UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NEW YORK, NY 10007-1866

JAN 20 2000

George B. Brooks, PE
Deputy for Programs and Project Management
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Brooks:

In preparation for our February meeting on the Niagara Falls Storage Site (NFSS), I am enclosing the Status Sheet we prepared for the Lake Ontario Ordnance Works Restoration Advisory Board quarterly meeting on January 12, 2000. It highlights our concerns with the wastes and residues, including the K-65 residues, at the NFSS. Based on our records, the ten-year period covered by the mid-1980 assessment of the integrity of the Interim Containment Facility has expired. Attached to the Status Sheet is a copy of the letter we send March 12, 1999, to the USACE to which we have not received a response, concerning the interim storage and disposal of highly concentrated radioactive wastes and residues at NFSS.

I look forward to our meeting next month.

Sincerely,

Paul A. Giardina, Chief
Radiation & Indoor Air Branch

Enclosure

c: J. Eng, RIAB

Lake Ontario Ordnance Works (LOOW)
and
Niagara Falls Storage Site (NFSS)

The Lake Ontario Ordnance Works (LOOW) was a 7,500-acre Army site that is undergoing study for restoration. Its restoration will depend on what happens to the 200-acre site known as the Niagara Falls Storage Site that contains 250,000 cubic yards of radioactively contaminated materials.

Radioactive residues from the war effort to extract uranium for development of the atomic bomb were shipped to the LOOW for storage in the late-1940s. The stored residues and off-site contaminated soils were collected and placed at the Niagara Falls Storage Site (NFSS) in an Interim Waste Containment Facility, a clay-lined, capped storage pile in the mid-1980s. The design life of the cap is stated to be 25-50 years. Of the 250,000 cubic yards, there are 15,000 cubic yards of residues from the extraction of uranium from pitchblende, a highly radioactive ore. 3,200 cubic yards of this residue, known as the K-65 residues, contain radium up to 550,000 pCi/g. The typical radium level in background soil is 1 pCi/g, and 280 pCi/g for typical U.S. uranium mill tailings. **It is EPA's position that the waste, because of its high radium content, needs a higher level of protection and should be disposed off-site as high-level radioactive waste.**

When the Interim Containment Facility was put in place in 1985, DOE proposed a ten-year timeframe for interim storage while it assessed long-term waste management for the radioactive waste stored at the NFSS. DOE did calculations to ensure that during the ten-year timeframe it could meet the standards of interim storage of high-level waste in 40 CFR 191 Subpart A. **That ten-year timeframe has run out. The Army Corps of Engineers needs to do a re-evaluation of the integrity of the cap and develop a plan for disposition of that waste.**

A study by the National Research Council, a division of the National Academy of Sciences, issued on December 18, 1995, concluded that the highly radioactive K-65 residues should not be disposed of at the NFSS because the residues will likely contaminate ground water and cause adverse health effects.

EPA Region 2 Radiation & Indoor Air Branch wrote to the Army Corps on March 12, 1999, of its concern about the NFSS. To date, EPA has not received a response. **Radiation & Indoor Air Branch requests the Army Corps provide us with future workplans and integrate us into the review process. We understand Phase I sampling has been completed and request a copy of it.**

MAR 1 : 1999

Mr. Raymond L. Pilon
U.S. Army Engineering District
Buffalo District
1776 Niagara Street
Buffalo, New York 14207-3199

Dear Mr. Pilon:

The purpose of this letter is to reiterate the Environmental Protection Agency's (EPA) position regarding the Niagara Falls Storage Site (NFSS). We received a copy of a letter written to you by Dr. Paul Merges (copy attached) on February 22, 1999 in which he provided comments to a draft scope of work for an RI/FS at NFFS. Dr. Merges' letter has prompted this correspondence.

The use of 40 CFR 192, Uranium Mill Tailings Standards Radiation Control Act (UMTRCA), is not appropriate for the NFSS. 40 CFR 192 was developed for use on limited number of uranium mines and the associated mill tailings as designated by the Secretary of the Department of Energy (DOE). These mines were located in the southwestern portion of the United States and contained low to medium grade ore. The waste contained at the NFSS originated from the processing of ore mined in what was then the Belgian Congo and is of a much higher grade (uranium concentration) than UMTRCA was ever intended to regulate. Further, UMTRCA is not a risk based standard, and using it as an ARAR can not ensure remediation activities will meet the risk criteria established under EPA CERCLA guidelines. As mentioned in the National Research Council study of the site, there is a significant possibility for groundwater contamination using the current containment plans. If this issue is not adequately addressed by removal of the waste material, the site may face remedy failure in the future and further corrective actions will be necessary. The highly concentrated K-65 residues and other highly concentrated residues stored on site should be ultimately disposed of in a manner consistent with good management practices for high level radioactive waste.

During the late 1980's, we conferred with the DOE on this matter and we believe we received their assurances that these materials would be handled as such. In fact, they even provided an analysis that the temporary storage of these materials met the criteria for storage of high level radioactive waste pursuant to the high level radioactive waste standards that were in effect at that time.

EPA is aware that the only high level waste repository, Yucca Mountain, is still under development and, if licenced, will not begin accepting waste material for several decades. Given the current impossibility for removal and disposal of the K-65 waste, all actions taken at the site should be considered interim until a high level geological waste repository is operational. All interim actions taken by the Army Corps of Engineers should be undertaken to ensure the health and safety of the surrounding public.

We would also appreciate a copy of the draft scope of work referred to in Dr. Merges' letter as we never received this document and it appears that we should be considered an interested stakeholder considering our regulatory authority over this site.

Please feel free to contact me at 212-637-4010 or by e-mail at Giardina.Paul@epa.gov should have questions.

Sincerely;

Paul A. Giardina, Chief
Radiation and Indoor Air Branch

cc: Paul J.Merges, Ph.D.
New York State Department of
Environmental Conservation