

LOOW CAC session delves further into the IWCS

by Terry Duffy

Much greater insight on the state of the radioactive Interim Waste Containment Structure was shared at the Dec. 14 session of the Lake Ontario Ordinance Works Community Action Council, held on the Lew-Port campus.

Dr. William Boeck, LOOW CAC member and retired physics professor at Niagara University, provided a detailed overview to visitors on what the U.S. Army Corps of En-

gineers, government overseers of the site, could be considering in its future remediation and cleanup. "I wanted to review some of the older documents," said Boeck as he began his discussion on the 13-acre IWCS at the Niagara Falls Storage Site on Pletcher Road. "We are two years away from a decision," said Boeck, of the Corps' future plans for the site.

In his presentation, Boeck, utilizing Corps data, reviewed past

NFSS activities and discussed facilities that are now buried within the IWCS mound, constructed in the mid-1980s and found on the western side of the NFSS, located 1-1/2 miles east of the Lewiston-Porter School District campus. Operated briefly in 1943 as a trinitrotoluene (TNT) production plant in the early days of World War II, NFSS originally had a number of support facilities such as water intake plants, storage tanks, pipelines and

reservoirs, plus numerous shops and storage buildings.

In 1944, NFSS became a repository facility for the Manhattan (Project) Engineer District. Various buildings on the site were used for storage of radioactive residues that resulted from the processing of uranium ores, done elsewhere during the development of the atomic bomb. Boeck noted the MED and its successor government agencies,

SEE BOECK, continued on Page 8

(cont)

Boeck discusses IWCS contents, cleanup options

continued from cover

such as the Atomic Energy Commission, Department of Energy and Department of Defense, continued to periodically ship radioactive residues and materials to the NFSS for storage through the early 1950s.

In the roughly 15 years prior to construction of the IWCS containment cell in mid-'80s, NFSS saw a vast number of changes, including the shifting/creation of government agencies assigned to monitor it, various buildings and support facilities demolished, and contamination remediation efforts, some of which involved higher level radioactive wastes removed to other locations.

The remaining wastes and structures went on to be consolidated into

what is now known as the IWCS, a temporary in-ground cell, the size of a football field, that consists of radioactive wastes stored in basements of demolished buildings and structures on its southern end, with the balance of the unit being subsurface construction soils and debris. In it are found the following:

- K-65 residues, amounting to roughly 4,000 cubic yards of high-level waste, which comprise 95 percent of the radon curies found within the IWCS, according to Boeck. These wastes were sent to NFSS in the 1950s from an ore processing facility in St. Louis, and are now contained in a vast basement of what was Building 411, located in the south-central area of the IWCS, and in Tank 413, buried in the

southwest area.

Boeck said the K-65s at IWCS have a life of 1,600 years, and while seemingly forever, they are not considered an imminent threat. Where the immediate threat lies in the fact that they break down into radon gas, and in high concentrations they become mobile, he said. "Every time a radium atom disintegrates it becomes a radioactive gas atom, radon," said Boeck. "Radon gas has a shelf life of a half day and they are mobile. That's where the problem is."

- L-30 and F-32 residues, comprising 4.6 percent of the radon curies at IWCS, also found in the remnants of Building 411.

- L-50 residues, comprising .03 percent of the IWCS radon curies, are found in Tanks 413 and 414 on the southwest corner. These wastes along with the R-10 pile, which comprises 0.2 percent of the radon curies, came to NFSS in the mid-1940s from Manhattan Project-related activities at Linde Air Products in Tonawanda.

The balance of the IWCS consists of contaminated soils, rubble and miscellaneous debris, which account for 90.6 percent of its volume, but only 0.1 percent of the radon curies inside, according to Boeck.

As far as options for cleanup, both Boeck and Dr. Joe Gardella, Larkin chemistry professor at the University at Buffalo, who assisted in the presentation, said they do exist. "There are

permanent site options for the K-65s," said Gardella, "Whereas with reactor wastes, there are not."

Boeck said the Corps provided up to seven alternatives in its 2009 NFSS feasibility study work plan that was released in 2009.

Accessed at <http://www.lrb.usace.army.mil/fusrap/nfss/index.htm>, they include:

- Alternative 1: removal of the entire IWCS contents with off-site disposal; Alternative 2: removal of all residues, excluding the R-10 materials, with off-site disposal; Alternative 3: removal of the K-65 residues, with off-site disposal; Alternative 4, removal of residues, with placement in a new, engineered, on-site long-term storage facility; Alternative 5: limited action – enhanced IWCS containment and environmental monitoring; Alternative 6: no further action – continuation of current conditions at the site; and Alternative 7: no further action – a baseline alternative that "would leave the NFSS site, including the IWCS 'as is' with no actions taken regarding access or land use controls beyond those already in place," according to the Corps.

Boeck and Gardella stressed that all alternatives should only be considered as options at this point, and that no decision whatsoever has been made by the Corps on the IWCS. "Federal regulations require a full range of alternatives to be developed," said Boeck. "None of this is being portrayed as 'good or bad

ideas' (by the Corps). It marks the full range of what is possible."

Gardella added, "The point is ... there has been discussion in the community that a decision has been made. It hasn't. We need to place context on what the alternatives are."

Both added that that is why the Corps is only at the very beginning of a lengthy feasibility process, to fully evaluate all situations and all options.

Considering Alternative 1, full removal, Boeck said that K-65 wastes as well as L-30s, L-50s and R-10s could all go to a licensed storage facility in Texas. Radioactive contaminated soils would be trucked to a facility in Michigan. Both stressed no radioactive contaminated soils would be going to local landfills, as none in the area are licensed to receive them.

As far as a total price tag for the IWCS cleanup, Boeck estimated it at \$4 billion. Actual cost figures have yet to be provided by the Army Corps. By comparison the Corps did report that its Fernald, Ohio, cleanup, done in the 1990s, totaled in the \$4 billion range.

The biggest problem with the IWCS, Boeck said, is the current state of the government finances. "This (IWCS cleanup) would cost around \$4 billion," said Boeck. "The (Formerly Utilized Sites Remedial Action Program) FUSRAP budget for all locations is \$140 million a year. Four billion dollars is the national FUSRAP budget for the next 29 years."