

Thompson, Margaret

From: Bower, Fred
Sent: Friday, November 07, 2014 3:27 PM
To: aceactivists@comcast.net
Cc: Scott, Michael; Nieh, Ho; Screnci, Diane; Tifft, Doug; McNamara, Nancy; Sheehan, Neil; Montgomery, Richard; Ennis, Rick; DiPaolo, Eugene; Perkins, Leslie; Plasse, Richard; Bower, Fred; Pinkham, Laurie; Thompson, Margaret; Barber, Scott; Lin, Brian; Turilin, Andrey; Noggle, James; Folk, Kevin; Irebarchak@pa.gov; Jefields@pa.gov
Subject: RE: Limerick spill into the Schuylkill River - ACE Questions - [EDATS 2014-0340]

Dr. Cuthbert (ACE),

I received your email from one of our public affairs officers, Neil Sheehan, and I am getting back to you with our response. Please note that the Pennsylvania (PA) Department of Environmental Protection (DEP) has jurisdictional authority for chemical spills into the Schuylkill River. We are mindful of their responsibility and have been careful not to usurp their authority. We understand that you have contacted the PA DEP and they would be best able to respond to you regarding any actions that they have or will take in regard to the matter consistent with their regulatory authority.

NRC inspectors did perform some preliminary inspections of the October 7, 2014, sodium hypochlorite spill into an onsite holding pond; however, they did not do a detailed inspection of the event because it was not nuclear safety related nor did the issue involve an inspect-able area under the NRC's Reactor Oversight Process (ROP). However, we did collect some facts through discussions with the Exelon personnel. We understand that, at approximately 9:00 p.m. on October 7, 2014, Limerick plant operators discovered a crack in a Unit 1 flow control valve sight glass that allowed sodium hypochlorite to leak from a storage tank into the station holding pond where it was mixed with more than 400,000 gallons of clean water. The operators stopped the leak and secured scheduled discharges from the holding pond to minimize the environmental impact. We also understand that sodium hypochlorite is a common bleaching agent used to purify water as part of the station's cooling tower water purification process and it is commonly found in many water treatment systems. Based on the dilution rates and preliminary calculations, Exelon personnel estimated that approximately 100 gallons of the diluted chemical solution reached the river. As required by State regulations, Exelon operators notified the PA DEP. Title 10 to the Code of Federal Regulations, Part 50.72(b)(2)(xi) requires licensees to notify the Nuclear Regulatory Commission (NRC) within four hours of a notification to other government agencies. Exelon's report to the NRC was documented as Event Number 50518 and it can be located on our website at the following address: <http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2014/20141009en.html>. Subsequently, the resident inspectors reviewed Exelon's corrective actions in response to the spill and their reporting of the circumstances surrounding the spill and did not identify any violations of NRC requirements.

Regarding the 2011 event, the circumstances were different from those in the recent October 2014 issue. In that instance, less than 1 gallon of 15% sodium hypochlorite was sprayed onto the floor during a delivery to an enclosed onsite water treatment plant. Although there were no injuries, personnel in the area reported a burning sensation while breathing in the area. Due to the impact on station personnel, Exelon judged that an entry into their Emergency Plan was appropriate and consequently they declared an Unusual Event [HU7] for a toxic gas which has been released onsite which could affect plant operations. The spill was subsequently cleaned up, the Unusual Event was terminated, and normal operations were resumed. The October 2014 spill occurred outside. Additional information can be found on the NRC website. Specifically, the report for this event was documented as Event Number: 47303 and can be located at: <http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2011/20110930en.html#en47303>. Inspection of this issue was documented in Inspection Report 05000352/2011004 and 05000353/2011004.

Regarding the 2012 spill, the NRC has responded to your questions/comments on this topic on a number of previous occasions, and our overall assessment of this event has not changed. Specifically, I would refer you to a previous response located on our website at the following address: <http://pbadupws.nrc.gov/docs/ML1213/ML12130A152.pdf>. However, we have included some additional information in the discussion below to clarify our assessment of the environmental impact of March 19, 2012 discharge of tritium-contaminated wastewater.

Regarding your comments on the final supplemental environmental impact statement (FSEIS) for license renewal of Limerick Generating Station (NUREG-1437, Supplement 49, August 2014), Region I staff consulted with the environmental and license renewal staff in the NRC's Office of Nuclear Reactor Regulation. These staff notes that the NRC prepared the FSEIS using the best available information with respect to plant operations and the state of the affected environment, including surface water and groundwater quality. As detailed in Section 2.2.4.2 of the FSEIS, industrial wastewater, cooling water, and storm water discharges from Limerick are subject to a National Pollutant Discharge Elimination System (NPDES) permit issued by the Pennsylvania Department of Environmental Protection. The release of radiological materials is subject to NRC regulations at 10 CFR 50, Appendix I, as well as those in the plant's technical specifications. Further, Limerick's current NPDES permit also requires that Exelon implement a Preparedness, Prevention, and Contingency (PPC) Plan, including appropriate best management practices, to prevent, respond, and report potential spills of hazardous substances (see Section 2.1.3.2 of the FSEIS). Such discharges are regulated by and subject to water quality standards set by the Pennsylvania DEP, in conjunction with the Delaware River Basin Commission (DRBC). The DRBC is the delegated interstate agency responsible for setting Delaware River basin-wide water quality standards for the protection of aquatic life and other beneficial uses, including use of basin waters as a public water supply. The main stem of the Schuylkill River in the vicinity of the Limerick continues to meet designated water quality standards and uses, including use as a source for public water supply. The NRC's license renewal environmental review, as documented in the FSEIS with respect to the NRC's implementation of the National Environmental Policy Act, identified no impairment of surface water quality attributable to Limerick operations. The FSEIS can be located here: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement49/>.

During the license renewal environmental review for Limerick, the NRC staff specifically considered the issue of minor chemical spills as part of its review of information for "generic" surface water issues. The use of biocides, such as sodium hypochlorite, is common and is required to control biofouling and nuisance organisms in plant cooling systems and chemical spills are always a possibility at any industrial facility. Any such spills are regulated by State and other Federal environmental agencies, rather than the NRC. As stated in Section 4.4.1 of the FSEIS, NRC staff did not identify any new and significant information with regard to the Category 1 (generic) surface water issues and found, in part, that the environmental impact of minor chemical spills is SMALL. The recent sodium hypochlorite spill does not change this conclusion.

Section 2.2.5.2 presents the NRC staff's characterization of existing groundwater quality beneath Limerick Generating Station and includes a discussion of the March 19, 2012 discharge of tritium-contaminated wastewater, the corrective actions taken by Exelon, as well as the impact on shallow groundwater. The maximum observed tritium concentration in groundwater did not exceed the drinking water standard and there was no offsite migration of tritium above federal and state drinking water standards. Regarding radiological contaminants, Exelon maintains a radioactive effluent monitoring and a radiological environmental monitoring program (REMP) at Limerick to assess the radiological impact, if any, to its employees, the public, and the environment around the plant site. As part of the license renewal environmental review, the NRC staff reviewed Exelon's annual radiological environmental operating reports for the period 2007 to 2012, which are submitted under the REMP, to look for any significant impacts to the environment or any unusual trends in the data. Based on the review of the radiological environmental monitoring data, the staff found that there were no unusual and adverse trends, and there was no measurable impact to the offsite environment from Limerick operations. The NRC's ongoing Inspection Program periodically evaluates Exelon's radioactive effluent monitoring and REMP programs for compliance with NRC's radiation protection standards. The NRC's inspection program evaluates the data for compliance with radiation protection standards. If the data were to show a noncompliance with requirements, the NRC would take appropriate enforcement action. In summary, no new information has been presented that would necessitate that the NRC revise or supplement its final

SEIS for Limerick, or which would otherwise change the staff's findings with respect to the environmental impacts of continued operations.

Fred Bower

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✉: Fred.Bower@nrc.gov

From: Sheehan, Neil
Sent: Friday, October 17, 2014 1:43 PM
To: Bower, Fred
Subject: FW: Limerick spill into the Schuylkill River - Questions

From: aceactivists@comcast.net [<mailto:aceactivists@comcast.net>]
Sent: Friday, October 17, 2014 12:45 PM
To: Sheehan, Neil
Subject: Fwd: Limerick spill into the Schuylkill River - Questions

From: "ACE" <aceactivists@comcast.net>
To: "Sheehan, NRC" <Sheehan@nrc.gov>
Cc: "Evan Brandt" <ebrandt@pottsmmerc.com>, "Kurt Imhof, Senator Casey" <kurt_imhof@casey.senate.gov>, "Vidovich, Senator Toomey" <mitch_vidovich@toomey.senate.gov>, "Rafferty, Senator John" <jrafferty@pasen.gov>, "Senator Dinniman" <andydinniman@pasenate.com>, "Representative Vereb" <mvereb@pahousegop.com>, "Painter, Representative" <mpainter@pahouse.net>
Sent: Friday, October 17, 2014 10:18:25 AM
Subject: Limerick spill into the Schuylkill River - Questions

From: "ACE" <aceactivists@comcast.net>
To: "Neil" <Sheehan@nrc.gov>
Cc:
Sent: Friday, October 17, 2014 8:45:22 AM
Subject: Limerick spill into the Schuylkill River - Questions

10-17-14

To: Neil Sheehan, NRC Spokesman

From: Alliance For A Clean Environment
Dr. Lewis Cuthbert

Re: Clarification Needed Related to Limerick Nuclear Plant's 100 Gallon Bleach Spill into the Schuylkill River

Mr. Sheehan,

You made several comments on behalf of NRC related to Limerick's recent bleach spill into the Schuylkill River. We have questions related to your comments and NRC's position on Limerick's "spills" into the Schuylkill River.

1. You said the spill occurred around 9 p.m.
 - a) To be clear, was that 9 p.m. on Tuesday, 10-7-14?
 - b) Exactly what date and time was NRC notified by Exelon?
 - c) How did NRC validate that the spill didn't start much earlier than what Exelon claimed?

2. You said the material was diluted in the holding pond.
 - a) Were you suggesting "dilution" made the spill safe?
 - b) How much liquid does the holding pond hold?
 - c) How much "material" (toxic sodium hypochlorite) was sent to the holding pond the day before, and the day of the accident? Please explain how you verify the amount of sodium hypochlorite you believe was diluted.
 - d) Does that holding pond contain any other toxic chemicals used in Limerick's cooling towers or any radionuclide?
 - e) If the holding pond contains other toxics, please explain why you believe the spill contained just sodium hypochlorite.

3. There were conflicting statements about what caused the recent spill.
 - a) Did NRC do an investigation into what caused the spill? If not, why not? If so, exactly what has NRC concluded caused the spill?
 - b) Did NRC require Exelon to take immediate corrective action? If so, what was the action required and has it been successfully completed? If not, why not?

4. In 2011, NRC classified a one gallon spill of the same chemical as an "unusual event", the lowest of four levels of NRC emergency classification.
 - a) The recent spill was at least 100 times larger. How is NRC characterizing this accident?
 - b) Will there be an NRC notice of violation for this event? If not, why not?
 - c) Some unverified amount of this toxic chemical reached the river, a vital drinking water source for almost two million people. What kind of enforcement action will NRC enact?

5. March 19, 2012, Limerick had at least a 15,000 gallon radioactive spill that ended up in the river.
 - a) What, if any, enforcement action has been taken by NRC for that large radioactive spill? If there was no enforcement action, why not?
 - b) For 23 days, NRC failed to notify the public about that radioactive spill into the Schuylkill River, a drinking water source for over one million people beyond Limerick's discharges. Has there been any correction in NRC rules to insure that this never happens again?

Limerick Nuclear Plant had many radioactive and other toxic spills on site and into the Schuylkill River. Limerick regularly releases unmeasured amounts of many radionuclides and cooling tower toxics into the river. Yet, NRC basically dismissed Limerick's unprecedented threats and harms to drinking water in Limerick's final Environmental Impact Statement. **To protect public interests, NRC needs to revise Limerick Nuclear Plant's Environmental Impact Statement in order to reflect reality.**

PLEASE RESPOND TO QUESTIONS AND REQUESTS AS SOON AS POSSIBLE.