



DEPARTMENT OF THE ARMY

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

FEB 26 2010

REPLY TO
ATTENTION OF

Special Projects Branch

SUBJECT: Lewiston-Porter School Campus Data Gap Analysis and Proposed Sampling Strategy

Mr. Christopher Roser
Superintendent
Lewiston Porter School Central School District
4061 Creek Road
Lewiston, New York 14174

Dear Mr. Roser:

I'm writing to provide you with the latest information on the US Army Corps of Engineer's (Corps) proposed environmental sampling of the school property and ask your assistance to help move this project forward and complete the work. At your earliest convenience, the Corps team would like to meet with school representatives to finalize the sampling strategy we developed from previous discussions with you and the school representatives. Once the strategy is finalized, the Corps will amend our work plans, and require a signed Real Estate Right of Entry from you to proceed with the sampling activities.

We understand your concerns with some remaining areas within the school property which have not been investigated by the Corps. In response, the Corps secured supplemental funding specifically to address these concerns. The sampling strategy proposed below reflects the maximum extent of the Corp's authority to answer the school's questions. Our understanding is that upon completion of this sampling effort we will have collected sufficient data to conclude whether the school property has potentially been impacted from past defense activities at the former Lake Ontario Ordnance Works (LOOW) and Niagara Falls Storage Site (NFSS).

The schedule necessary to execute the work this federal fiscal year is provided below:

- March 19, 2010 (or sooner): Joint discussion to finalize sampling strategy and receive concurrence letter from school on sampling strategy
- April 16, 2010: Corps finalizes amendments to work plans based on sampling strategy
- April 30, 2010: Corps receives signed Real Estate Right of Entry from the school
- May 2010: Presentation to the school board meeting
- June 2010: Corps collects samples and submits to laboratory for analysis

- September 2010: Corps completes its analysis and submits a technical report of findings

During the August 27, 2009 partnering meeting with the Corps and representatives of the school district, Dr. Gardella presented on concerns regarding data gaps in the previous sampling and analyses conducted on the school property. As a result, the Corps performed a data gap analysis and developed a proposed sampling strategy to address concerns regarding any potential impacts from the Department of Defense (DoD), Manhattan Engineering District (MED), and Atomic Energy Commission (AEC) on the Lewiston-Porter School property, located within the footprint of the former 7,500-acre LOOW. This strategy is presented below.

1. Soil disturbances identified in 1944 aerial photos (appearing during time of DoD ownership of the property).

Proposed Sampling: The Corps proposes to investigate the mounded material, trenches, and pits located on the undeveloped portion of the school property as identified within the 1944 aerial photograph included with the *Niagara Falls Storage Site Historical Photographical Analysis, Lewiston Township, New York, US Army Geospatial Center, September 2009*. The document can be found on the web at:

<http://www.lrb.usace.army.mil/fusrap/nfss/index.htm#Documents>.

Under the Defense Environmental Restoration Program - Formerly Used Defense Site (DERP-FUDS) authority, the Corps will perform the following activities:

- Attempt to locate and visually inspect the anomalies;
- Perform at least one soil boring at each anomaly location using hand augers;
- Perform visual inspection and volatile organic chemical scanning of the soil samples using field instrumentation;
- From each anomaly location, obtain at least one surface (0-6 inches below ground surface (bgs)) and at least one subsurface soil sample (depth dependent on highest field instrumentation reading) from each anomaly; and
- Submit each sample for chemical laboratory analysis.

Since it is assumed that these mounds have not been impacted by non-DoD entities, the Corps will analyze for a "full suite" of chemical parameters including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, explosives, and polychlorinated biphenyls (PCBs). The enclosed figure shows the locations of the anomalies the Corps will investigate in red.

Radiological scanning, using field instrumentation, will be performed during all the activities mentioned above for the safety of the workers. If a soil sample has an elevated radiological field scan (16,000 counts per minute - which is approximately two times the naturally occurring background value conservatively used for health and safety screening) the sample will also be submitted for radiological laboratory analysis. The

radiological parameters include gross alpha, gross beta, gamma emitters, plutonium, thorium, uranium, and radium.

Note: This assessment includes a soil mound located on the developed portion of the Lewiston-Porter School property identified as having elevated radiological scans during the background gamma walkover survey and documented in the *Final Gamma Walkover Survey Report, Lewiston-Porter School Property, Youngstown, New York, U.S. Army Corps of Engineers Buffalo District, February 6, 2002.*

2. The Southwest Drainage Ditch (SWDD) which extends from the south east portion of the school property to the northeast, flows north into Four Mile Creek, and intersects the 30-inch outfall pipeline from the LOOW site.

Past Sampling: During the DERP-FUDS Phase III Remedial Investigation (RI), a surface water and sediment sample was collected from the SWDD at the point where the 30-inch outfall line traverses the ditch. The sample was analyzed for DoD marker compounds (boron, lithium, and explosives) since non-DoD activities may or may not have impacted the SWDD. No explosives were detected in either sample. Boron and lithium were reported in both media in concentrations below screening criteria. Under FUSRAP authority, split samples were collected from the Phase III RI SWDD sample and analyzed for radium, thorium, and uranium. The radiological results were comparable to naturally occurring background levels.

Proposed Sampling: The Corps proposes to expand the investigation of the SWDD that is located on the school property. Under DERP-FUDS authority, the Corps will collect surface water, sediment, and subsurface soil (depth dependent on screening measurements) samples from six locations within the SWDD as shown in blue on the enclosed figure.

Typically under DERP-FUDS, the samples would be analyzed for only DoD marker compounds including boron, lithium, and explosives, because non-DoD activities may or may not have impacted the SWDD. Since the SWDD is accessible to students, a sensitive population, and the cost for additional analyses is minimal relative to the mobilization, the Corps proposes to analyze these samples for a "full suite" of chemical parameters including VOCs, SVOCs, metals, explosives, and PCBs to enhance the value of information available to the Lewiston-Porter Schools regarding potential impacts to the ditch.

Under FUSRAP authority, split samples of the surface water, sediment, and subsurface soil samples will be submitted to a laboratory for analysis of the following radiological parameters: plutonium, thorium, uranium, radium, strontium, and gamma emitters.

3. The portion of the 30-inch outfall pipeline from the LOOW site that extends west from the Southwest Drainage Ditch (SWDD) through the school property.

Past Sampling: During the DERP-FUDS Phase I RI, four subsurface soil samples were collected from below the 30-inch outfall line that extends through the Lewiston-Porter School property. Two of these samples were collected west of the SWDD. The four samples were field screened for trinitrotoluene (TNT) and two of them were submitted to a laboratory for analysis of DoD marker compounds (boron, lithium, and explosives). The two samples that were analyzed at the laboratory were collected from a depth of 8-foot bgs. TNT was not detected in the field screening samples, and explosives were not detected in either of the samples analyzed at the laboratory. Boron and lithium were detected in the two samples analyzed at the laboratory, although the concentrations found were below screening criteria.

During the Phase III RI, a number of samples were collected from the portion of the 30-inch outfall line that traverses the Lewiston-Porter School property. The portion of the 30-inch outfall line that is located on the Lewiston-Porter School property and west of the SWDD was excluded from further investigation since non-DoD activities may or may not have caused impacts to this portion of the line and surrounding media.

Under DERP-FUDS authority, a Human Health Risk Assessment (HHRA) of selected sites in the former LOOW was completed in 2008. This HHRA evaluated the underground utilities as Exposure Unit 10, and addressed the potential for risks to current and future residents (adults and children) and construction workers from exposure to the 30-inch outfall on the parcels along the outfall, including the school property. The risk assessment evaluated the 30-inch outfall line as a whole, so the results of the risk assessment are based on all available data for the line, not just the data from the Lewiston-Porter School property. The HHRA evaluated the potential for risks from exposure to all media investigated during the Phase III RI: sediment, surface water, sludge, wastewater, and subsurface soil. The HHRA found that there were no exceedances of the carcinogenic or noncarcinogenic risk thresholds for any of the receptors; that is, the assessment found that the potential for risks were within acceptable limits.

Additionally during the Phase III RI, split samples were taken from samples collected along the 30-inch outfall line and from the SWDD beneath the 30-inch outfall line, and were analyzed for radiological parameters under FUSRAP authority. The results were comparable to background.

Proposed Sampling: Therefore, the Corps proposes no further investigation of the 30-inch outfall line as it is not warranted based upon the lack of impacts and risks in the pipeline segment upgradient from the SWDD and the fact that the pipeline segment downgradient from the SWDD is actively used by non-DoD entities.

4. Enhanced chemical air monitoring on the school property and increased communication on the purpose of current radiological air monitoring at Lewiston-Porter School campus.

Past & Current Sampling: Under FUSRAP authority, the Lewiston-Porter School property is currently utilized as one of three background locations for the Niagara Falls Storage Site (NFSS) Environmental Surveillance Program due to its location predominantly upwind of NFSS and lack of documented MED/AEC activity. Activated charcoal canisters are deployed once a year for the measurement of background radon flux at the Lewiston-Porter School Property to which we compare the NFSS radon flux measurements. This event coincides with the radon flux measurements at the NFSS Interim Waste Containment Structure (IWCS). Additional background information is collected by an Alpha-Trac® radon monitor and an optically stimulated luminescence (OSL) badge, for beta and gamma radiation monitoring. These devices are located on the Lewiston-Porter School property year round and exchanged/measured twice per year to compare to the similar measurements made at NFSS.

Currently, no air monitoring is performed by the Corps for chemical constituents at the school property as the Corps has no authority under FUSRAP or DERP-FUDS to do this type of sampling. However, when the Corps performs significant intrusive or demolition activities, air monitoring programs are developed and implemented to ensure that our workers, as well as the surrounding property owners and the general public are protected from any air emissions that may occur from the Corps remedial activities at LOOW and/or NFSS.

Proposed Sampling: The Corps plans to perform chemical air monitoring of the worker breathing zone while conducting the sampling work on Lewiston-Porter School property. The Corps plans to continue its radiological background monitoring described above. However, beyond these activities no additional air monitoring on the Lewiston-Porter School property is warranted or authorized for Corps action.

5. Eastern portion of campus where a future bus garage and access road will be located and other areas accessible to the general public.

Past Sampling: Under FUSRAP authority, the Corps performed gamma walkover studies on the US Army National Guard Weekend Training Site (north of Balmer Road) in addition to Lewiston-Porter School property to collect background radiation level data to which we compared gamma walkover results collected on NFSS. The Lewiston-Porter School property was selected for a background investigation due to its location upwind of NFSS and lack of documented MED/AEC activity. The walkover was completed on all accessible portions of the Lewiston-Porter School property. Some spot measurements were obtained, outside the fully accessible areas.

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According to Figure 1 of the *Final Gamma Walkover Survey Report, Lewiston-Porter School Property, Youngstown, New York, U.S. Army Corps of Engineers Buffalo District, February 6, 2002*, the Corps appears to have surveyed the access road of interest and the westernmost portion of the property east of the SWDD where the proposed bus garage may be located (verification is needed on the exact location of the proposed bus garage).

Proposed Sampling: No additional gamma walkover surveys at the Lewiston-Porter School property are authorized as the current background data set is sufficient and there is no evidence of past MED/AEC activity in that location.

The Corps technical team remains available to finalize this strategy and is eager to accomplish this sampling project. Thank you very much for your support and please do not hesitate to contact me at 716-879-4418 if you have any questions or concerns.

Sincerely,



William E. Kowalewski, PE, PMP
Special Projects Branch Chief

Enclosure