Steven Orth

From: Steven Orth
Sent: Wednesday, May 27, 2009 2:10 PM
To: [redacted]
Cc: Viktoria Mitlyng; Prema Chandrathil
Subject: Braidwood End of Cycle Meeting
Attachments: Pages from 2008 Rad Effl Release Report (BWD).pdf

April,

I was very pleased to speak with you at the Braidwood End of Cycle Meeting on Thursday evening. Hopefully, we were able to provide you with information that was of interest to you.

After reviewing some information after the meeting, I found that I made an error at the meeting and unintentionally provided some incorrect information concerning the plant's 2008 radioactive releases. During the meeting, you asked if the plant had any unplanned, abnormal releases in 2008. After quickly referencing the 2008 Effluent Report, I indicated that there didn't appear to be any abnormal releases reported.

I've taken a very close look at the 2008 effluent report, and I've noticed that I had missed some information. During the meeting, I had mistakenly only referenced the liquid release section of the report, which indicated that the plant had no abnormal liquid releases in 2008. However, the plant had three unplanned, abnormal airborne radioactive releases that were reported for 2008 (see attached Page 18 of the report). As indicated in the annual report, the releases resulted from:

- evaporation of liquids during tank cleaning,
- an equipment leakage issue (inside the plant), and
- a release of radioactive gases into the Unit 2 Containment.

In each case, the report indicates that the Braidwood staff calculated the release and the resultant offsite dose. These types of releases are not wholly uncommon, but do indicate releases that are outside of the plant's normal release program. I plan to have some additional details concerning the releases that we can discuss at the June 2009 Braidwood Community Information Night.

Thank you again for attending the meeting. If there is any additional information that I can obtain for you or questions that you have, please feel free to contact me or Viktoria Mitlyng.

Steven Orth
US NRC Region III
630/829-9827
steven.orth@nrc.gov

1. In 2008, there were changes to the Process Control Program. The changes to corporate procedure RW-AA-100, Process Control Program for Radioactive Wastes, were administrative in nature. The changes included many instances of replacing the words, "will", "must", and "should" with the word "shall". The changes included several editorial/format changes where words that had previously been bold were changed to normal format. Administrative instructions were placed in the Documentation section of the procedure. The changes do not affect the physical processing of the radioactive waste as described in the PCP. The changes do not affect the expected offsite dose resulting from the processing or disposal of radioactive waste.

2. During 2008, the following radioactive waste system changes were made.

   A 500,000 gallon liquid radioactive waste storage tank was completed. This tank will be used to store high concentration tritium containing waste water to help manage the site inventory and discharge of liquid tritium. Additionally, equipment was installed to manage the inventory of brine (reverse osmosis unit reject) from processing of liquid radwaste. This equipment includes pumps, valves, and piping to transfer the brine to the liquid radwaste release tanks. This equipment and its use will not increase offsite dose since the radioactivity released from the station's liquid release tanks will be the same or lower in any given year.

3. There were no liquid release tanks or gas decay tanks which exceeded the limits addressed in the ODCM-RETS.

4. There were no unplanned liquid releases in 2008.

   Three abnormal gaseous releases occurred in 2008 and are described below.

   On 5/14/08 through 5/16/08, a planned and monitored release took place from the 0WX27T, Radwaste Storage Tank. Even though the release was planned and monitored, that path to the environment is not a normal station effluent path, and therefore this release is being listed as abnormal. At the time of the release, the 0WX27T contained liquid radioactive waste with a high concentration of tritium (approximately 1.1 μCi/g). To perform maintenance on the interior of the tank, the tank was drained. The small volume of water that remained on the floor of the tank after draining was dried through evaporation using fans flowing out of the tank manway. Prior to the drying step, the water was sampled for tritium and gamma isotopes. Only tritium was above the effluent LLD and a conservative release permit was performed in the Radiological Effluent Tracking and Dose Assessment Software (RETDAS). Permit #2008214 was used to calculate offsite dose from the release. The calculated dose was insignificant.

   The 0E Gas Decay Tank was identified as losing pressure after a release. The tank pressure following the release was 8 psig. Over the next six days, 6/4/08 to 6/10/08, the pressure dropped to 1 psig. This additional pressure loss was considered an abnormal release and the offsite dose calculated using RETDAS permit #2008237.

   On 4/24/08, an unplanned discharge of radioactive gas to the Unit 2 Containment Building occurred. The release of this gas to the environment was through normal and monitored pathways. Samples were obtained and a bounding calculation was performed to show that offsite dose was not affected by this event.

5. The following effluent monitoring instruments have exceeded their specified inoperability time.

   0F-WX001 (Liquid Radwaste Effluent Line Loop WX001) exceeded its specified inoperability time on 4/24/07. At that time, required surveillances for this effluent instrument were taken to "suspend" and were not performed because this effluent flow path was no longer in use at Braidwood Station. The instrument continues to be inoperable and no liquid releases have taken place through this release path during the time of inoperability. A design change and modification to this flow path are in progress. Required surveillances will be performed prior to this flow path being put back in service.