



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

July 26, 2018

William T. Frederick, P.G.  
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U.S. Army Corps of Engineers Buffalo District  
1776 Niagara Street  
Buffalo, N.Y. 14207

**SUBJECT: THE U.S. ARMY CORPS OF ENGINEERS BUFFALO DISTRICT DESIGN -  
LEVEL SEDIMENT SAMPLING AND ANALYSIS PLAN - SPRINGVILLE DAM  
AND CATTARAUGUS CREEK SEDIMENT SAMPLING, DATED  
APRIL 2018**

Dear Mr. Frederick:

The U.S. Nuclear Regulatory Commission (NRC) received the U.S. Army Corps of Engineers' (USACE's) email (Agencywide Documents Access and Management System [ADAMS] Accession No. ML18179A117), dated April 27, 2018, requesting that the NRC and other stakeholders review the subject document and provide feedback. Attached to the email were several documents to include a letter from the USACE showing how the USACE dispositioned the NRC's recommendations on the earlier version of the sampling and analysis plan (SAP), a project quality assurance plan (QAPP); and the "contamination contingency plan that identifies the USACE civil works policy for HTRW [Hazardous, Toxic and Radioactive Waste] impacts discovered at civil works projects."

As indicated in the SAP, "[t]he project goal is to retrieve sediment samples from the channel of the Cattaraugus Creek at specific locations to determine whether sediments targeted for future removal meet the New York State criteria for a positive beneficial use determination (BUD) and thus uncontrolled re-use at an upland site." As noted in our January 16, 2018, letter (ADAMS Accession No. ML17347A125), the NRC would become involved in this activity, if offsite residual radioactivity was identified that was shown to be associated with the former West Valley reprocessing plant (NRC License CSF-1, Docket 50-0201). The NRC staff (staff) agreed to conduct a courtesy review of the USACE sediment SAP and contingency plan once these plans were finalized.

The staff completed its review of April 27, 2018, submittal. The staff found that the USACE generally addressed the staff's January 16, 2018, comments on the October 2017 version of the SAP. Specifically, the USACE updated the SAP to include 1) subsample retention, 2) field instrument applicability and scanning methods, 3) equal subsample mass in the composite, and 4) comparison of results to the chemical criteria and radiologic background ranges to address

NRC's comments. Additional edits were made by the USACE, such as the addition of the QAPP and Appendix A which provides details on the field scanning methodology materials, to address NRC's comments.

Also as noted in our January 16, 2018, comment letter, field screening may be beneficial for various purposes. This comment applies to samples that are not saturated. The staff note that, when handling saturated sediment samples, it is very unlikely there would be any detectable resuspension of environmental radiological contaminants and doesn't expect any radiological health and safety concerns to arise. However, it is presumed that typical sampling PPE and protocols will be utilized that normally include the use of latex gloves, decontamination steps, and contamination surveys. The staff also note that the SAP appeared to require alpha/beta surface activity scanning for each sample core as well as gamma scanning using a 2" x 2" Sodium Iodide detector. It is the staff's experience that alpha/beta scanning of damp sediment is unlikely to provide useful information. For damp volumetric contamination, the surface efficiency for alpha/beta is much lower than what is presumed in the minimum detectable concentration calculations and scanning the sample core for surface alpha/beta activity is likely not necessary. However, the gamma scanning can provide useful information and should be retained.

The USACE letter dispositioning the NRC comments alludes to NRC guidance and notes that for three subsamples from a single core location in a composite that investigation levels for Class 1 and Class 2 areas would be divided by 3. However, USACE also makes arguments as to why the screening ranges based on background are orders of magnitude below any risk-based criteria. It is NRC staff's understanding that USACE intends to retain background ranges as the screening criteria for comparison against composite sample results and has provided justification for why these screening criteria are protective of members of the public. Also, the staff noticed an apparent inconsistency between the value of 14.2 in Section 8.3 of the SAP and the value of 15.2 in footnote "c" of Table 3 in the SAP.

The staff also note, if the USACE is not using the same analytical laboratory used by DOE for the background determination, then bias can be introduced. This may occur when different laboratory methods and calibration sources are employed. Bias could also arise from the decay of some contaminants and sediment transport and deposition since the time that the WVDP samples were taken. These potential biases should be considered when comparing the Springville Dam Restoration Project sediment data to the WVDP data. The USACE should be aware that these biases could be present and may need to evaluate the data and laboratory reports to try to ascertain whether small variations outside of the background ranges appear to have a natural cause or may be due to licensee radiological activities or analytical bias.

Based on the PowerPoint presentation, Springville Dam Restoration (ADAMS Accession No. ML18179A118) and USACE's Water Resource Policies and Authorities HTRW Guidance for Civil Works Projects, dated June 26, 1992 (ER 1165-2-132) (ADAMS Accession No. ML18179A120), included in the April 27, 2018, submittal, it is the NRC's understanding that these two documents represent the USACE's contingency plan. Further, we understand that the project partners (USACE, New York State Department of Environmental Conservation [NYSDEC], and Erie County) plan is to monitor for HTRW materials and if they are

found during the implementation of the project, it will be up to the project partners to decide what to do and how to pay for the clean-up, should it be needed. The staff requests that the USACE notify the NRC if the project partners determine that the material in question is offsite residual radioactivity shown to be associated with the former West Valley reprocessing plant. The staff would then determine if any further actions are necessary. In accordance with Title 10 of the *Code of Federal Regulations* Part 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

You indicated that NRC comments on the earlier version of the SAP improved the sampling plan and strategy. We hope that our additional comments will also assist the project partners. We appreciate the opportunity to comment on this version of the SAP and do not expect to see a revised version of the SAP again because of the general nature of our comments. If you have any questions, please contact Ms. Amy Snyder, Senior Project Manager of my staff. She can be reached [amy.snyder@nrc.gov](mailto:amy.snyder@nrc.gov) or 301 415-6822.

Sincerely,

***/RA A. Snyder for/***

Stephen Koenick, Chief  
Materials Decommissioning Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 50-0201  
License No. CSF-1

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 LEVEL SEDIMENT SAMPLING AND ANALYSIS PLAN - SPRINGVILLE DAM  
 AND CATTARAUGUS CREEK SEDIMENT SAMPLING, DATED JULY 26, 2018

Docket No. 50-0201  
 License No. CSF-1

**DISTRIBUTION:**

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**ADAMS Accession No.: ML18179A399**

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<b>DATE</b>	6/26/18	7/5/18	7/8/18	7/10/18	7/24/18	7/26/18

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