Engineers, NY District






Project Objectives

- Perform a Phase II Environmental Baseline Survey in accordance with DOD, Air Force, USACE and State Regulations.
- Sample, identify, and quantify all ACM, Other Regulated Materials , RCRA constituents, and PCB contaminated items/materials in order to provide sufficient data to support delineation of those materials for demolition and soil remedial actions.
- Collect sufficient data to inventory remaining hazardous materials/wastes to include locations and quantities that can be used for cost estimating purposes by the demolition contractor.






Project Location

Site Description:
Air Force Plant 59
Broome County, NY
Longitude – 75° 58' 23.39" W
Latitude – 42° 6' 52.162" N

Site History

- Built in 1942 by the Defense Plant Corporation to produce aircraft propellers during World War II.
- As a USAF government-owned, contractor-operated (GOCO) facility, AFP 59 has manufactured aircraft-related products since 1942.
- Remington Rand, the first manufacturer to occupy the plant, produced aluminum aircraft propellers from 1942 to 1945.
- After World War II, the plant was used as a warehouse and for reserve training.
- In 1948, the plant was occupied by the Aeronautics and Ordnance Systems Division of General Electric (GE) to produce aircraft flight and fire control components.
- During the 1970s and 1980s, production changed from manufacturing mechanical systems to producing electronic and computer systems, such as flight controls and internal navigation and guidance systems.
- In 1993, Martin Marietta acquired GE Aerospace and took over operation of AFP 59.






- In the late 1990's the USAF entered into an agreement to divest ownership of the property to BCIDA.
- The most recent occupant, BAE, acquired Lockheed Martin Control Systems and assumed operations of AFP 59 in April 2000.
- In June 2006, the Susquehanna River flooded and inundated AFP 59.
- In 2011, Hurricane Irene and the remnants of Tropical Storm Lee caused major flooding in the Susquehanna River Valley and inundated AFP 59 again.

BAE Westover
Photo by Bill Walsh

Pertinent Previous Environmental Investigations

- Asbestos Management Plan, (late 1980s)
- Environmental Baseline Survey, EarthTech (February 1995)
- Supplemental Site Inspection for Air Force Plant 59, Johnson City, New York , Argonne National Laboratory, (August 1995)
- Environmental Baseline Survey Addendum, (January 2000)
- Investigation and Remediation of Various PCB Impacted Areas, IT Corporation (2001) – *document missing*
- PCB Management Plan, O'Brian and Gere (March 2005) – *portions of document missing*
- East Basement Soil Excavation Letter Report , EarthTech (December 2005)
- Groundwater RI, decision documents, and monitoring reports (various)
- Vapor Intrusion Remedial Investigation Report, AECOM (April 2011)
- Supplemental Vapor Intrusion Remedial Investigation Report and Focused Feasibility Study, AECOM (July 2012)
- Visual Inspection Report, USACE (June 2013)
- Environmental Assessment for the Proposed Demolition of Air Force Plant 59, Johnson City, New York (October 2013)
- Finding of No Significant Impact/Finding of No Practicable Alternative, Demolition of Air Force Plant 59 (2013)

CSM Components

- Activity:
  - AFP 59 is currently unoccupied and does not currently support any mission critical activities.
  - Land use in the vicinity of AFP 59 is predominately commercial/industrial and residential.
- Access:
  - Unauthorized access is prohibited
  - Security guards patrol the area.
  - Rear portion of the site is fenced.
- Receptors:
  - Security guards, construction workers, and trespassers.






Conceptual Site Model – Sources

- Production Complex and Plant Admin (Facilities #0001 and #0002)
  - PCB contaminated building materials and soil beneath building
  - VOCs in soil beneath the building
  - Contents of dust collection systems
  - Contents of classified document incinerator
  - Former Gun Range
- Loading and Unloading Platform – Facility #0003
  - Contamination of concrete
- Water Supply, Water Storage, Asphalt/Concrete Parking Areas (Facilities #0007, #0028, #0034)
  - Characterization of reservoir water
  - Subsurface soil VOC contamination
- Hazardous Material Storage (Facility #0025)
  - Blind sump and concrete contamination
- Oil Water Separators, Neutralization Tank
  - Contents of Oil Water Separators
  - Soil downgradient/beneath Oil Water Separators






CSM Sources – Asbestos Containing Material

- Asbestos Containing Material (ACM) use in floor tile and mastics to pipe insulation, was commonplace during construction in the 1940s.
- Asbestos presence at the plant has been documented through a prior asbestos survey. Although, ACM inventory, locations and quantities are not current and comprehensive.











- Paint and coatings have the potential to contain Lead Based Paint (LBP) and PCB contaminated paint.
  - Lead Based Paint (LBP) was routinely applied prior to 1978.
    - LBP was used to increased durability, maintain its appearance and resist moisture that causes corrosion.
    - The State of New York does not regulate the presence of LBP in non-residential, non-childcare facilities. The removal of lead containing paint is not required by regulations prior to demolition.
  - PCB contaminated paint was used at DOD and other industrial facilities to increase its fire-retardant capability
    - Materials painted with PCB-containing paint may constitute bulk product waste.
- Layers of paints may be present with different characteristics

- Other Regulated Materials (ORM) present include:
  - Light Ballasts in the office and plant areas should have been replaced
    - Ballasts in the cat walk areas may contain PCBS
  - Mercury switches (and other equipment such as thermostats) may still be in place
  - Lab Pack
    - Majority of materials and chemicals have been removed. Isolated instances of laboratory chemicals may be present
  - Petroleum, Oils, Lubricants (POL) and paints/coatings
    - Majority of POL have been removed. Isolated instances of these materials still present in the building may occur
    - Machinery may still contain lubricants
  - Fuel
    - Generators and other fuel tanks may not have been drained
  - Smoke Detectors
  - Glycol Systems











- Building materials have been contaminated with PCBs through spills and leaks of transformer oil.
  - Transformers formerly within the rafters have leaked and contaminated wooden rafters, wooden cat walks, and potentially the flooring below.
    - According to the PCB management plan, 14 wooden platforms, 1 stairwell, and 3 air handling units are known to be contaminated
  - There also may have been spills and leaks on the floor level resulting in contaminated flooring material and building slab. Stained concrete areas identified after the removal of warped flooring may contain PCBs.
    - 24 areas of flooring (114,891 sq ft) were formerly designated as restricted work areas
  - PCBs may have migrated through cracks/joints in building slab to contaminate soil beneath the slab

- Spills of VOCs in the building may have migrated to subsurface soil beneath the building through cracks and joints.
- Storage of VOCs in the building (tanks, degreasers, etc.) may have released vapors which over time can accumulate in sub-slab soils.
- Extensive investigation of vapor intrusion into the building has identified chlorinated solvents in indoor air and beneath the building in soil gas.
    - Soil gas sampling is an indicator of potential sub-slab soil contamination but can also be indicative of groundwater contamination.
- Areas of concern:
    - Soil in the area of elevated soil-gas readings
    - The eastern basement of the building was the subject of a soil removal action for TCE contamination. The soil removal was not completed due to the concern of undermining the building foundation.
    - Groundwater samples collected in the area of the fire suppression reservoir exhibited chlorinated solvents above comparison criteria.






- A dust collection system was used to collect shavings and dust from the propeller blades.
  - The building has in-floor ducts connected to large cyclone systems in the rafters that would vacuum dust swept into the floor ducts.
  - The cyclone system would separate dust and cutting oils. The cutting oils were recovered and the dust was blown into bins on the roof for later removal by rail car.
- These systems may have never been cleaned out after usage stopped after WWII.
- The dust and other debris/oil in the duct work have not been characterized.
  - Potential COCs: metals, PCBs, VOCs, and SVOCs






- Classified document incinerator should have only been used for paper however burning of other waste materials cannot be ruled out.
  - Potential COCs: metals, VOCs, SVOCs, and PCBs
- Small Arms weapons systems manufactured in the building were tested in the former gun range on the south side of the building.
  - The impact media has been removed from the former gun range
  - Potential for lead dust to have accumulated on surfaces, ventilation systems, and ventilation exhaust






CSM Source -Loading and Unloading Platform and Hazardous Material Storage






- The loading and unloading platform and Hazardous Material Storage facility may have been subject to spills or leaks.
- Stained concrete is indicative of former spills and leaks.
  - Potential COCs: metals, PCBs, VOCs, and SVOCs
- The hazardous material storage facility has a blind sump that reportedly was not cleaned of sediment.
  - Potential COCs: metals, PCBs, VOCs, and SVOCs

CSM Source - Water Supply

- Water Supply consists of Water Storage Facility and Asphalt/Concrete Parking Areas
- Groundwater samples collected in the area of the fire suppression reservoir exhibited chlorinated solvents above comparison criteria.
- Soil has not been characterized
  - Potential COCs: VOCs
- Reservoir water has not been characterized
  - Potential COCs: VOCs, SVOCs, metals






CSM Source - Oil Water Separators






- Three on site oil water separators, one neutralization tank, and one oil water separator are located in the former employee parking lot across route 17C.
- The oil water separators may have leaked or overflowed.
  - Leaks may have contaminated soil beneath/adjacent to units
- No documentation regarding whether or not the units were pumped out after they were last used.
  - Oil Water Separators may contain liquid and sludge waste material
- COCs: VOCs, SVOCs, metals, and PCBs

Data Quality Objectives (DQOs)

1. State the problem.
   - AFP 59 has manufactured aircraft-related products since 1942.
   - AFP 59 is currently unoccupied. Demolition of AFP 59 is now needed (due to the extensive damage caused by flooding) prior to the transfer of the land to BCIDA for their reuse.
   - In order to estimate demolition costs, contamination needs to be characterized, quantified, and delineated.
2. Identify the decision.
   - Sample, identify, and quantify all ACM, Other Regulated Materials , RCRA constituents, VOCs, and PCB contaminated items/materials in order to provide sufficient data to support delineation of those materials for demolition and soil remedial actions.






Data Quality Objectives (DQOs) (continued)

3. Identify inputs to the decisions
   - Historical use of AFP 59
   - Previous Investigations
   - EBS Field Activities
     - Asbestos Survey
     - Lead Based Paint Survey
     - Other Regulated Materials Survey
     - Environmental sampling
4. Define study boundary.
   - This EBS will cover the footprint of the nine facilities identified in the PWS as well as the three Oil-Water Separators, and one Neutralization Tank






Data Quality Objectives (DQOs) (continued)

5. Develop decision rules.
   - Asbestos Survey
     - If suspect ACM not previously identified is found, a minimum of three bulk samples of each suspect ACM will be collected to determine the presence of asbestos, per AHERA sampling protocol
     - If at least one sample result contains greater than 1% asbestos, the item will be considered ACM.
     - If regulated ACM threshold limits of 260 linear feet, 160 square feet or 35 cubic feet are exceeded, per State and NESHAP regulations, the ACM will be identified to indicate the need for removal prior to demolition.
   - Lead Based Paint Survey
     - If lead concentrations equal to or exceeding 1.0 milligram per square centimeter or 0.5% by weight or 5,000 parts per million (ppm) by weight, it will be considered LBP.
     - If PCB contamination is present in excess of 50 mg/kg in core samples it will be considered bulk product waste
   - Other Regulated Materials
     - If Other Regulated Materials are identified, the item will be compiled into a list.
     - If Other Regulated Materials with the potential for contamination (i.e., pump oils) are identified, the item will be sampled in order to characterize for disposal.






Data Quality Objectives (DQOs) (continued)

5. Develop decision rules.
   - Environmental Sampling
     - If the potential for contamination exists (i.e., known areas of contamination, floor staining, foreign material, etc.), environmental sampling will be performed for the COCs.
     - If initial sampling indicates that contamination is present, follow-on delineation and characterization of materials for disposal will be performed, as required.
6. Specify tolerable limits on decisions.
   - Environmental samples will be collected and analyzed IAW the applicable methodologies.
   - Validation of analytical data will be performed per DoD QSM for data evaluation
7. Optimize the design
   - When appropriate, previous investigation will be used to guide sample locations.
   - In areas where contamination is expected, VSP "Locate Hot Spot" module was run to determine the appropriate number of samples.
   - Samples will be biased to locations most likely to contain contamination (i.e., stained floors)






Facilities to be Sampled

- Facilities to be sampled within AFP 59 include:
  - Production Complex and Plant Admin (Facilities #0001 and #0002)
  - Loading and Unloading Platform – Facility #0003
  - Water Supply, Water Storage, Asphalt/Concrete Parking Areas (Facilities #0007, #0028, #0034)
  - Hazardous Material Storage (Facility #0025)
  - Oil Water Separators, Neutralization Tank






Proposed Field Work for ACM

- Sampling Methodology
  - CB&I will conduct a comprehensive asbestos NESHAP pre-demolition survey and sampling of the plant performed by Asbestos Hazard Emergency Response ACT (AHERA)-certified and New York State-certified asbestos inspectors
  - Prior survey results will be used, as appropriate, to support current survey
  - All suspect ACM will be sampled to determine the presence of asbestos
  - Sampling will be conducted in accordance with AHERA regulations. Three samples will be collected of any suspect material not previously determined to contain asbestos
- Comparison Criteria
  - ACM is any material containing greater than 1% asbestos, as determined using the method specified in Appendix A, Subpart F 40 CFR part 763, section 1, Polarized Light Microscopy. TEM analysis will be used for reanalysis of PLM non-detect results for non-organically bound samples per NYS requirements
  - All suspect materials will be classified as either non-detect or as ACM. All ACM that is RACM will be identified to indicate the need for removal prior to demolition per State and NESHAP regulations






Proposed Field Work for Painted Surfaces

- Sampling Methodology
  - Three paint chip samples will be collected of identified paint colors found throughout the facilities.
  - All samples will be submitted to ELAP certified laboratories for LBP and PCB analysis
  - Samples testing positive for PCBs will be resampled through coring and analyzed for PCBs
- Comparison Criteria
  - Lead-based paint means paint or other surface coatings that contain lead equal to or exceeding 1.0 milligram per square centimeter or 0.5% by weight or 5,000 ppm by weight (HUD.gov)
  - Waste derived from caulk or paint containing PCBs at greater than or equal to 50 ppm will be identified as PCB bulk product waste.






Proposed Field Work for Other Regulated Materials

- Sampling Methodology
  - CB&I will conduct a survey and inventory of ORM concurrently with the asbestos and LBP survey.
  - ORM to be inventoried will include, but not limited to the following materials: mercury switches, light ballasts, machine oils, fuels, lubricants, paints, solvents, acids, bases, hydraulic fluids, etc.
  - Items with the potential for contamination (i.e., pump oils) will be sampled in order to characterize the disposal
- Comparison Criteria
  - Analytical results will be compared to RCRA standards for disposal






Proposed Field Work for PCB Sampling

- PCB Contaminated Building Materials Sampling Methodology
  - The objective of the investigation is to characterize and delineate contaminated building materials with a 90% statistical level of confidence to establish quantities and volumes for proper disposal pricing.
  - Roof Trusses Investigation – 3 phases
    1. Collect screening level samples of the wood beyond the encapsulation
    2. Encapsulated rafters will be characterized and delineated with core samples
    3. Determine if the trusses are potential TSCA waste
  - Floor Staining
    - To determine if these stained areas contain PCBs, one chip sample will be collected from each location and analyzed for PCBs at an off-site laboratory.
    - If the initial chip sample indicates PCB contamination in excess of 25 mg/kg characterization IAW the mega rule will be performed.





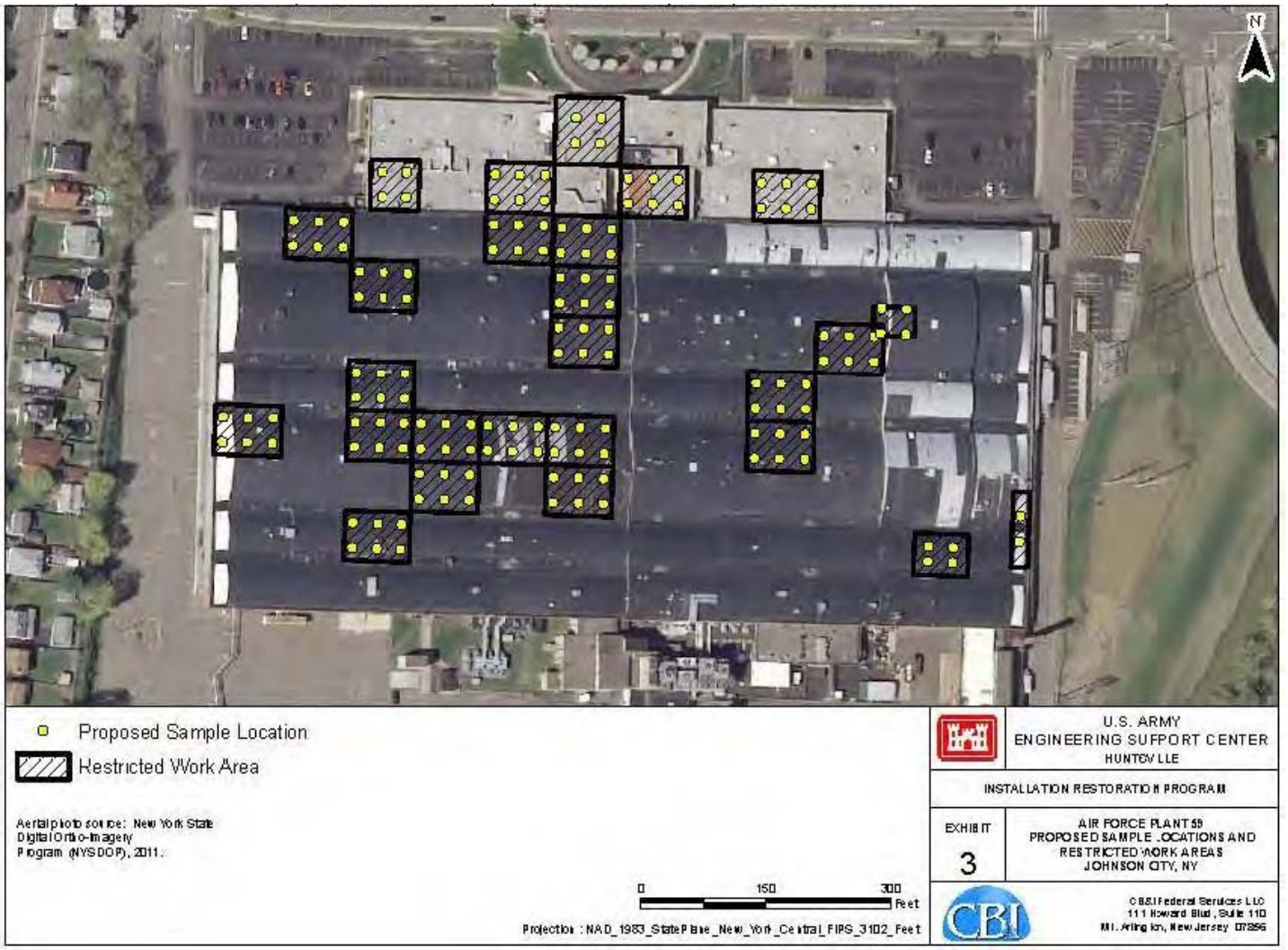

Proposed Field Work for PCB Sampling

- PCB Contaminated Building Materials Sampling Methodology (cont).
  - PCB Management Areas – Flooring
    - Initially screening-level samples will be collected to determine the presence or absence of PCBs on the flooring or upper subfloor.
    - If PCBs are present on the flooring or upper subfloor step outs (screening-level samples) will be made to determine the full extent of potentially contaminated flooring.
    - Wood flooring containing PCB contamination will serve as a potential indicator of PCB contaminated concrete beneath it.
    - Concrete chip samples for off-site laboratory analysis will be collected from all locations contaminated with PCBs based on the screening-level sampling. The new area of PCB contamination will be calculated and VSP will be used to determine the number of chip samples required to obtain a 90% confidence level.
    - Any areas exhibiting PCB concentrations in excess of 25 mg/kg will be characterized for disposal IAW Mega Rule
  - Transformer Pad
    - 4 chip samples will be collected and analyzed. Samples will be biased to areas exhibiting staining.
    - Any areas contaminated in excess of 25 mg/kg will be sampled IAW the Mega Rule.






Preliminary PCB Locations - Flooring



Proposed Field Work for PCB Sampling

- PCB Contaminated Building Materials Sampling Methodology (cont).
  - Courtyard
    - The courtyard was reportedly contaminated with PCBs.
    - Three chip/core samples of the concrete or asphalt in the courtyard will be sampled for PCBs. If contaminated in excess of 25 mg/kg it will be sampled in accordance with the mega rule.
    - Soil samples will be collected beneath any areas contaminated in excess of 25 mg/kg.
- PCB Contaminated Soil Sampling Methodology
  - Soil beneath the building slab has not been characterized for potential PCB contamination resulting from spills or leaks to have migrated through the slab.
    - Sub-slab samples will be collected in all locations where PCBs are detected in concrete in excess of the NYSDEC industrial SCO of 25 mg/kg.
    - If no concrete exhibits concentrations in excess of 25 mg/kg than a minimum of one DPT sample will be collected from each restricted work area grid.
    - Soils will be delineated horizontally through the use of step outs conducted on 30 foot increments. PCBs will be delineated vertically to the residential standard through the collection of soil samples on one foot increments.






Proposed Field Work for PCB Sampling

- Comparison Criteria
  - The PCB screening-level testing will be performed in accordance with electrochemical method USEPA SW-846 9078 using the Dexsil L2000DX PCB/Chloride Analyzer System.
  - For non-porous surfaces (i.e., wipe samples), PCB-contaminated means having a surface concentration greater than 1.0 milligram per square centimeter and less than 10 milligram per square centimeter (40 CFR 761)
  - Core and chip samples will be collected IAW EPA Region 1 SOP for Sampling Porous Surfaces for PCBs
  - Non-spill areas will be treated as PCB bulk product waste. The comparison criteria for PCB bulk product waste is 50 mg/kg.
  - Spill areas will be treated as remediation waste and will be characterized to determine if it constitutes a TSCA waste (> 50 mg/kg).
  - Mega Rule Protocol
    - The primary objective will be to determine if the material constitutes a TSCA waste.
    - Each discrete area of contamination will be divided up in accordance with the protocol. From within each divided area, three grab samples will be retrieved and composited.
      - In small areas of contamination, the divided area will each have its own composite tested and the set of composite sample results will represent that area.
      - In significantly larger areas, the composite sample will be composed of three adjacent areas, for a total of 9 grab samples making up that composite.





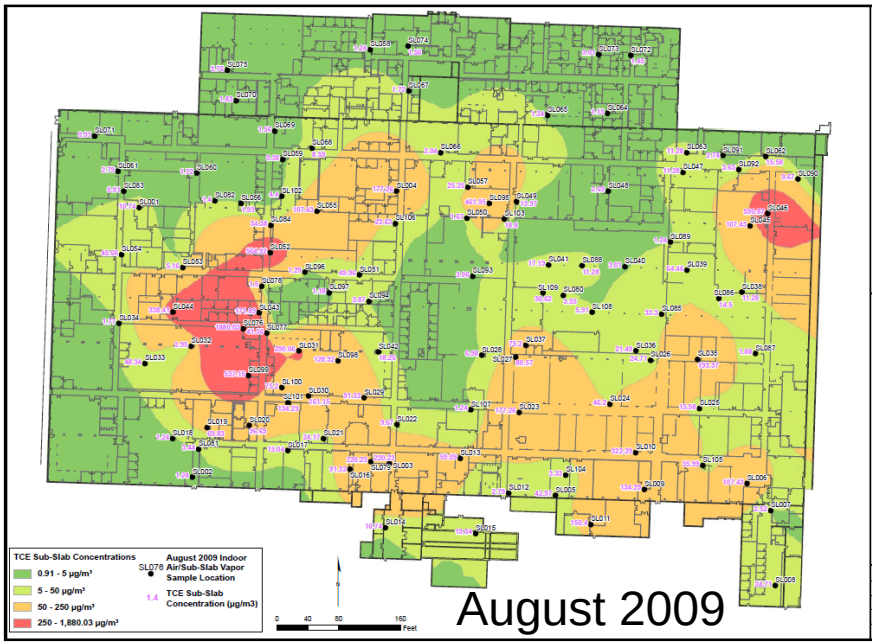

Proposed Field Work for VOCs in Sub-Slab Soil



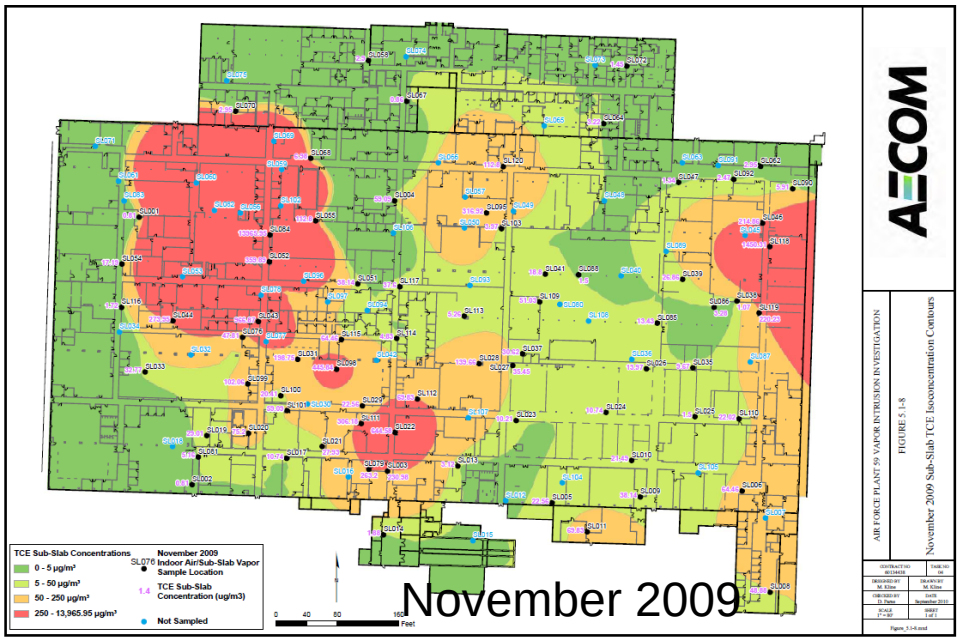



- Sampling Methodology
  - The sampling program proposed for chlorinated solvent contamination beneath the building was developed through a thorough review of existing soil gas data.
    - Sub slab soil gas data from four rounds (August 2008, November 2010, February 2010, and August 2010) was reviewed and areas of the greatest soil gas concentrations were combined.
  - 20 soil borings to be advanced to 10 feet bgs and one sample from the screened interval exhibiting the greatest result taken
    - If the bottom of the 10 foot interval is contaminated above residential standards, the boring will be continued.
  - Data from the first 20 borings will be examined and VSP run to delineate the area of contamination in excess of residential soil standards.
  - Two borings will also be installed downgradient side of the removal action performed in the eastern basement.

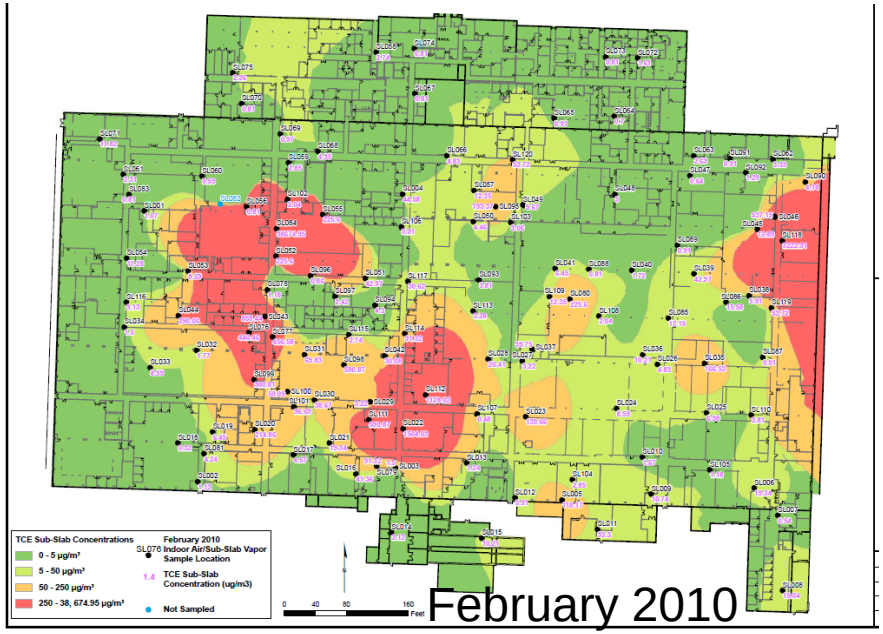
Soil Gas Sampling – TCE Results



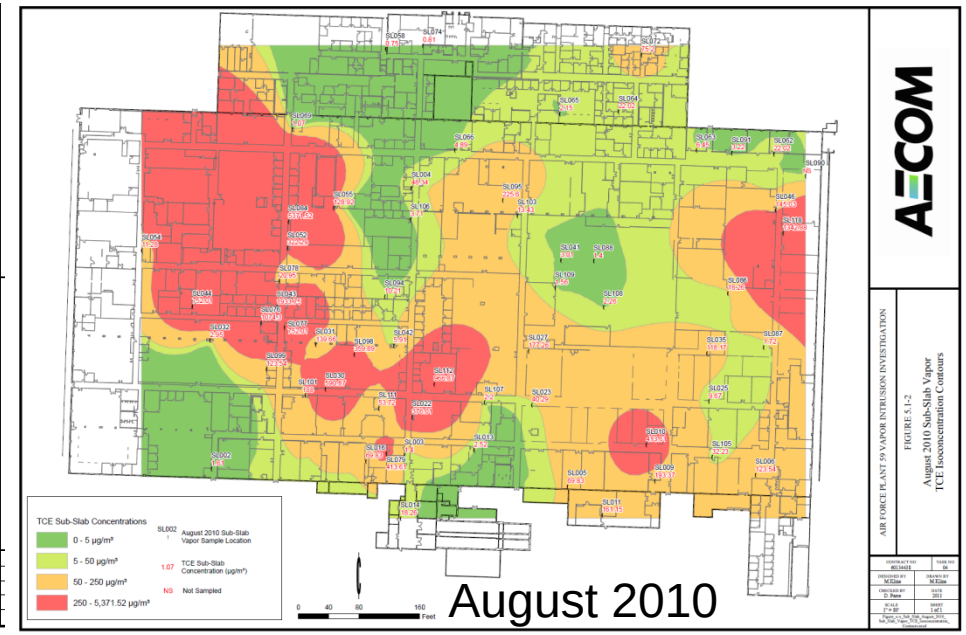
August 2009



November 2009

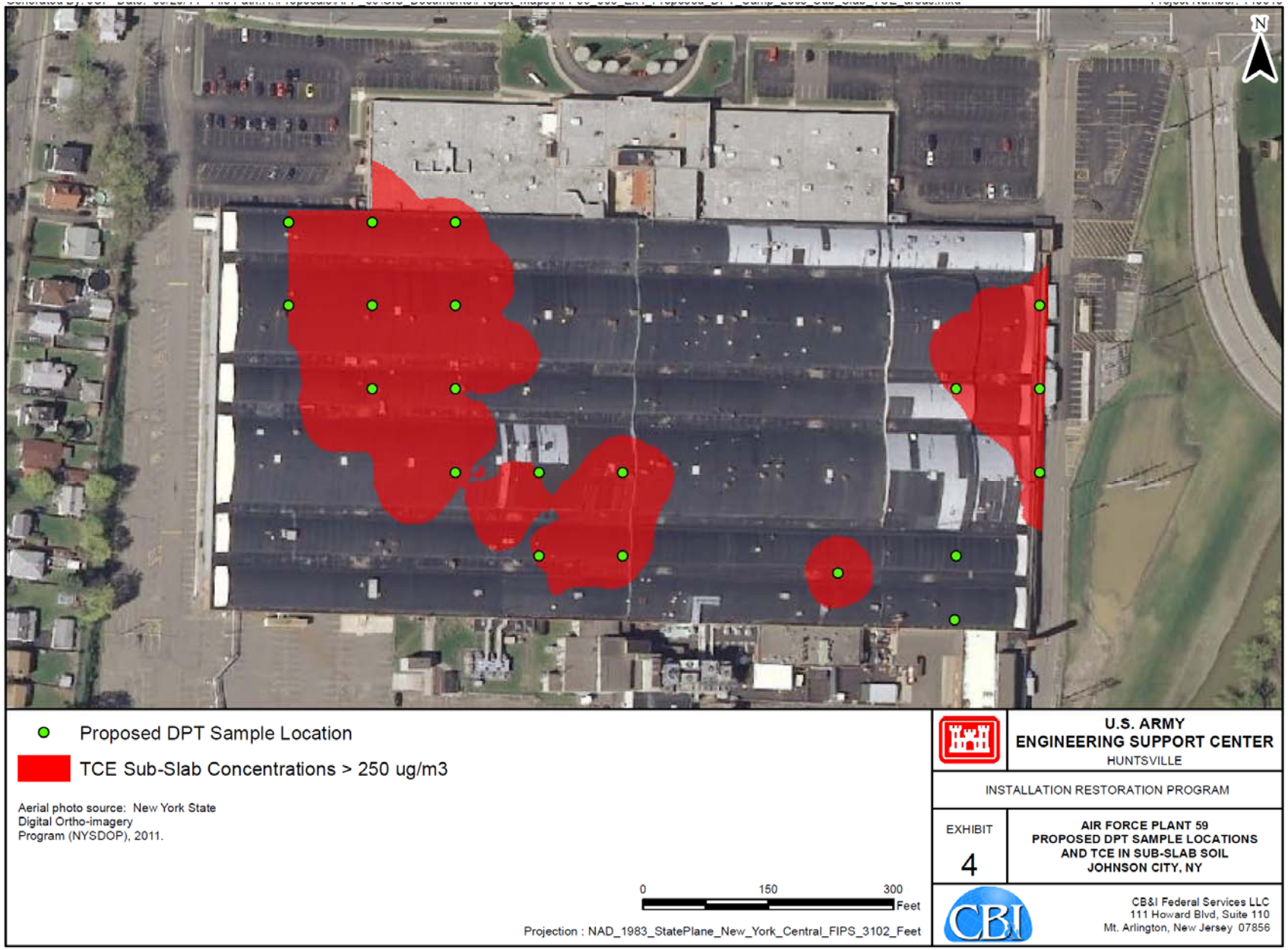


February 2010



August 2010

Preliminary TCE Boring Locations



Proposed Field Work
Remainder of the Production Complex






- Sampling Methodology
  - Dust Collection System
    - Initially, half of the cyclone systems will be inspected and any dust sampled.
    - Additional units will also be sampled if contamination is identified in the first sampling round
    - Duct work in the floor will be inspected and dust present in the duct work will be sampled
    - Samples will be analyzed for TCLP (metals, VOCs, SVOCs, and PCBs).
  - Classified Documents Incinerator
    - One sample will be collected for TCLP (metals, VOCs, SVOCs, and PCBs).
  - Former Gun Range
    - The former gun range will be inspected and any suspect material will be sampled for disposal via TCLP metals. Additionally, building materials from the target area will be sampled and characterized for disposal via TCLP metals.

Proposed Field Work Loading and Unloading Platform and Hazardous Material Storage

- Sampling Methodology
  - Loading and Unloading Platform
    - Concrete chip samples are proposed to characterize the platform.
      - Samples will be biased to stained concrete
      - If no stained concrete is identified one concrete chip sample will be collected.
      - Concrete will be sampled for TCLP (metals, PCBS, SVOCS).
      - Should the stained concrete exhibit levels of contamination in excess of RCRA standards, a soil sample beneath the stained area will be collected.
  - Hazardous Material Storage
    - Concrete chip samples are proposed to characterize the facility
      - Samples will be biased to stained concrete
      - Concrete will be sampled for TCLP (metals, PCBS, SVOCS).
      - Should the stained concrete exhibit levels of contamination in excess of RCRA standards, a soil sample beneath the stained area will be collected.
    - One sediment sample will be collected from the sump and analyzed for TCLP metals, PCBS, SVOCS.






TCLP Comparison Criteria

EPA HW No.	Contaminant	CAS No.	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	4 200.0
D024	m-Cresol	108-39-4	4 200.0
D025	p-Cresol	106-44-5	4 200.0
D026	Cresol		4 200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	3 0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008

EPA HW No.	Contaminant	CAS No.	Regulatory Level (mg/L)
D032	Hexachlorobenzene	118-74-1	0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentrachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	3 5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethyl-ene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethyl-ene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2






Proposed Field Work
Water Supply






- Sampling Methodology
  - An investigation of potential soil contamination will be conducted in the area between the production facility and the fire suppression reservoir.
    - Initially, three borings will be advanced by DPT rig and soil cores will be collected and screened using PID.
    - One sample from the interval exhibiting the greatest PID reading within each core will be collected and sent to the laboratory for analysis by method 8260B, C.
    - Should the greatest PID reading come from the bottom of the boring, one sample will be collected from the bottom of the boring and it will be advanced to the water table and screened with the PID. One additional sample will be collected from the deeper interval.
  - One sample will be collected from the reservoir water and analyzed for VOCs, SVOCs, and TAL metals
- Comparison Criteria
  - Water data will be compared to drinking water criteria

Proposed Field Work
Oil Water Separators and Neutralization Tank

- Sampling Methodology
  - In accordance with DER-10, each OWS will have two samples collected, one water sample and one sludge sample.
    - Sludge and water will all be analyzed for TCLP VOCs, TCLP SVOCs, TCLP metals, and TCLP PCBs.
  - One boring will be advanced within two feet of the down gradient side of the OWS to determine the potential for leaks and sample will be collected from 2 feet below the bottom of the OWS.
    - Samples obtained for VOC analysis will be field screened using a PID.
    - An undisturbed sample will be collected from the two foot interval exhibiting the greatest reading. If field readings are above background at the bottom of the boring, the core will be extended to the water table.
    - Soil samples will be analyzed for VOCs, SVOCs, metals, and PCBs and compared to NYSDEC residential SCOs. Exceedances of residential standards will be delineated horizontally and vertically to the water table.






NYSDEC Residential SCOs

Contaminant	CAS Number	Residential SCO (ppm)
Metals		
Arsenic	7440-38-2	16
Barium	7440-39-3	350
Beryllium	7440-41-7	14
Cadmium	7440-43-9	2.5
Chromium, trivalent	16065-83-1	36
Copper	7440-50-8	270
Lead	7439-92-1	400
Manganese	7439-96-5	2,000
Total Mercury		0.81
Nickel	7440-02-0	140
Selenium	7782-49-2	36
Silver	7440-22-4	36
Zinc	7440-66-6	2200
PCBs		
Polychlorinated biphenyls	1336-36-3	1
SVOCs		
Acenaphthene	83-32-9	100
Acenapthylene	208-96-8	100
Anthracene	120-12-7	100
Benz(a)anthracene	56-55-3	1
Benzo(a)pyrene	50-32-8	1
Benzo(b)fluoranthene	205-99-2	1
Benzo(g,h,i)perylene	191-24-2	100
Benzo(k)fluoranthene	207-08-9	1
Chrysene	218-01-9	1
Dibenz(a,h)anthracene	53-70-3	0.33
Dibenzofuran	132-64-9	14
Fluoranthene	206-44-0	100
Fluorene	86-73-7	100
Indeno(1,2,3-cd)pyrene	193-39-5	0.5
m-Cresol	108-39-4	100
Naphthalene	91-20-3	100
o-Cresol	95-48-7	100
p-Cresol	106-44-5	34

Contaminant	CAS Number	Residential SCO (ppm)
Pentachlorophenol	87-86-5	2.4
Phenanthrene	85-01-8	100
Phenol	108-95-2	100
Pyrene	129-00-0	100
VOCs		
1,1,1-Trichloroethane	71-55-6	100
1,1-Dichloroethane	75-34-3	19
1,1-Dichloroethene	75-35-4	100
1,2-Dichlorobenzene	95-50-1	100
1,2-Dichloroethane	107-06-2	2.3
cis-1,2-Dichloroethene	156-59-2	59
trans-1,2-Dichloroethene	156-60-5	100
1,3-Dichlorobenzene	541-73-1	17
1,4-Dichlorobenzene	106-46-7	9.8
1,4-Dioxane	123-91-1	9.8
Acetone	67-64-1	100
Benzene	71-43-2	2.9
Butylbenzene	104-51-8	100
Carbon tetrachloride	56-23-5	1.4
Chlorobenzene	108-90-7	100
Chloroform	67-66-3	10
Ethylbenzene	100-41-4	30
Hexachlorobenzene	118-74-1	0.33
Methyl ethyl ketone	78-93-3	100
Methyl tert-butyl ether	1634-04-4	62
Methylene chloride	75-09-2	51
n-Propylbenzene	103-65-1	100
sec-Butylbenzene	135-98-8	100
tert-Butylbenzene	98-06-6	100
Tetrachloroethene	127-18-4	5.5
Toluene	108-88-3	100
Trichloroethene	79-01-6	10
1,2,4-Trimethylbenzene	95-63-6	47
1,3,5- Trimethylbenzene	108-67-8	47
Vinyl chloride	75-01-4	0.21
Xylene (mixed)	1330-20-7	100






Deliverables and Schedule

EBS Work Plan

- Technical Project Planning #1 — 24 April 2014
- Draft Work Plan to Army — 15 May 2014
- Technical Project Planning #2 — 19 May 2014
- Final Work Plan — 6 June 2014

Field Effort

- 9 June – 24 July 2014

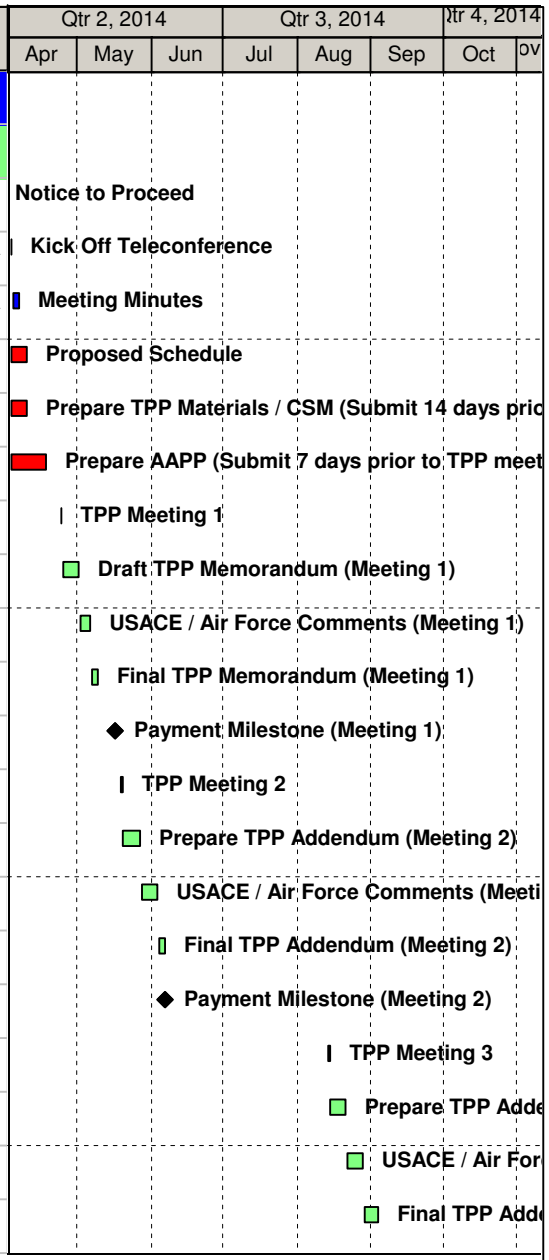
EBS Report

- Draft EBS Report to Army — 13 August 2014
- Technical Project Planning #3 — 14 August 2014
- Final EBS Report — 18 September 2014

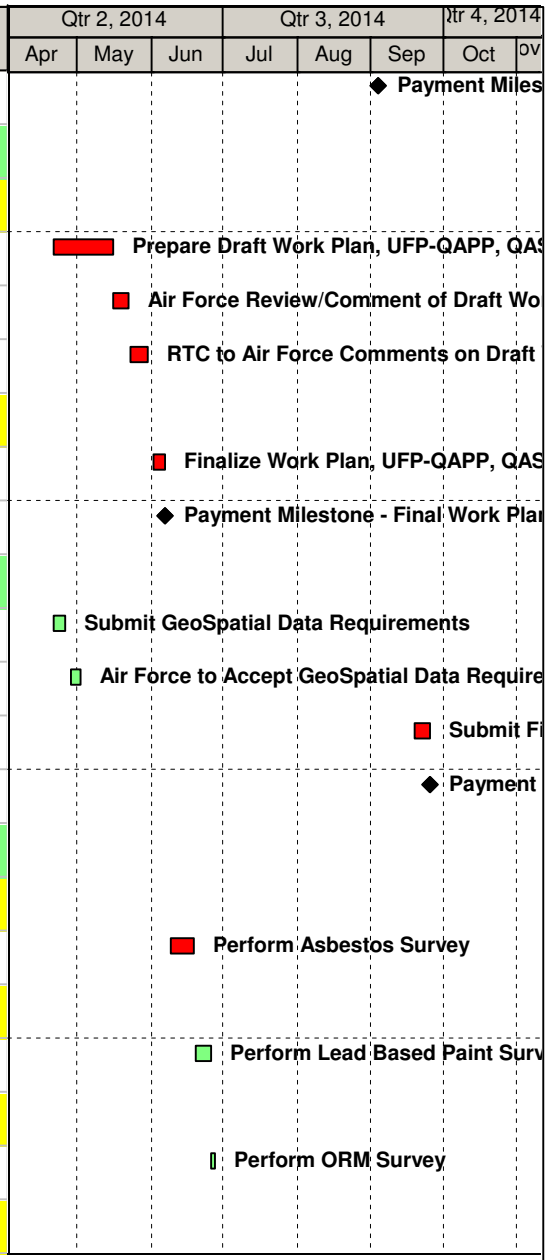




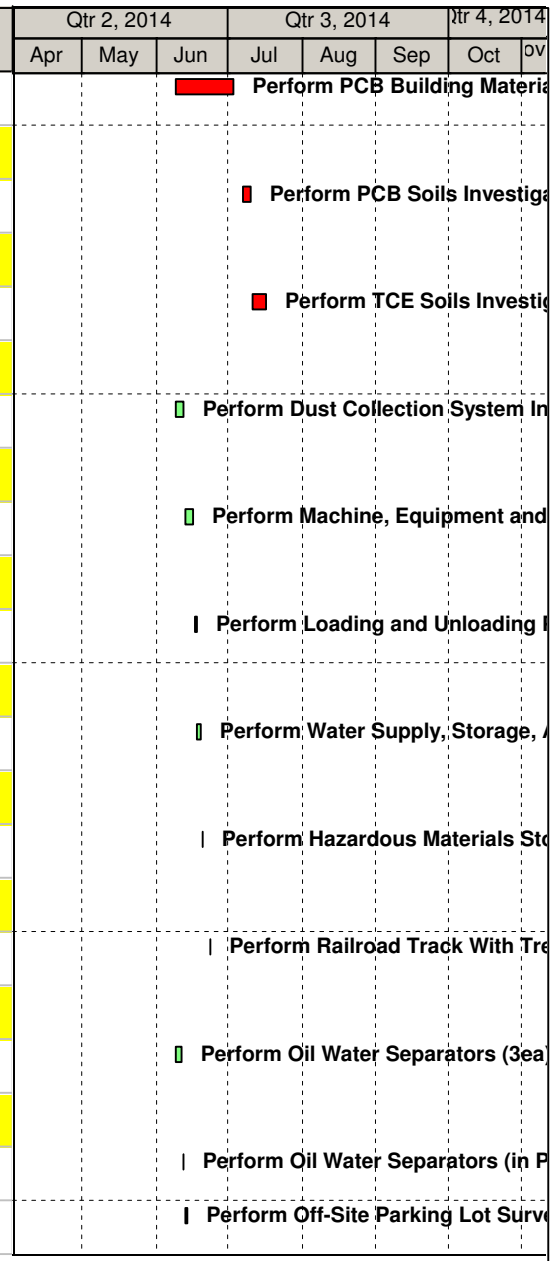

Activity ID	Activity Name	Rem Dur	Start	Finish
Huntsville WERS - Demolition and Remediation of AFP 59		123	28-Mar-14 A	25-Sep-14
Technical Project Planning		107	28-Mar-14 A	03-Sep-14
A1000	Notice to Proceed	0	28-Mar-14 A	
A1001	Kick Off Teleconference	0	03-Apr-14 A	03-Apr-14 A
A1002	Meeting Minutes	0	04-Apr-14 A	07-Apr-14 A
A1003	Proposed Schedule	5	04-Apr-14 A	09-Apr-14
A1004	Prepare TPP Materials / CSM (Submit 14 days prior to TPP meeting)	5	04-Apr-14 A	09-Apr-14
A1005	Prepare AAPP (Submit 7 days prior to TPP meeting)	11	04-Apr-14 A	17-Apr-14
A1007	TPP Meeting 1	1	24-Apr-14	24-Apr-14
A1580	Draft TPP Memorandum (Meeting 1)	5	25-Apr-14	01-May-14
A1590	USACE / Air Force Comments (Meeting 1)	3	02-May-14	06-May-14
A1600	Final TPP Memorandum (Meeting 1)	3	07-May-14	09-May-14
A1601	Payment Milestone (Meeting 1)	0		16-May-14
A1610	TPP Meeting 2	1	19-May-14	19-May-14
A1620	Prepare TPP Addendum (Meeting 2)	5	20-May-14	27-May-14
A1630	USACE / Air Force Comments (Meeting 2)	5	28-May-14	03-Jun-14
A1640	Final TPP Addendum (Meeting 2)	3	04-Jun-14	06-Jun-14
A1641	Payment Milestone (Meeting 2)	0		06-Jun-14
A1650	TPP Meeting 3	1	14-Aug-14	14-Aug-14
A1690	Prepare TPP Addendum (Meeting 3)	5	15-Aug-14	21-Aug-14
A1700	USACE / Air Force Comments (Meeting 3)	5	22-Aug-14	28-Aug-14
A1710	Final TPP Addendum (Meeting 3)	3	29-Aug-14	03-Sep-14



Activity ID	Activity Name	Rem Dur	Start	Finish
A1740	Payment Milestone (Meeting 3)	0		03-Sep-14
Work Plan, UFP-QAPP, QASP		34	21-Apr-14	06-Jun-14
Draft		29	21-Apr-14	30-May-14
02000110	Prepare Draft Work Plan, UFP-QAPP, QASP / Submit	19	21-Apr-14	15-May-14
02000111	Air Force Review/Comment of Draft Work Plan, UFP-QAPP, QASP	5	16-May-14	22-May-14
02000120	RTC to Air Force Comments on Draft Work Plan, UFP-QAPP, QASP	5	23-May-14	30-May-14
Final		5	02-Jun-14	06-Jun-14
02000130	Finalize Work Plan, UFP-QAPP, QASP	5	02-Jun-14	06-Jun-14
02000131PM	Payment Milestone - Final Work Plan, UFP-QAPP, QASP	0		06-Jun-14
GIS		111	21-Apr-14	25-Sep-14
A1150	Submit GeoSpatial Data Requirements	5	21-Apr-14	25-Apr-14
A1160	Air Force to Accept GeoSpatial Data Requirements	5	28-Apr-14	02-May-14
A1180	Submit Final GIS Documentation	5	19-Sep-14	25-Sep-14
A1770	Payment Milestone - Electronic Data Submittal of GIS Documentation	0		25-Sep-14
EBS Field Activities		33	09-Jun-14	24-Jul-14
Asbestos Survey for Production Complex - Facility #0001 and Plant Admi...		8	09-Jun-14	18-Jun-14
04000001	Perform Asbestos Survey	8	09-Jun-14	18-Jun-14
Lead Based Paint Survey for Production Complex - Facility #0001 and Pla...		5	19-Jun-14	25-Jun-14
04000002	Perform Lead Based Paint Survey	5	19-Jun-14	25-Jun-14
ORM Survey for Production Complex - Facility #0001 and Plant Admin - F...		2	26-Jun-14	27-Jun-14
04000003	Perform ORM Survey	2	26-Jun-14	27-Jun-14
PCB Building Matls Survey for Production Complex - Facility #0001 and P...		19	09-Jun-14	03-Jul-14



Activity ID	Activity Name	Rem Dur	Start	Finish
04000004	Perform PCB Building Materials Survey	19	09-Jun-14	03-Jul-14
PCB Soils Investigation for Production Complex - Facility #0001 and Plant...		4	07-Jul-14	10-Jul-14
04000005	Perform PCB Soils Investigation Survey	4	07-Jul-14	10-Jul-14
TCE Soils Investigation for Production Complex - Facility #0001 and Plant...		4	11-Jul-14	16-Jul-14
04000006	Perform TCE Soils Investigation Survey	4	11-Jul-14	16-Jul-14
Dust Collection Sys Investigation for Prod Complex-Facility #0001 and Pl...		4	09-Jun-14	12-Jun-14
04000007	Perform Dust Collection System Investigation Survey	4	09-Jun-14	12-Jun-14
Mach, Equip and Lab Pack Survey for Prod Complex-Facility #0001 and Pl...		2	13-Jun-14	16-Jun-14
04000008	Perform Machine, Equipment and Lab Pack Survey	2	13-Jun-14	16-Jun-14
Loading and Unloading Platform - Facility #0003		1	17-Jun-14	17-Jun-14
04000009	Perform Loading and Unloading Platform Survey	1	17-Jun-14	17-Jun-14
Wtr Supply-Facility #0007, Wtr Storage-Facility #0028, Asphalt/Concrete P...		2	18-Jun-14	19-Jun-14
04000010	Perform Water Supply, Storage, Asphalt/Concrete Parking Areas Survey	2	18-Jun-14	19-Jun-14
Hazardous Material Storage - Facility 0025		1	20-Jun-14	20-Jun-14
04000011	Perform Hazardous Materials Storage Survey	1	20-Jun-14	20-Jun-14
Railroad Track With Trestle - Facility 0032 and Steam Line - Facility 0039		1	23-Jun-14	23-Jun-14
04000012	Perform Railroad Track With Trestle and Steam Line Survey	1	23-Jun-14	23-Jun-14
Oil Water Separators		3	09-Jun-14	11-Jun-14
04000013	Perform Oil Water Separators (3ea) Survey	3	09-Jun-14	11-Jun-14
Additional Facilities - Off Site		2	12-Jun-14	13-Jun-14
04000014	Perform Oil Water Separators (in Parking Lot) (1ea) Survey	1	12-Jun-14	12-Jun-14
04000014A	Perform Off-Site Parking Lot Survey	1	13-Jun-14	13-Jun-14



Activity ID	Activity Name	Rem Dur	Start	Finish
Final Field Payment		**28**	**13-Jun-14**	**24-Jul-14**
04000015PM	Payment Milestone - Field Work	0		13-Jun-14
5000130	Preliminary Lab Data for Above Ground Materials	14	07-Jul-14	24-Jul-14
EBS Report		**45**	**17-Jul-14**	**18-Sep-14**
Draft		**40**	**17-Jul-14**	**11-Sep-14**
05000110	Prepare / Submit Draft EBS Report & Analytical Data Submittal	20	17-Jul-14	13-Aug-14
05000111	USACE / Air Force Comment on Draft EBS Report	15	14-Aug-14	04-Sep-14
05000120	RTC to Air Force Comments on Draft EBS Report	5	05-Sep-14	11-Sep-14
Final		**5**	**12-Sep-14**	**18-Sep-14**
05000130	Finalize Draft EBS Report	5	12-Sep-14	18-Sep-14
05000131PM	Payment Milestone - EBS Report	0		18-Sep-14