

Niagara Falls Storage Site News from the Corps

Sent: Fri 12/6/2013 2:52 PM

Hello from the U.S. Army Corps of Engineers Buffalo District:

I'm writing you to address a recurring claim made by a few members of the community which inaccurately portrays conditions on the Niagara Falls Storage Site. This claim, which has been confusing when covered in the media, involves the performance of the Interim Waste Containment Structure (IWCS), and was first discussed with the community in 2010. The Corps is committed to protecting human health and the environment. We value community input and have listened carefully and spent considerable time, taxpayer dollars, and effort investigating this matter. The source and extent of soil and groundwater contamination outside the IWCS is being taken seriously and is further refined with each field investigative effort.

Based on the extensive data compiled over 25 years, the Corps is confident that the IWCS, which was engineered and constructed by the U.S. Department of Energy in the early 1980s, is functioning properly and is safely containing the radioactive materials stored within it. The Corps has applied the full strength of our scientific and engineering team to ensure public safety by evaluating over 25 years of environmental monitoring data for the Niagara Falls Storage Site to formulate this conclusion.

The IWCS dike and cut off walls surrounding the IWCS were designed and constructed to be effective for at least 200 years and up to 1,000 years. There are no pipes penetrating the clay dike and cutoff wall. It would defy the engineered purpose of the clay dike and cutoff wall to leave abandoned pipelines running through it as claimed by those who question the performance of the IWCS. A picture showing the construction of a portion of the clay dike and cutoff wall during 1983 is attached.

The Corps closely monitors the elevated uranium concentrations south of the IWCS and near monitoring well OW-11B. The investigation performed in 2012 and the current field investigation are meant to address these areas in support of our long-term remedial decision for the areas of the site outside of the IWCS (Balance of Plant).

The elevated uranium concentrations south of the IWCS and near OW-11B are attributable to historic storage piles and activities performed during the construction of the IWCS. The claims that the higher levels of uranium in wells OW11B and south of the IWCS are originating from the IWCS are not supported by the data or the historic management of radioactive wastes at the NFSS. The monitoring wells were specifically placed in areas where historic areas of uranium contamination existed so it is expected that they exhibit groundwater contamination. For example, an excerpt from a historic report [1982 Aerospace Report] on the materials stored surrounding Building 409 is as follows: "Recoverable uranium from the metal casting operations of the Electro-Metallurgical Company (Electromet) of Niagara Falls, New York, adhering to the graphite reduction bomb liners and crucibles, was stored southeast of the Fire Reservoir (Building 409) (NYOO Medical Division 1949). The earliest shipment arrived in late 1944 from Linde's Utica Street Warehouse and by mid-1955, 18,132 kilograms of uranium were deemed recoverable." Rain and snow fell onto open piles of radioactive material stored on NFSS for over 30 years. Uranium leached into the surrounding soil and impacted shallow groundwater being drawn into the monitoring wells installed south of the IWCS. A figure showing the current well placement in relation to the previous storage piles south of the IWCS and surrounding Building 409 is attached.

All known pipelines entering and exiting the site have been exposed, sampled, plugged, and sealed. There were concerns expressed regarding the 10-inch water line located south of the IWCS acting as a potential pathway for materials from the IWCS entering the groundwater and impacting areas south of the IWCS and OW-11B. This line was exposed, sampled, plugged, and sealed during the 2012 Balance of Plant Operable Unit Field Investigation. There were no radiological impacts detected in or surrounding the 10-inch water line. Consequently, this pipeline is not a preferential pathway.

There were claims reported in a recent media article of uranium concentrations increasing in well OW-11B from 248 micrograms per liter to 1,760 micrograms per liter in 2011. This statement is incorrect with uranium concentrations measured at 377.6 micrograms per liter in the Spring of 2011 and 167.66 micrograms per liter

in the Fall of 2011. The change in uranium concentrations between the Spring and Fall is a result of increasing and decreasing water levels within the well, respectively. The groundwater monitoring well installed approximately 15 feet west of monitoring well OW11B and closest to the IWCS did not exhibit radionuclide concentrations above drinking water criteria.

Further details regarding the Corps findings are provided in the NFSS Balance of Plant Information Booklet available in the fact sheet section at:

<http://www.lrb.usace.army.mil/Missions/HTRW/FUSRAP/NiagaraFallsStorageSite.aspx>

In addition to the field investigation performed last year, the Corps is currently installing over 350 soil borings to further refine the estimated extent of soil contamination in the Balance of Plant Operable Unit to support our future Balance of Plant Feasibility Study. The Corps is also installing additional trenches in the area of monitoring well OW-11B and exposing the sanitary sewer line to determine if this utility may be the source of contamination in this area. Please note that the sanitary sewer line was exposed, plugged, and partially removed by the USDOE north of Ditch 31 [approximately 150 feet south of well OW-11B] during the IWCS construction activities. The pipe segment crossing Ditch 31 was removed and thus cannot provide a preferential pathway for groundwater contamination south of the IWCS to migrate to the OW-11B area. All pipelines leading from the eastern side of the IWCS were removed during construction of the IWCS. As such, the preferential uranium migration pathways identified in the article do not exist.

There were also claims made about the structural integrity of the IWCS cap and a potential breach exposing individuals in Toronto and Buffalo to radon. This statement is categorically false. The IWCS cap undergoes active monitoring and maintenance with a radon flux event conducted every year. During this radon flux event, 180 canisters are placed on the cap to measure radon levels to detect any emission from the IWCS. The results from these events over the last 25 years show radon levels at or below natural background.

Additionally, topographic survey data from four survey events conducted between 1991 and 2009 indicate that the average change in elevation across the surface of the IWCS between 1991 and 2009 is approximately +/- 0.1 ft. This means there has been minimal settling or change in the surface of the cap providing further evidence of the cap's integrity and effectiveness of operation and maintenance activities since construction in 1986; the IWCS is functioning as designed. In January of 2012, the Corps released the Radon Assessment Technical Memorandum that analyzed potential radon air concentrations at several locations both on and off the NFSS property due to catastrophic failures of the IWCS cap from scenarios such as an earthquake, inadvertent intruder, and damage by heavy equipment. The evaluation showed that only one scenario, damage by heavy equipment (that assumes removal of an entire side of the IWCS), resulted in potential radon gas concentrations slightly exceeding the federal and state radon standards at a distance within 0.5 miles of the site. There would be no radon impacts to Toronto and Buffalo or the Lewiston-Porter schools located 1.5 miles west of the site. The Radon Assessment Technical Memorandum is available under the reports section at: <http://www.lrb.usace.army.mil/Missions/HTRW/FUSRAP/NiagaraFallsStorageSite.aspx>

Again, the Corps reiterates that the IWCS at Niagara Falls Storage Site is performing as designed and remains protective of human health and the environment. The NFSS is a complicated property under active investigation; each successive study refines our site knowledge. This knowledge is conveyed to the public several times per year. The Corps is committed to engaging the community through technically facilitated discussions as the process moves forward in the development of the Feasibility Study for the Interim Waste Containment Structure Operable Unit of the Niagara Falls Storage Site. Please e-mail us at fusrap@usace.army.mil if you would like to be added to the invitation list for these meetings.

Sincerely,


Niagara Falls Storage Site
Project Manager



