



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

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

Environmental Project Management Team

SUBJECT: Responses to New York State Department of Environmental Conservation (NYSDEC)
and New York State Department of Health (NYSDOH) Comments on the Niagara Falls Storage Site
(NFSS) Balance of Plant Field Investigation Work Plans

[REDACTED]
Director
Remedial Bureau A
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau A, 11th Floor
625 Broadway
Albany, NY 12233-7255

Dear [REDACTED],

Thank you for providing your comments on the Niagara Falls Storage Site (NFSS) Balance of
Plant Field Investigation Work Plans. Attached are our responses to NYSDEC and NYSDOH
comments. Please contact me at [REDACTED] if you have any questions.

Sincerely,

[REDACTED]
Environmental Project Management Team Lead

Enclosure

ecc:

[REDACTED] USEPA
[REDACTED] NYSDEC
[REDACTED] NYSDEC
[REDACTED] NYSDEC
[REDACTED] NYSDOH

NFSS_08.01_0550_a

NYSDEC Comment: “Section 1.3: The lower water bearing zone (“LWBZ”) is better described as a gray-brown silt and sand unit, not to be confused with the stratigraphically lower “basal red till” which has significantly lower hydraulic conductivity.”

Corps Response: Thank you. The LWBZ was bundled together as a general reference to the lower three interconnected lithologies at the site. For this Field Sampling Plan (FSP), the distinction is simply to generalize the zone below the gray lacustrine clay layer. No edits will be made.

NYSDEC Comment: “Section 2.1: In comments dated September 10, 2008 (NFSS Remedial Investigation report) and October 16, 2009 (RI Addendum Work Plan), the Department identified several areas of the NFSS needing additional investigation. To date, only a subset of the areas have received attention as part of the RI Addendum and this proposed work. Please review the above referenced comments and respond to when/if these areas in question will be addressed.”

Corps Response: The Remedial Investigation (RI) Report Addendum addressed data gaps identified by stakeholders on the RI. NYSDEC comments provided on the RI Report Addendum dated 26 JUL 2011 were addressed as follows:

- "The Corps needs to conduct additional investigation in the vicinity of monitoring well MW-921." ACTION - The Corps is installing two wells downgradient of MW-921
- Additional definition of the source area in EU4 requires further investigation. ACTION - Three monitoring wells are being installed in EU4 to further delineate this area
- "The area south of the IWCS requires additional investigation to better define the area of contamination and the relationship between the pipelines in the area and groundwater contamination." ACTION - The Corps is installing seven monitoring wells south of the IWCS and excavating and evaluating the 10-inch water line.
- "The Department believes that there has been insufficient investigation of monitoring well OW-11B." ACTION - The Corps is installing four wells in the vicinity of OW-11B and performing eight field investigative trenches in this area near the sewer lines, grit chamber and former decontamination pad to identify the source of contamination in OW-11B.
- "The relationship between the pipelines and groundwater has not [been] sufficiently investigated." ACTION - The Corps is excavating, evaluating, sampling, and plugging all underground utilities leaving the site. The results should address the relationship between the pipelines and groundwater and eliminate stakeholder concerns for contaminant migration through/along underground utilities.

Please identify which specific areas, based on NYSDEC’s comments on the RI Report and RI Report Addendum Work Plan, require further investigation include proposed sampling locations and methodology.

NYSDEC Comment: “Section 2.2.3: Previous discussions between the USACE and the Department with respect to underground pipelines indicated that these lines had been previously been cut and plugged (See USACE comment #214 response, date 18 August 2010). Please clarify. In addition, there is no explanation in the work plan as to why manhole 41 is being sampled and plugged. Previous Department concerns with pipeline contamination and potential migration pathways (please see USACE response to RI comment # 276 & 277 dated 18 August 2010 and Department responses dated 17 December 2010) have yet to be adequately addressed.”

Corps Response: There are several locations at the site boundary where pipelines cross and there are different types of pipes. The response to comment #214 was in reference to the sanitary line and acid waste lines that leave the site to the north (near current PE2), which were plugged by the Corps in 2006. The pipes at PE2 are water lines, including drinking water, process water, and fire suppression.

Manhole 41 was filled with concrete to effectively plug the sanitary line just before it exits the site to the east, thereby eliminating the potential for contents in the sanitary line from leaving the site. Furthermore, no bedding material was encountered either during the recent water pipeline excavations or during the 2006 excavation of the sanitary line along the northern property boundary, so there is likely no potential for migration of contaminants along the outside of the sanitary line.

NYSDEC Comment: “Section 3.1, proposed wells MW944, MW945 & MW946: It is understood that wells MW944 & MW945 are proposed to further delineate dissolved Uranium concentrations northwest of well MW921 and MW946 and to define groundwater conditions in the area up gradient of well 808A. Please explain why further efforts are not proposed to investigate the relationship of dissolved uranium between wells 808A and 506 that is depicted on Figure 4-6 of the RI Addendum Report.”

Corps Response: Figure 4-5 of the RI Report Addendum shows the dissolved total uranium plume and it appears to be well delineated in the vicinity of 506 given the data from wells MW922 and MW923, as well as TWP926 and the direction of groundwater flow in the upper water bearing zone.

NYSDEC Comment: “Section 3-1, proposed wells MW947, MW948 & MW949: The purpose of wells MW948 and MW949 is not clear. These wells are downgradient of Well MW934 which is located beyond the downgradient extent of volatile organic compound groundwater contamination (as depicted on Figure 4-8 of the RI Addendum Report). The proposed location of well MW947 is not understood. If the purpose of this proposed well is to delineate the up gradient extent of chlorinated solvent contamination, a series of exploratory borings more efficiently serves the purpose of delineating the presence of contamination, given the previously detected levels.”

Corps Response: The purpose of shallow well MW948 is to better delineate the dissolved total uranium plume. The adjacent deep well, MW949, is intended to monitor the LWBZ

downgradient of the chlorinated solvent plume. Well MW947 is intended to delineate the upgradient extent of the chlorinated solvent plume.

NYSDEC Comment: “Previous Department comments on groundwater contamination in this area identified the need for the implementation of a remedial action. The investigative actions proposed in this work plan are insufficient to properly determine a remedial approach and will necessitate additional field investigation.”

Corps Response: This sampling is part of a phased data-gap investigation, and was not intended to be a final investigation to support a remedial approach. The Corps will evaluate the data from this investigation and develop/propose any further sampling necessary to support remedial action decisions. The Department should submit a proposal for any additional work deemed necessary to support the Balance of Plant Feasibility Study and evaluate potential remedial alternatives.

NYSDEC Comment: “Section 3.2.2 Task 4 Pipeline Excavations on page 3-11: It states: “The SOW requires URS to sample the contents of pipelines, as well as the soil beneath the pipelines. Therefore, it will be necessary to enter the excavation. Consequently, URS will implement appropriate shoring and protective systems during excavation. These procedures are identified in the Trenching and Excavation Plan (Attachment 13 of the APP). Because it will be necessary to enter the excavations, URS will also adhere to regulations and requirements for confined space entry.” The correct reference in the quoted line above should point to the SSHP and SMS013 and not Attachment 13.”

Corps Response: Comment noted.

NYSDEC Comment: “The Department generally does not comment on safety and health plans unless they are obviously deficient. In the case of the use of ladders during site operations there is an omission in the plan that could place workers at risk. In Section 3-7 Ladders: where the use of ladders should be covered as part of the Safety and Health Plan, the text simply states that this section is “Not Applicable.” However, ladders are clearly intended to be utilized as evidenced by reference to them 30 times within this Plan. Additionally, Appendix B of the Sampling and Analysis Plan spells out the need for a ladder as a safety item to ensure an adequate exit from these excavations. For the sake of worker safety the proper use of ladders should be spelled out under Section 3-7 Ladders.”

Corps Response: Comment noted.

Comments from the NYSDOH:

NYSDOH Comment 1: “The underground water line as highlighted in Figure 2 as PE1 should be analyzed/investigated/plugged at locations on both sides after penetrating through the IWCS. There are multiple locations on the east side of the IWCS relative to OW11B but no new proposed trench/investigations/cutting/plugging along the southeast end of the IWCS where the underground water line penetrates through the IWCS area.”

Corps Response: The pipeline at PE1, the 10-inch water line, does not penetrate the IWCS but rather passes near the southeast corner (but outside) of the IWCS. Refer to attached figure.

NYSDOH Comment 2: “If sampling/investigation of the PE1 pipe contents and/or surrounding soils shows that it is contributing as a preferential pathway for the migration of Uranium, will the pipe contents and/or soils be exhumed/investigated further? Will this be the case for the other PE’s?”

Corps Response: There is sufficient evidence and analysis to conclude that the soils surrounding the pipes are not a preferential pathway as bedding material has not been observed around any of the pipelines exposed at NFSS. Since these lines were pressurized water lines, it is not anticipated that contamination will be present inside these pipes. The contents of each pipe will be tested and the data will be released after analysis and validation. The pipes will be grouted to prevent any transport of contaminants through the pipes.

NYSDOH Comment 3: “Sampling of the pipe, its contents, and surrounding soils as described for the investigation/cutting/plugging area of PE1 should be completed on the trending side of OW11B (to the northeast).”

Corps Response: The nearest pipelines to well OW11B are the process, fire suppression, and cooling water lines, not the 10-inch water line. In any case, to investigate the source of uranium in well OW11B, four additional monitoring wells have been installed and eight test pits have been excavated. Soil and groundwater samples have been collected. Once the analytical data is received and validated, the USACE will assess the data and determine if additional work is needed.

