

Release

From: Nirodh Shah *RTI*
To: Jan Strasma
Date: 12/13/05 4:02AM
Subject: Questions from Bwd semi-public mtg on tritium 12/12

Jan, here are the questions asked by the local residents (and the answers provided by the licensee) that I wrote down during the meeting. Please take a look and let me know if you remember a different answer or if there were some questions that I missed.

thanks...N

CC: Gregory Roach; John House; Richard Skokowski; Steven Orth

D-170

Questions from 12/12 Tritium Meeting at Braidwood

Unless stated, all answers are those provided by the licensee (John Moser).

1. **When did the licensee dig the sampling wells ?**

The wells were dug in Nov and Dec 2005.

2. **Is there any tritium in the blowdown pipe today ?**

There is no tritium in the pipe since liquid radwaste releases were suspended. The pipe contains normal blowdown from the lake.

3. **What is being done with the liquid radwaste since the licensee has suspended radwaste releases ?**

It is being stored on-site in tanks.

4. **How much liquid radwaste is currently being stored on-site ?**

About 80,000 gal.

5. **How much liquid radwaste is normally discharged from the site ?**

About 250,000 gal/year. The radwaste is held in tanks and periodically discharged into the blowdown line.

6. **When did you start suspending liquid radwaste discharges ?**

About 2 weeks ago.

7. **Since you stopped discharging have you seen an increase or decrease in the tritium levels ?**

Have not collected many duplicate samples, as still doing characterization. However, samples to date show no significant variation.

8. **Since you can't store forever, does this mean you have to fix this problem this year ?**

We have obtained additional tanks and we are reviewing our options for future discharges.

9. **What is the blowdown line made of ?**

Stainless Steel.

10. **Do you plan to do a pressure test on the blowdown line ? How long will your evaluation take ?**

A pressure test was one of several options considered, but we decided that acoustical monitoring of the piping was the best choice. We expect this monitoring to take 3-4 days and begin next Monday. If you wish, we will share the results of the monitoring with you.

11. **If a vacuum valve falls where does the water go ? Into the water table ?**

The water will collect in the valve pit and then overflow into the environment.

12. **When did you start inspecting the blowdown line and valves ? Did you start after the 2000 event ?**

We had performed walkdowns of the blowdown line and valves prior to the 2000 event, but we increased our inspection frequency after the event.

13. **What is the normal concentration of tritium in the blowdown line ?**

About 90,000 pCi/L in 2000, but since then about 30,000 pCi/L.

14. **This concentration is higher than the EPA limit. Is this ok ?**

Yes. The release is diluted by the river. Before each release we monitor both river flow and level to assure adequate dilution.

15. **How often did you test the liquid radwaste for tritium ?**

Before each discharge and on a 30 day average.

16. **What do you mean by "background levels ?"**

Background levels are those levels of tritium that can be attributed to natural sources or as fallout from atomic bomb testing.

17. **What is the EPA limit based on (dose to adult or child) ? I have an 18 month old baby and expensive show horses--do I need to be concerned ?**

The EPA limit is based on an adult. If you were to imbibe water having a tritium concentration equal to this limit, you would get a dose of 4 mrem/yr. The highest well sample measured so far, would equate to a dose of 0.3 mrem/yr.

18. **Which well had the highest tritium sample ?**

The highest well water sample result was 1524 pCi/L. We cannot divulge whose well had that sample due to personal privacy concerns.

19. **What should I do with my horses if you see >20,000 pCi/L in the residential well samples?**

We do not expect to see these tritium levels in the samples.

20. **What testing frequency do you plan for the future ?**

That has yet to be determined.

21. **Do you plan to do sampling in the vicinity of the blowdown piping by the river ?**

Yes.

22. **What are the EPA standards/requirements for future testing ?**

Don't know. We will get back to you.

23. **Why are you concerned if the well samples are below the EPA drinking water limits ?**

Even though the levels are below the EPA limits, because the tritium migrated offsite we are concerned.

24. **If the spill occurred in 1998, why are you concerned so many years after the fact ? What did you do for the 1998 event ?**

This question will be reviewed during the root cause evaluation.

25. **Was any testing done for tritium during site construction ? What were the results ? Was any testing done for the 1998 spill ? Who was responsible for sampling the 1998 event ?**

Yes, testing was done in 1976, but I don't know the results. Don't know what was done for the 1998 spill. This will be evaluated as part of the root cause.

26. **How many gallons of water were spilled in the 2000 event ? How come nobody noticed the leakage for so long ?**

About 3 million gallons were spilled during the 2000 event. Why it went undetected will also be evaluated as part of the root cause evaluation.

27. **Did the leakage (1998 and 2000) occur from the 8 inch diameter vent piping ?**

No. The leakage occurred in the valve pit and escaped through the manhole.

28. **What caused the failure of the vacuum breaker valve ? Is there a way to stop the water flow if the valve failed ?**

A leak detection system was being evaluated, but does not appear to be very reliable.

29. **What else is in the water besides tritium ? Is Co-60 present ?**

Besides tritium, the samples were analyzed for radioactive particulates; none were found. Co-60 is a particulate and, as stated, was not identified.

30. What was the highest sample result collected ?

33,000 pCi/L onsite near VB 3-6. 220,000 pCi/L was identified in a sample taken today located about 25 ft below ground.

31. Where were the closest residential wells to the spill and were they sampled ?

(The licensee indicated the well locations on a map displayed in the meeting)

32. What is the red line on the map ?

The red line indicates the area where tritium was found.

33. What triggered the on-site sampling ?

The investigation started as a result of a follow-up to a request from the State of Illinois. Specifically, an individual located on the west side of the plant, had independently sampled his well water and had identified tritium. He reported it to the State, who in turn contacted us. Subsequently, we found low levels of tritium in the vicinity and as part of that investigation, eventually identified the tritium along Smiley Road.

34. Did that individual get tested because of sickness or a lawsuit ?

I don't know what prompted that individual to test his well.

35. How can I get independent tritium sampling of my property similar to that individual ?

The licensee stated that they would provide the questioner with information regarding offsite laboratories.

36. How is the residential sampling conducted ? Is the protocol ok ? I have a reverse osmosis system on my property, did you account for this when you took your sample ? When you took my sample, you took it from the drinking water tap and not from the well site—is this ok ?

Phil Harvey from Conestoga Rovers provided a brief summary of the sampling process. He stated that the protocol responsibility usually lay with the sample collector and not with the homeowner. Regarding the reverse osmosis system, he stated he was not aware of it, but that it shouldn't make a significant difference in the sample results.

37. I have prostate cancer and some members of my family have thyroid cancer. Is it possible that this is due to the tritium that was leaked?

It is unlikely given the low levels of tritium involved.

38. Can I go to my doctor and have my tritium exposure measured ?

No. Tritium bioassay is a specialized procedure that your doctor is unlikely to perform.

39. **The Will County Health Department has previously sampled my well water, but has never told me about any tritium. Why ?**

Brian Scanion of the Will Count Public Health department addressed this question. He stated that most residential water is sampled for organic contaminants and not for radioactivity. Because tritium concentrations are highly regulated, it is typically not analyzed as part of the water sampling program.

40. **(addressed to Brian Scanlon, Will County Health Department) Would you feel comfortable drinking the water from my site ?**

Yes.

41. **Do you believe that the tritium was released from any other source besides the blowdown pipeline ?**

No.

42. **Do you have any other options than to use this pipeline ?**

We are looking at other options, including permanently suspending liquid radwaste releases.

43. **What remediation options are you considering ? How long will it take ?**

There are several options being considered, including the use of remediation wells. These options have to be discussed with IEMA and IEPA and there is currently, no definitive timetable for implementation or completion.

44. **If you plan to pump the water out, how will that affect the shallow wells used by the residents ?**

Unknown; however, any damage to the residential water wells caused by the remediation efforts will be addressed by Exelon.

45. **What is the half-life of tritium ?**

About 12 yrs.

46. **Have any other nuclear plants had similar problems ? What did they do ?**

There have been two plants in the east coast and some in Illinois (no names mentioned) that had similar problems. One of the east coast plants used remediation wells to remove the contaminated water.

47. **Can we get a copy of the root cause report from you when it is completed ? Can we get it from the NRC ?**

Jan Strasma stated that, in general, any document provided to the NRC is available to the public under FOIA, with some exceptions, such as proprietary information or private

information.