



## DEPARTMENT OF THE ARMY

BUFFALO DISTRICT, CORPS OF ENGINEERS  
1776 NIAGARA STREET  
BUFFALO, NEW YORK 14207-3199

DEC 22 2009

REPLY TO  
ATTENTION OF

Special Projects Branch

SUBJECT: NYSDEC Spill No. 08-06523, Supplemental Work Plan, Former Lake Ontario Ordnance Works (LOOW) Underground Storage Tank Removal, Niagara County, New York

Mr. Salvatore Calandra  
NYSDEC, Region 9  
270 Michigan Avenue  
Buffalo, New York 14203

Dear Mr. Calandra:

The US Army Corps of Engineers (USACE), Buffalo District provides the following supplemental work plan for additional sampling related to the Underground Storage Tank (UST) Removal Action for the Former Lake Ontario Ordnance Works (LOOW) Site, Niagara County, New York, for your concurrence. The work plan is provided in response to your correspondence, dated November 18, 2009, that requested further work due to confirmatory analytical sample results exceeding NYSDEC soil guidance levels for semi-volatile organic compounds (SVOCs) in the following areas:

1. Tank 2.4 – West Wall
2. Tank 2.6 – North Wall
3. Tank 2.6 – East Wall

To determine the full extent of impacts, USACE proposes to perform one soil boring at each of the above mentioned locations. Each boring will be located approximately 2-feet outside the former excavation limit and within the center of the former excavation wall. See the enclosed figures for proposed soil boring locations and the former UST excavation dimensions.

A vehicle-mounted, hydraulically-powered machine using static and percussion force (Geoprobe® or similar) will advance a 4-foot macro-corer, with acetate sleeves, into the subsurface to perform the soil borings and collect soil samples. Continuous soil samples will be collected to at least the depth of the former excavations (9-feet below grade surface (bgs) for Tank 2.4 and 7-feet bgs for Tank 2.6) and examined for staining, discoloration, odors, and debris indicative of contamination. Field screening analysis will be performed with a photoionization detector (PID) to detect possible organic vapors and

radiation screening instruments for health and safety purposes. If evidence of grossly impacted soil is encountered, the probes will be advanced to a depth at which soil no longer exhibits such impacts. Geologic descriptions of the soil and field screening results will be recorded in field logs.

One sample for laboratory analysis will be collected from the 6-inch interval that exhibits the highest impacts from each soil boring location. If no impacts are observed within a soil boring, the sample will be collected from the bottom 6-inch interval, the depth of the former excavation. Each sample will be submitted to a laboratory and analyzed for SVOCs utilizing USEPA Method 8270 (Spill Technology and Remediation Series (STARs) Compound List). Detailed sampling procedures can be found within the Former LOOW UST Removal and Site Closure Work Plan, dated September 10, 2008.

Upon receipt and review, the analytical results will be tabulated; compared to NYSDEC soil guidance values; and presented along with figures, boring logs, and the laboratory reports for your review. This summary report will include recommendations for further work or request "no further work – inactive" status for NYSDEC Spill Number 08-06523.

The work will be scheduled upon receipt of your written concurrence to me at the address above. Please contact the LOOW Project Engineer, Mr. Jeffrey S. Hall, PE, PMP, at 716-879-4272 if you have any technical questions about the project or the supplemental work plan. A copy of this plan is also being forwarded to Mr. Kent Johnson in your Albany office.

Sincerely,



Michael P. Sensus  
LOOW Project Manager

Enclosure

ASPHALT ROAD

**WORK AREA DETAIL**

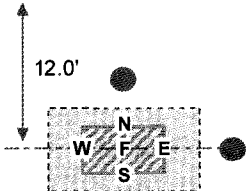
**TANK 2.6 DIMENSIONS**

Excavation:  
16.0' x 9.0' x 7.0' deep

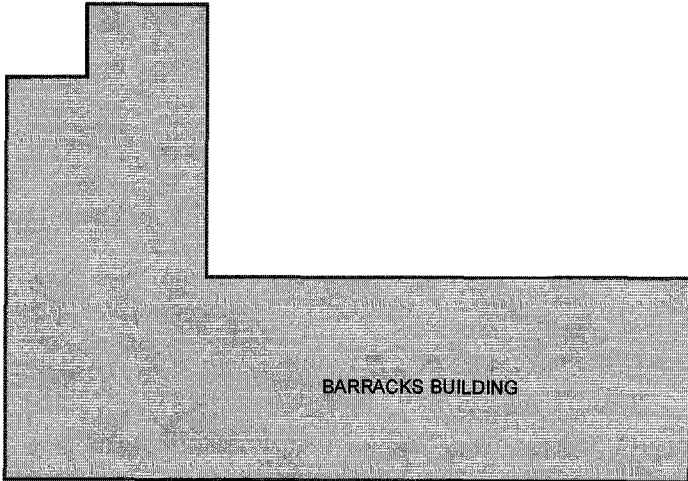
Tank:  
9.0' x 5.3' diameter

**TANK 2.6 CONFIRMATION SAMPLES**

- N: North Wall (LUC-CS-0033)
- S: South Wall (LUC-CS-0034)
- E: East Wall (LUC-CS-0035)
- W: West Wall (LUC-CS-0036)
- F: Floor (LUC-CS-0037)



GRAVEL DRIVEWAY



BARRACKS BUILDING

TANK 2.6

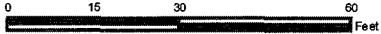
**LEGEND**

- Excavation
- Tank
- Asphalt Road
- Driveway (Unpaved)
- Building
- Proposed Soil Boring



**PROJECT NAME:**  
Former Lake Ontario Ordnance Works  
UST Removal and Site Closure

**DRAWING TITLE:**  
Figure 2-2. NIKE Missile Battery - Barracks Building



DATUM: NY State Plane North Zone, NAD83, US Survey Feet

**DRAWN BY:**

JDV 5/8/09

**CHECKED BY:**

JG 5/8/09

**2-2**

**WORK AREA DETAIL**

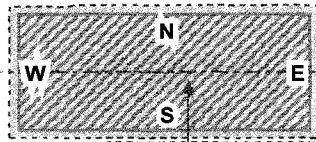
**TANK 2.5 CONFIRMATION SAMPLES**

N: North Wall (LUC-CS-0019/0024)  
 S: South Wall (LUC-CS-0020)  
 E: East Wall (LUC-CS-0021)  
 W: West Wall (LUC-CS-0022)

**TANK 2.5 DIMENSIONS**

Excavation:  
 18.0' x 8.0' x 8.5' deep

Tank:  
 17.8' x 7.0' diameter



**TANK 2.4 DIMENSIONS**

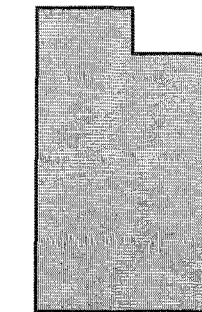
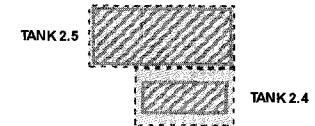
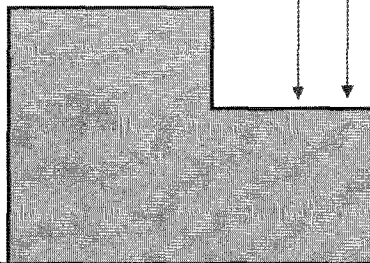
Excavation:  
 12.5' x 7.5' x 9.0' deep

Tank:  
 10.7' x 4.0' diameter

**TANK 2.4 CONFIRMATION SAMPLES**

N: North Wall (LUC-CS-0014)  
 S: South Wall (LUC-CS-0015)  
 E: East Wall (LUC-CS-0016)  
 W: West Wall (LUC-CS-0017)

25.0'  
 15.0'



**SOUTHERN GENERATOR BUILDING**

**LEGEND**

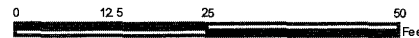
- Excavation
- Tank
- Asphalt Road
- Driveway (Unpaved)
- Building
- Proposed Soil Boring



**PROJECT NAME:**  
 Former Lake Ontario Ordnance Works  
 UST Removal and Site Closure

**DRAWING TITLE:**

Figure 2-3. NIKE Missile Battery - Southern Generator Building



DATUM: NY State Plane North Zone, NAD83, US Survey Feet

**DRAWN BY:**

JDV 5/8/09

**CHECKED BY:**

JG 5/8/09