NAVAL SECURITY GROUP ACTIVITY FACILITY
Building #153 Complex
Route 195/Corea Road
Village of Corea in Gouldsboro, Maine 04624

SITE SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADENDUM

RFA#14085, Addendum V1 to Campbell Environmental Group's Generic Quality Assurance Project Plan for Brownfields Sites in Maine
EPA GRANT # RP96188501

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BROWNFIELD ASSESSMENT PROGRAM
JULY 2016
Prepared For:
HANCOCK COUNTY PLANNING COMMISSION

Prepared by:
Campbell Environmental Group

_____ 7/7/16_____
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Senior Geologist

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Richard Campbell, CG Date
Project Manager

Approved by:

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Alan Peterson Date
EPA Project Officer and Quality Assurance Reviewer

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Benjamin Guidi Date
MEDEP

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Thomas Martin Date
Hancock County Planning Commission

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CAMPBELL
ENVIRONMENTAL GROUP

July 7, 2016

Mr. Thomas Martin
Hancock County Planning Commission
395 State Street
Ellsworth, Maine 04605

Re: Phase II Environmental Site Assessment Quality Assurance Project Plan Addendum
Building #154 Complex, Polychlorinated Biphenyl (PCB) Investigation
Route 195/Corea Road, Village of Corea in Gouldsboro, Maine 04624

Dear Thomas:

Campbell Environmental Group, Inc. (CEG) is pleased to submit this draft Site Specific Quality Assurance Project Plan Addendum (SSQAPPA) PCB Investigation to the Hancock County Planning Commission, to conduct an additional Phase II Environmental Site Assessment (ESA) at the Building 154 (Site), located off Route 195/Corea Road, in the Village of Corea in Gouldsboro, Maine **(Figure 1)**. This work plan was developed to further investigate and delineate the extent of PCBs impacts to the concrete floor of Building # 154 as outlined in CEGs *Phase II Environmental Site Assessment, Building 153 Complex (Lot 4)* located Route 195/Corea Road, Village of Corea in Gouldsboro, Maine 04624 report, dated March 11, 2016. Recognized environmental conditions (REC) at the Site include the following:

- The PCB concentrations in the samples collected from Building #154 are above Toxic Substances Control Act (TSCA) PCB remediation waste high occupancy cleanup requirements for porous media, but are below the low occupancy cleanup requirements. Additional sampling in Building #154 is recommended to determine the extent and concentration of the PCB impacted concrete.

If you have any questions or comments, please call our office at (207) 253-1990. CEG appreciates the opportunity to work with you on this project.

Sincerely,

Danica Wallace
Senior Geologist

Richard B. Campbell
Maine Certified Geologist
President

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APPENDICES

1.0 INITIAL SITE CONCEPTUAL MODEL

This section presents the initial conceptual model for the Building #153 Complex (Lot 4) (Site), Route 195/Corea Road, Village of Corea, in Gouldsboro, Maine Site. The model is based on information presented in CEG's Phase I Environmental Site Assessment (ESA) dated September 23, 2015 and the Phase II ESA dated March 11, 2016. This conceptual model may be revised in the subsequent Phase II ESA report, based on the data gathered during this proposed Phase II investigation.

1.1 Site Description and History

Building #154 is one of seven buildings located on a 6.83 acre parcel designated by the Town of Gouldsboro tax assessor's office as Map 48, Lot 10. The parcel is a small subset of what was originally part of a 451.5 acre Naval Security Group Activity (NSGA) base. The Site lot is also designated as Lot 4 on the Boundary Survey for Division of Land of Acadia Capital Corporation, State Route 195, Gouldsboro, by Edward J. Wainwright (PLS #1080) and dated May 10, 2010 and registered with the Hancock County Registry of Deeds under File 39, Page 173. According to the Gouldsboro tax assessor, there are currently no designated street addresses for this area.

The Site is accessed by an unnamed driveway off Route 195 (aka Corea Road) and based on its location, is within Shoreland zoning. The Site is located in the northern section of the former naval complex. All buildings associated with the NSGA were sequentially labeled by number in order of construction date. The lower numbers being the first buildings constructed. Building #154 is a one-story slab on grade, concrete masonry building which contained backup diesel generators and an uninterrupted power supply system that was constructed in 1972.

The Site and general vicinity are relatively flat. The vicinity that surrounds the Site is composed of heath and forested land. The Atlantic Ocean is located directly west of the property line. Some wetlands are also found throughout the area.

1.2 Geology and Hydrogeology Summary

Table 3
Site Geology and Hydrogeology

Feature	Source	Description
Nearest Water Body	USGS Topographic Map	Un-named stream originating at the Site flowing westerly and discharging to Prospect Harbor
Bedrock Geology	Maine Geologic Survey	Devonian aged granite, but gray highly fractured basalt was encountered directly south of the Site
Surficial Geology	Maine Geologic Survey	The surficial soil near the coast consists of undifferentiated thin drift. The soil thickness ranges from 0 to 7.5 feet thick and is mostly sand and gravel with some areas also containing silt. Soils

Table 3 Site Geology and Hydrogeology		
Feature	**Source**	**Description**
		toward the interior consist of swamp and marsh. Groundwater was encountered west of Building #153 at a depth of 52 to 79 inches below grade.
Wetlands	National Wetland Inventory (NWI), EDR Report	Wetlands are scattered along the perimeter of the Site.
Flood Zone	(FEMA) 100-year flood plain panel for Hancock County Panel 230283 0020 B	Area designated with no base flood elevation (a), 500 year flood plain area (X), and coastal flooding with base elevation of 13 feet (VE).
Drinking Water Source	Maine Public Water Resource Information System, MEDEP EGAD	Nearest public water supply well approximately 1.8 miles northwest of Site across Prospect Harbor.
Sand & Gravel (S&G) Aquifer	MEDEP EGAD	Nearest sand & gravel aquifer is approximately 5 miles northeast of Site

1.3 Potential Contaminants of Concern

Based on sampling results of the initial March 2016 Phase II ESA, PCBs exceeding Toxic Substances Control Act (TSCA) high occupancy cleanup requirements were detected in a concrete floor sample (BM-3C) within a specific room of Building #154. The PCB concentration detected was 23 milligrams per kilogram (mg/kg) of aroclor 1254. The building was identified by a note in a previous investigation that indicated that transformers were located in the area where samples BM-3A, BM-3, and BM-3C were located. Samples BM3A and BM-3B were below the detection limit for PCBs. The extent of PCB contamination throughout this room is currently unknown.

1.4 Contaminant Migration

The fate and transport of metals, polychlorinated biphenyls (PCBs) tend to have very low solubility and mobility and will, therefore, tend to stay adsorbed to the soil particles and not migrate substantially into the water column. PCBs present in some of the building materials would not migrate beyond their immediate location. In some instances, however, PCB impacted material could bleed into adjacent porous material. Although PCBs have a low vapor pressure they can migrate into the air and be transported with air movement to other surfaces.

1.5 Potential Receptors

Potential sensitive receptors at or in the vicinity of the COC associated with this specific REC includes humans who come into contact with the impacted flooring through dermal contact, inhalation, or ingestion.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY FLOW CHART

This section summarizes the organizational structure for this Site Specific Quality Assurance Project Plan Addendum (SSQAPPA).

2.1 Project Organizational Chart

Table 2-1 consists of a Project Organization Chart depicting the agencies and companies involved with this project. **Table 2-2** describes each participant's responsibilities for this project.

In addition to the project responsibilities outlined in **Table 2-1** and **Table 2-2**, CEG anticipates hiring subcontractors including an waste removal contractor and analytical laboratory, as described in **Section 5.0** if this Work Plan and Cost Estimate.

Table 2-1 Project Organization Chart

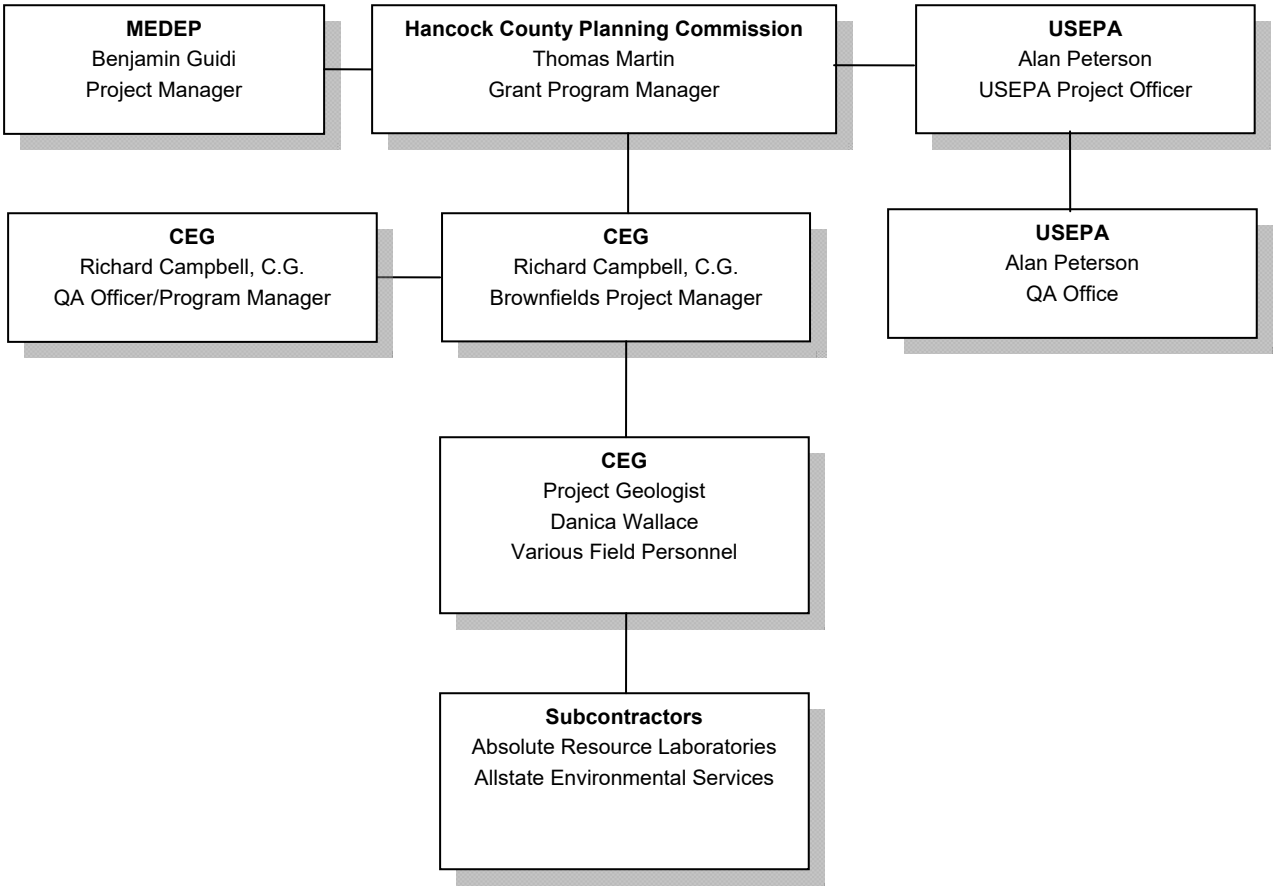

Table 2-2 Project Personnel Responsibilities			
Name	**Title**	**Organizational Affiliation**	**Responsibilities**
Thomas Martin	Grant Program Manager	Hancock County Planning Commission	Administers Brownfields grant. Provides technical oversight.
Alan Peterson	EPA Project Officer	USEPA	Project oversight and approval.
Alan Peterson	EPA QA Officer	USEPA	Provides QA/QC project oversight.
Benjamin Guidi	MEDEP Project Manager	MEDEP	Provides technical oversight and reviews technical documents.
Richard Campbell	Brownfields Project Manager	CEG	Provides overall technical and project direction for the consultant.
Danica Wallace	Task Manager/ Field Leader	CEG	Day-to-day technical lead; oversees and coordinates data collection; participates in data interpretation and preparation of deliverables; communicates and coordinates with subcontractors.
Richard Campbell, C.G.	Quality Assurance Officer	CEG	Develops project QA/QC objectives and implements checks for SSQAPPA adherence.
Field Staff	Scientists/ Engineers	CEG	Conduct field activities with oversight from Project Manager; oversee subcontractor field activities; communicates and coordinates with Project Manager.

3.0 SCOPE OF WORK SUMMARY

CEG proposes the following scope of work to investigate the identified AOCs:

- Prepare and submit this work scope and cost estimate for your approval;
- Subcontract Allstate Environmental Services, Inc. to remove and dispose of the solid waste debris in Building #154 which is currently prohibiting access to the concrete floor for the purpose of sampling;
- CEG shall layout a 10 foot sampling grid on the cleared concrete floor and utilize a hammer drill for pulverizing concrete for sample collection;
- Collect an estimated 30 concrete samples and analyze for PCBs by Absolute Resource Associates; and
- Prepare a report summarizing the methods and results of the investigation with an analytical table comparing results to TSCA regulations.

4.0 SITE SPECIFIC QUALITY ASSURANCE PROJECT PLAN ADDENDUM

This section represents the Building #154 PCB Phase II ESA SSQAPPA. Information presented in the CEG Generic QAPP includes the quality assurance and quality control requirements for this Phase II ESA. Table 4-1 presents CEGs Standard Operating Procedures (SOPs) for this project.

Table 4-1
CEG Standard Operating Procedures

SOP Reference Number	Title, Revision Date and/or Number	Originating Organization
SOP #007	Chain of Custody and Sample Handling, Rev #0, August 2008	CEG
SOP #010	Standard Guide for Site Assessments: Phase II ESA Process; ASTM Designation E1903-97, Rev #0, August 2008	ASTM
SOP #011	Field Documentation Protocol, Rev #1, May 2010	MEDEP (DR#013)
SOP #022	Equipment Decontamination	MEDEP (DR#017)
SOP #026	For Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)	EPA

5.0 PHASE II FIELD INVESTIGATION

The following section presents a detailed description of the proposed field investigation tasks used to investigate soil and shallow groundwater. To complete the proposed investigation, CEG will subcontract with:

- Absolute Resource Associates, of Portsmouth, New Hampshire, for analytical services; and
- Allstate Environmental Services for the removal of solid waste.

Analytical samples collected will be labeled as presented in Section 10.2.1 of the QAPP as follows:

BM =Building Material

5.1 Site Specific HASP

The original HASP prepared for the previous Phase II ESA is adequate for addressing this additional scope of work. The method of sample collection and analysis was previously conducted and this additional work will follow the same procedure as the initial scope of work.

5.2 DigSafe Notification and Utility Clearance

CEG does not anticipate penetrating through the concrete slab with the hammer drill; therefore, Digsafe is not necessary for utility clearance.

5.3 Decontamination and Investigation Derived Wastes

Decontamination of non-dedicated equipment will be conducted using an alconox wash followed by a hexane spray and distilled water rinse in accordance with Section 5.1 of the QAPP. Investigation derived

wastes (IDW), including decontamination fluids with the exception of the hexane will be discarded directly to the ground surface in the vicinity of the sample locations. The waste hexane will be handled appropriately and disposed of at a licensed disposal facility.

5.4 Analytical Program

Analytical samples collected at the site will be submitted to Absolute Resource Laboratories, LLC (ARA) for analysis. A description of analytical methods and CEGs quality assurance plan is included as an appendix to CEG's Generic QAPP. The analytical program consists of the analytical methods presented in **Table 5-1.**

Table 5-1
Absolute Resource Associates
Summary of SOPs, Methods, Glassware and Preservative per Laboratory Analysis

Test	Method	SOP No.	Matrix	Preferred Volume (mL or oz)	Container/ Preservative
Building Materials Matrix					
PCBs	USEPA Method SW3540C/8082	QA-5303	Building Materials	4 oz	G-Amber/4°C

Quality control samples are presented in **Table 5-2** and will be collected as described in the QAPP.

Table 5-2
Field Quality Control Requirements

QC Sample	No. of Concrete Samples	No. of Water Samples	Frequency	Acceptance Criteria	Corrective Action
Field Duplicate	2	1	5% per parameter per matrix	30% relative percent difference for duplicate aqueous samples. 50% relative percent difference for duplicate soil samples.	Compare to appropriate action level and re-sampling or reanalysis
Equipment Blank	1	1	One per non-dedicated piece of equipment that comes in contact with sample medium per event	No compounds detected	Qualify results or resample if cross contamination is suspected

5.5 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements that specify the quality and quantity of data needed to support decisions during site assessments. DQOs are developed by considering the purpose of collecting the data and the intended use of the data. For this project, the DQOs will establish the quality of data required to meet the goal of the site assessments and the intended end use of the data. The data collected will be compared to risk-based standards and screening criteria to evaluate potential risk to human health and the environment. A summary of data quality objectives developed to meet the site specific goals are provided in **Table 5-3**

TABLE 5-3
Summary of Data Quality Objectives

Matrix	Parameters	Methods	Analytical Level [1]	Data Evaluation Tier	Intended Data Use
Off-Site Laboratory Analysis					
Building Materials Concrete	PCBs	EPA Method SW3540C/8082	Level II	Modified Tier I	As appropriate to meet project goals

NOTES:

1) Analytical levels (USEPA, October 1988):
Level I, on-site field screening and measurements, use one point calibration.
Level II analyses using standard laboratory QA/QC, including duplicate analyses, suitable calibration standards, sample preparation equipment, and operator training.

The media-specific criteria that may be used to evaluate the various types of data generated are presented in **Table 5-4**.

TABLE 5-4
State Criteria for Evaluating Data

Medium	Criteria for Evaluation
PCB Porous Material	TSCA high occupancy clean up criteria
PCB= Polychlorinated biphenyl, TSCA-Toxic Substances Control Act	

CEG reviewed laboratory Method Reporting Limits for PCBs to determine if the detection limits are sufficient to meet the regulatory criteria presented in **Table 5-4**. ARA is able to meet the respective DQOs for PCBs.

5.6 Solid Waste Debris Removal and Disposal

CEG is subcontracting Allstate to conduct the removal of solid waste debris from the room to be sampled in Building #154 to provide access for PCB sampling. Allstate shall use a skid steer and manual labor to remove what is estimated at approximately 60 cubic yards of solid waste that consists primarily of fiberglass insulation and cellulose ceiling tiles. The solid waste will be placed into two 30-cubic yard roll-off containers and transported to a licensed solid waste disposal facility. Efforts will be made to limit any potential tracking of PCBs from the concrete floor to the roll off containers. This will entail donning proper personal protection equipment including disposable booties and securing polyethylene sheeting on the ground along the pathway where the skid steer and foot traffic will be loading the solid waste from the building to the roll-off containers.

5.7 Concrete Floor Sampling and Analysis

CEG anticipates the source of the PCB impacts on the concrete floor is from the equipment stored in one particular room of the building and therefore, no sampling is currently proposed for the adjacent rooms.

Proposed concrete samples shall be collected within the room previously sampled for PCBs and identified as BM-3C on a 10 foot grid. CEG anticipates collecting a maximum of 30 concrete samples subject to the configuration of the room. All of the samples will be analyzed for PCBs. The collection of the samples shall follow the intent of standard operating procedure (SOP) #26. CEG shall utilize a generator and hammer drill for the purpose of pulverizing the concrete. CEG shall attempt to minimize the depth of each drill boring to a maximum of 6-inches to capture the highest concentrations expected in the surface and shallow concrete material. CEG suspects several borings shall be drilled in clusters at each grid point for obtaining the volume required by the laboratory. The drill bit shall be decontaminated between samples using an alconox wash, hexane spray, and distilled water rinse. An equipment blank of the drill bit shall be collected and analyzed for PCBs to determine if any cross contamination.

At the completion of the sample collection, each drilled boring shall be filled with a concrete mixture to grade surface.

5.8 Sample Collection Summary

Table 5-8
Sample Collection Summary by Media

	PCBs
Project Concrete Samples	30
QC Soil Duplicates	2
Equipment Blank	1
Trip Blank	0
Total Samples	**33**

6.0 PROJECT REPORTING

The Site investigation data will be compiled into a letter report documenting the methods and results of the investigation tasks. The report will include a site map depicting the sample grid layout, corresponding PCB concentrations, if present, and an analytical table comparing concentrations results to applicable TSCA regulations. The report will describe adjustments to the work plan, and will also include recommendations, if any, based on the results of the investigation.

7.0 TENTATIVE SCHEDULE

CEG is prepared to initiate work upon approval of this work plan. CEG shall immediately contact Allstate for availability to conduct the necessary debris removal and disposal. CEG's sampling event shall be scheduled within one week of the debris removal. Analytical data is anticipated from ARA within three weeks of sample submittal and a Draft Phase II Report is anticipated to be delivered to the HCPC within four weeks of CEG's receipt of the analytical data.

8.0 COSTING

The estimated cost to conduct this proposed scope of work is approximately $20,500.

Attachments

Figure 1
Delorme Topographic Map

As of the date of this site-specific QAPP addendum, the current state and/or federal standards have been incorporated into this table and the reporting limits and standards have been reviewed for accuracy.

TABLE 1-1
Absolute Resource Associates, LLC
2016 Analytical Method Sensitivity and Project Criteria

Analyte	CAS No.	TSCA High Occupancy Clean-up Criteria	Bulk Material (mg/kg)	
			REPORTING LIMITS (mg/Kg)	MINIMUM DETECTION LIMITS (mg/Kg)
Metals (Analytical Methods 6010/7000)				
Polychlorinated bihenyls - PCBs (Analytical Method 8082)				
Aroclor 1016	12674-11-2	nr	0.2	0.005
Aroclor 1221	11104-28-2	nr	0.2	0.005
Aroclor 1232	11141-16-5	nr	0.2	0.005
Aroclor 1242	53469-21-9	nr	0.2	0.005
Aroclor 1248	12672-29-6	nr	0.2	0.005
Aroclor 1254	11097-69-1	nr	0.2	0.005
Aroclor 1260	11096-82-5	nr	0.2	0.003
Total PCBs	1336-36-3	< 1	0.2	nr
Notes:				
NR-Not regulated				
<-less than				