

From: "Jacobsen, Joe" <jacobsenj@BATTELLE.ORG>
To: George McCann <GMM@nrc.gov>
Date: 5/5/05 1:26PM
Subject: RE: GROUND WATER SAMPLING QUESTIONS

Mike here is some responses to where we are at with this request. I have added John Tholen and Gretchen Farnung of Battelle's Environmental Monitoring group to the responses as they are helping with this review and data collection.

-----Original Message-----

From: George McCann [mailto:GMM@nrc.gov]
Sent: Tuesday, April 12, 2005 9:47 AM
To: Jacobsen, Joe
Cc: Eugenio Bonano; Jon Peckenpaugh; Peter J Lee
Subject: GROUND WATER SAMPLING QUESTIONS

Joe:

Below are questions from our hydrogeologist who is looking over your groundwater program. Look over and give me a call if you have any questions.

Mike

1. Has the NRC ever requested split water samples (groundwater and surface water) at the West Jefferson site? If the answers no, it would be prudent to request split samples on some on the groundwater and surface water sites.

We did an inspection several years ago and I think we did this. I am checking, do you have any records of such sampling? We will compare after I have a chance to go through our records. If not we will set up for one of the next upcoming inspections.

BATTELLE- AS WE KNOW WE HAVE NOT SPLIT SAMPLES. WE WILL BE READY TO SUPPORT TAKING THE 3-4 SAMPLES WITH CLOSURE SERVICES SUPPORT(ROD FALTER)
YOU HAVE MENTIONED THE WEEK OF MAY 16 DURING YOUR INSPECTION ACTIVITY

2. What radionuclide criteria is applicable to groundwater at this site. I found nothing that applies to groundwater in the DP or in the monitoring documents. Based upon our telephone conversation, you were only aware of the effluent standards for surface water in 10 CFR 20 Appendix B Table 2. These standards would not apply to the groundwater.

Can you point me to references in your DP and RPP or else where which speaks to this.

BATTELLE- MIKE, OUR DP AND RPP ONLY REALLY POINT TO EITHER THE ENVIRONMENTAL MONITORING PLAN FOR THE SITE OR THE VOLUMETRIC RELEASE PERMIT PROCESS THROUGH THE VOLUMETRIC RELEASE TECHNICAL BASIS DOCUMENT.
THE VOLUMETRIC RELEASE PROCESS USES 10 CFR 20 APPENDIX B TABLE 3 FOR RELEASE OF WATER FROM THE SITE SUCH AS OUR FRAC TANKS BEING SENT OFF SITE NOW TO A LOCAL POTW OR IF WE WERE TO RELEASE WATER TO ON THE SITE

GROUNDS WE WOULD FOLLOW 10CFR20 APPENDIX B TABLE 2. THE ENVIRONMENTAL MONITORING PROGRAM VOLUNTARILY FOLLOWS USEPA STANDARDS FOR ITS DRINKING WATER SUPPLY WELLS (THREE OF THEM) FOR THE SITE WATER TOWER. NOTE THAT OUR BCLDP INSTALLED WELLS ARE NOT CONSIDERED DRINKING WATER WELLS AND AS SUCH ARE SAMPLED RADIOLOGICALLY FOR TRENDING PURPOSES.

4. If the SDMP groundwater standards apply, they are the US EPA's MCLs for radionuclides in groundwater:

Combined Ra-226 and Ra-228	5 pCi/L,
Gross alpha (excluding radon and uranium)	15 pCi/L,
Beta particles and photon radioactivity	4 mrem/year, and

Uranium
30 micro grams/L.

I would suggest you have your Environmental people look at the past sampling records and see if they can summarize the sampling results and determine if you are below these limit. See nos 5 and 6, below. You will need to speak to this.

BATTELLE- WORKING ON THIS REVIEW

5. An examination of Table 4. Radiological Analyses of Ground Water at the West Jefferson Site in 2000 (from the Environmental Monitoring Plan) indicates that 5 well samples exceeded the 15 pCi/L of gross alpha MCL and 3 additional well samples were within 2 pCi/L of this MCL. This groundwater database contains three bedrock wells and 18 shallow, glacial till wells. The bedrock groundwater is about one-half the gross alpha MCL.

6. Based upon the results in Table 4, we should examine the groundwater from these wells in more detail. You should request the following data:

A. Ask the licensee to provide dates for the 2000 analytical results in Table 4.

BATTELLE- WORKING ON THIS REQUEST MIKE-PLAN ON HAVING THIS INFO AVAILABLE FOR YOU THE WEEK OF YOUR MAY 16TH SITE VISIT

B. We will also need more radiological results, including the radionuclides of concern at this site, for these 21 wells and the nearby surface water, Big Darby Creek and Battelle Lake. (The documents that I have reviewed indicate that Battelle has radionuclide data for the groundwater since the early 1990's.) Ask Battelle for the radiological analytical results for the groundwater and surface water at this site for the time period from 1989 or 1990 to date. Please note that the three bedrock wells were sampled more frequently, at least monthly, than the shallow wells. We will only need data that relates time wise, annual or semi-annual to the 18 shallow wells. If they have this data in summary table or in a spreadsheet that will be the preferable format, over multiple tables of the analytical results for each sampling event. However, this data is important in the NRC's evaluation of the radiological impact of this site on the groundwater and surface water.

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C. We will need groundwater levels for each well that relate to the groundwater sampling events.

BATTELLE- WORKING ON THIS REQUEST MIKE-PLAN ON HAVING AVAILABLE FOR YOU DURING YOUR WEEK OF MAY 16TH VISIT

CC: "Tholen, John" <tholen@BATTELLE.ORG>, "Farnung, Gretchen" <farnung@BATTELLE.ORG>, <PJL2@nrc.gov0>, <GAB1@nrc.gov>

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From: George McCann
Created By: GMM@nrc.gov

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