Letter Work Plan
Supplemental Polychlorinated Biphenyl (PCB) Soil Sampling
Concrete Pad Area at Site 10B – Engine Test House
Naval Weapons Industrial Reserve Plant (NWIRP)
Calverton, New York

Introduction

This letter work plan was prepared by Tetra Tech NUS Inc (Tetra Tech) for the Naval Facilities Engineering Command Mid-Atlantic under Contract Task Order (CTO) WE08 under the Comprehensive Long-Term Environmental Action Navy (CLEAN) contract number N62470-08-D-1001. This report presents rationale and an approach for the collection of additional soil samples in the area of a concrete pad at Site 10B – Engine Test House the NWIRP located in Calverton, New York (Figures 1 and 2). The concrete pad was formerly used to support an electrical transformer. In early 2009, a sign was observed on the chain link fence associated with the concrete pad indicating that a transformer containing PCBs was once sited on the pad. This transformer was removed in the late 1990s.

In July 2009, two concrete chip samples (composite) from the pad and four surface soil samples (discrete) were collected from around the pad. PCBs were detected in the concrete chip samples at concentrations less than 1,000 micrograms per kilogram (µg/kg). However, three of the four surface soil samples contained PCBs at concentrations greater than 1,000 µg/kg, with a maximum concentration of 11,000 µg/kg. Based on these results, the Navy determined that additional delineation of PCBs in soils was required.

Purpose

The purpose of this investigation is to delineate the horizontal and vertical extent of PCB contamination in the soils surrounding the concrete pad at Site 10B.

Sampling Approach

The sampling approach consists of collecting and analyzing up to 48 soil samples using field test kits to initially define the extent of PCB-contaminated soils; followed by analysis of approximately 7 to 11 soil samples using a fixed-base laboratory to confirm the extent of PCB contamination. The field test kit results will be used to identify soils that will be addressed via excavation and offsite disposal. The fixed-base test results will be used to document clean end points for the excavation.

Initially, 7 surface soil samples (0 to 6 inches below ground surface [bgs]) from locations CA-S10B-SS105 to –SS111 and 13 subsurface soil samples (1 to 3 feet bgs) from locations CA-S10B-SB101 to -SB113 will be collected and screened in the field for PCBs, see Figure 3.

Based on the initial field kit sample results, the following steps will be taken.

- For sample locations with PCB concentrations greater than 1,000 µg/kg, an additional soil sample will be collected below that location and additional soil sample(s) will be collected at a distance of approximately 5 feet away from that sample location. See Figure 3 for additional opportunity sample locations. These samples will also be analyzed using the PCB field test kits. Because hand augers will be used for sample collection, the maximum sample depth will be approximately 5 feet. If additional delineation is required at a depth greater than 5 feet, a drill rig will be used during a subsequent investigation round.

- For sample locations with field test kit PCB results of less than 1,000 µg/kg, additional opportunity samples will not be collected. Based on sample location relative to the pad, some of these samples will be submitted for fixed-based analysis to confirm the results of the field test kits.

- A minimum of 7 soil samples will be submitted for fixed-base PCB analysis. Except for the surface soil to the southeast, which is clean fill, one confirmation sample will be collected from each side of the concrete pad at depths of 0 to 6 inches and 1 to 3 feet. If based on the field test kit results, any of samples collected at the 1- to 3-foot interval contain concentrations greater than 1,000 µg/kg, then a maximum of four samples at the 3- to 5-foot depth interval (one per side) will also be submitted for fixed-base analysis.

Surface soil samples will be collected with disposable hand trowels. Subsurface soil samples will be collected with a hand auger. Excess soils generated from hand auguring will be backfilled at their respective soil boring location. The hand auger will be decontaminated in accordance with the Tetra Tech standard operating procedure (SOP) S.A.-7.1. Fluids generated from decontamination will be containerized and managed as investigation derived waste (IDW). Enzyme immunoassay (EIA) test kits (EPA Method 4020) will be used to field screen samples for PCBs through qualitative analysis at the 1,000 µg/kg concentration. Fixed-base soil samples will be analyzed for PCBs using SW846 Method 8082.

The following list summarizes the anticipated field samples and quality assurance/quality control (QA/QC) samples for fixed-base laboratory analysis.

- 7 confirmation samples (3 from 0-to-6-inches and 4 from 1- to 3-footl).
- 4 potential confirmation samples (3- to 5-foot).
- 2 duplicate soil samples (one surface and one subsurface).
- 1 matrix spike/matrix spike duplicate (MS/MSD) sample.
- 1 rinsate blank sample from the hand auger.
- 1 source water blank (deionized water [DI] used during decontamination)

TABLE

Table 1
Supplemental Analytical Program Sumary
Concrete Slab Area - PCB Soil Sampling
Site 10B – Engine Test House
Naval Weapons Industrial Reserve Plant (NWIRP)
Calverton, New York

Sample ID	Sample Location	Sample Depth Interval	Analysis
CA-S10B-SB101-0103	CA-S10B-SB101	1 to 3 feet bgs	Field Screening
CA-S10B-SB102-0103	CA-S10B-SB102	1 to 3 feet bgs	for PCBs.
CA-S10B-SB103-0103	CA-S10B-SB103	1 to 3 feet bgs	Select samples
CA-S10B-SB104-0103	CA-S10B-SB104	1 to 3 feet bgs	for fixed base
CA-S10B-SS105-0000.5	CA-S10B-SS105	0 to 6 inches bgs	PCB analysis.
CA-S10B-SB105-0103	CA-S10B-SB105	1 to 3 feet bgs	
CA-S10B-SS106-0000.5	CA-S10B-SS106	0 to 6 inches bgs	
CA-S10B-SB106-0103	CA-S10B-SB106	1 to 3 feet bgs	
CA-S10B-SS107-0000.5	CA-S10B-SS107	0 to 6 inches bgs	
CA-S10B-SB107-0103	CA-S10B-SB107	1 to 3 feet bgs	
CA-S10B-SS108-0000.5	CA-S10B-SS108	0 to 6 inches bgs	
CA-S10B-SB108-0103	CA-S10B-SB108	1 to 3 feet bgs	
CA-S10B-SS109-0000.5	CA-S10B-SS109	0 to 6 inches bgs	
CA-S10B-SB109-0103	CA-S10B-SB109	1 to 3 feet bgs	
CA-S10B-SS110-0000.5	CA-S10B-SS110	0 to 6 inches bgs	
CA-S10B-SB110-0103	CA-S10B-SB110	1 to 3 feet bgs	
CA-S10B-SS111-0000.5	CA-S10B-SS111	0 to 6 inches bgs	
CA-S10B-SB111-0103	CA-S10B-SB111	1 to 3 feet bgs	
CA-S10B-SB112-0103	CA-S10B-SB112	1 to 3 feet bgs	
CA-S10B-SB113-0103	CA-S10B-SB113	1 to 3 feet bgs	
CA-S10B-SB0305	CA-S10B-SBXXX	3 to 5 feet bgs	
CA-S10B-SB0305	CA-S10B-SBXXX	3 to 5 feet bgs	
CA-S10B-SB0305	CA-S10B-SBXXX	3 to 5 feet bgs	
CA-S10B-SB0305	CA-S10B-SBXXX	3 to 5 feet bgs	

1 - If field screening indicates a sample to contain concentrations of PCBs < 1,000 ug/kg, the sample may be considered for laboratory confirmation analysis of PCBs. Confirmation samples will be collected at a rate of 1 sample per depth interval, per slab side (7 confirmaton samples, 1 duplicate sample, up to 4 extra confirmation samples)

PCB - Polychlorinated Biphenyl
bgs - below ground surface
TAT - turn around time

FIGURES

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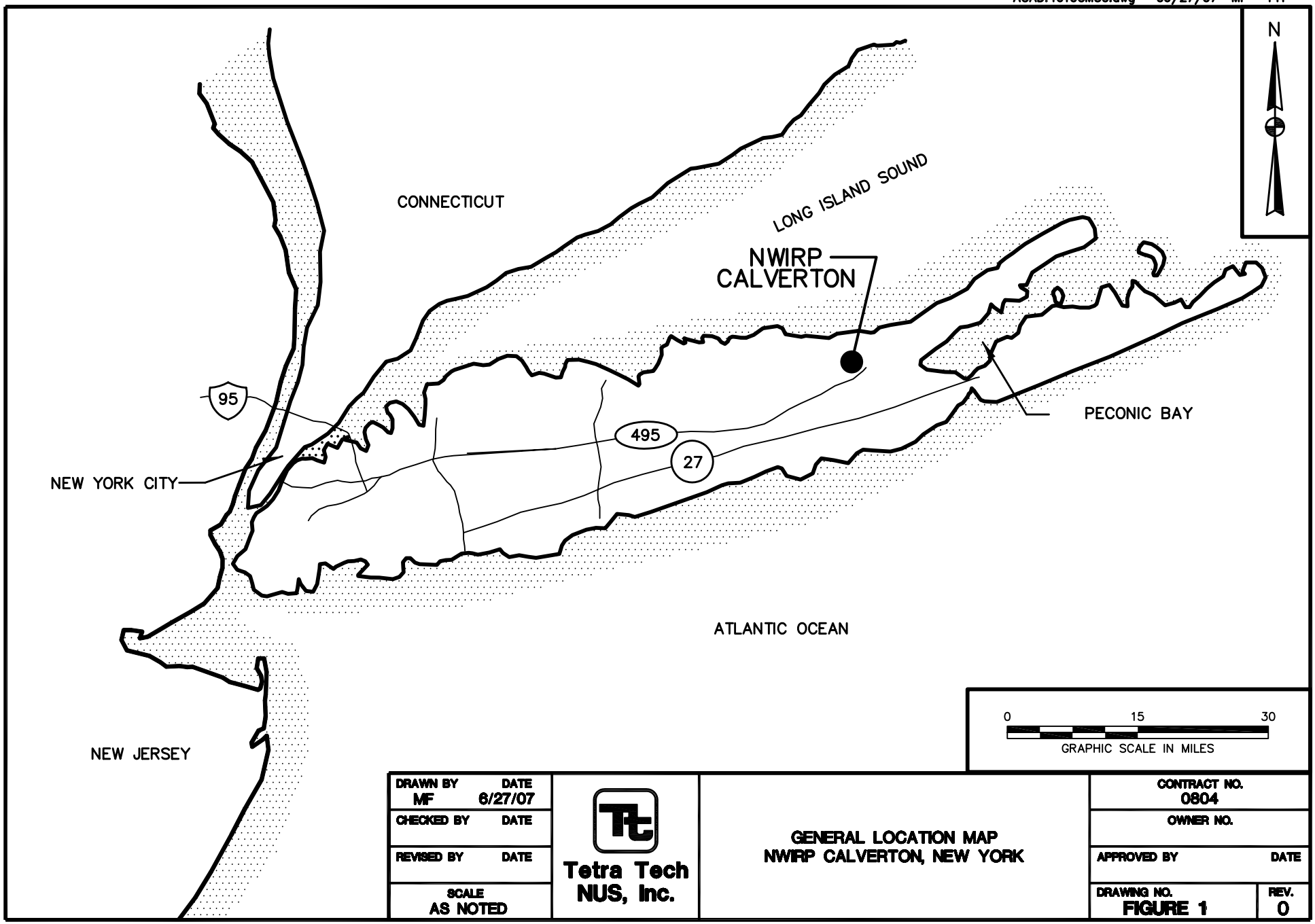

DRAWN BY MF DATE 6/27/07	Tetra Tech NUS, Inc.	GENERAL LOCATION MAP NWIRP CALVERTON, NEW YORK	CONTRACT NO. 0804
CHECKED BY DATE			OWNER NO.
REVISED BY DATE			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO. TTNUS-AH.DWG - REV 1 -9/10/98

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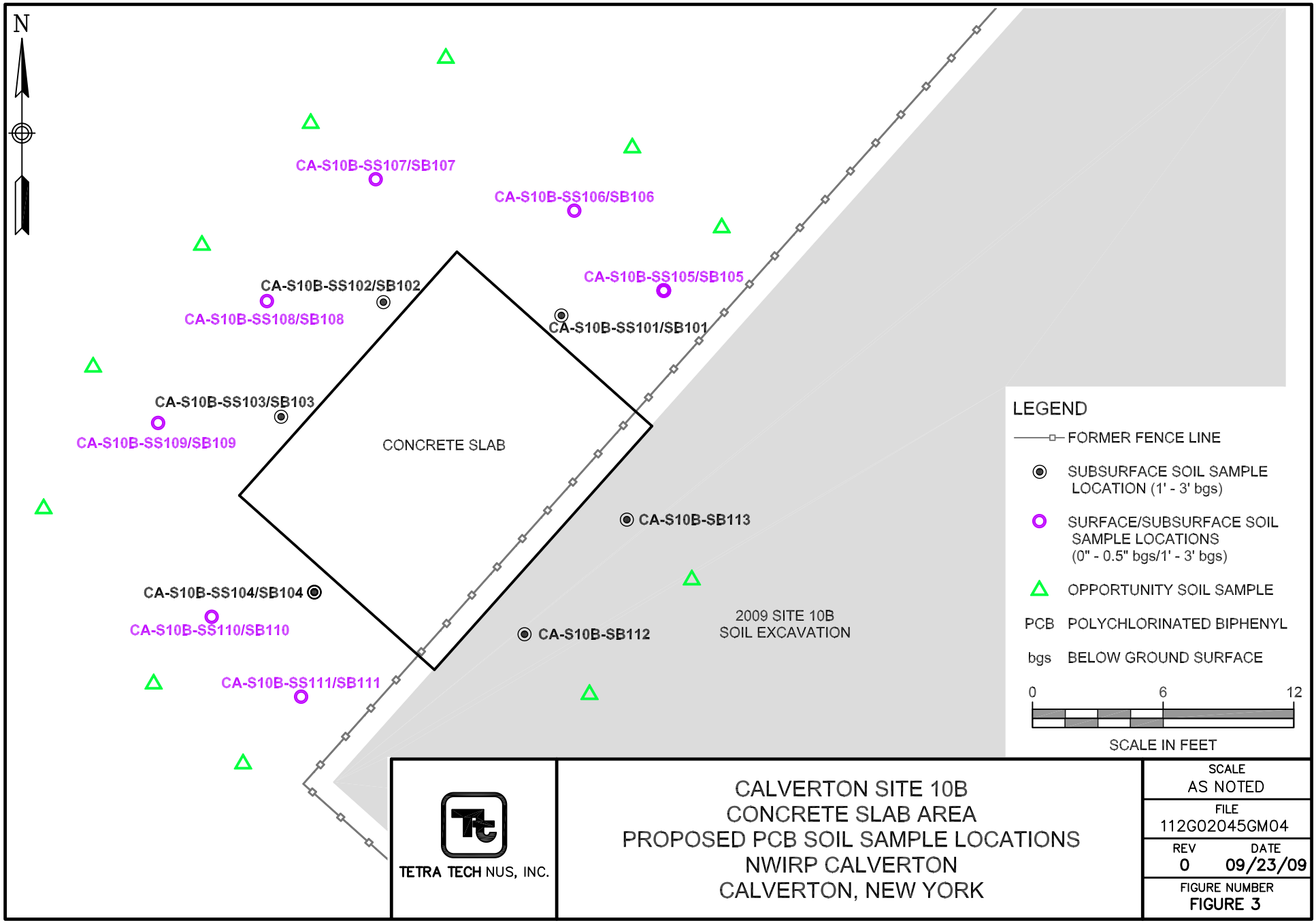
DRAWN BY: M. CUSHING	DATE: 9/8/09	TETRA TECH	CONTRACT NUMBER: 112G02045
CHECKED BY: ___	DATE: ___	**SITE LOCATION MAP** **NWIRP Calverton, New York**	APPROVED BY: ___ DATE: ___
REVISED BY: ___	DATE: ___		APPROVED BY: ___ DATE: ___
SCALE: AS NOTED			FIGURE NO. / REV: 0

112G02045/0410/112G01655GM04.DWG 09/23/09 MKB



TETRA TECH NUS, INC.

CALVERTON SITE 10B
CONCRETE SLAB AREA
PROPOSED PCB SOIL SAMPLE LOCATIONS
NWIRP CALVERTON
CALVERTON, NEW YORK

SCALE	AS NOTED
FILE	112G02045GM04
REV	0
DATE	09/23/09
FIGURE NUMBER	FIGURE 3