

VictoriaCEm Resource

From: Sandra McKenzie [sandra@sandramckenzie.com]
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Sandra L. McKenzie
Attorney at Law
HARDY MCKENZIE
205 S. Main
Victoria, Texas 77901
(361) 570-8299
(361) 570-8297 fax
mckenzie@sandramckenzie.com

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Recipients Received:

SANDRA McKENZIE
EMAIL: Sandra@sandramckenzie.com

Hardy McKenzie Law
205 SOUTH MAIN
VICTORIA, TEXAS 77901

TELEPHONE: 361/570-8299
FACSIMILE: 361/570-8297

January 3, 2011

VIA FAX TO 301-492-3446 & VIA Email to Victoria.ESPEIS@nrc.gov

**A. Ryan Whited
Chief, Rulemaking and Directives Branch (RDB)
Division of Administrative Services
Mailstop TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001**

Re: Scoping Comments Related to the Review of the Proposed Victoria County Station Site, Early Site Permit Application.

Dear Chief Whited:

Thank you for considering these scoping comments related to the review of the proposed Victoria County Station Site, Early Permit Application.

I am resident of Victoria, Texas, and write in my individual capacity and on behalf of a group of concerned citizens who live along and around the Guadalupe River and who enjoy the Guadalupe River. There are many along the Guadalupe who do not support the proposed Exelon Victoria Station project. Our concerns and scoping comments are as follows:

1. We believe that there is a fundamental flaw in the permit process which allows for early site evaluation without requiring the company to first provide detailed information as to the type of facility which is proposed and detailed information as the type of pollution which will be emitted, discharged, handled and stored.

2. We are opposed to the discharge of radioactive pollutants and other toxins into the Guadalupe River. It is assumed that Exelon will seek a permit to discharge radio nuclides directly into the Guadalupe River. However, at this time, the type, nature and amount has not been disclosed by Exelon. We would ask that this information be made available to the NRC and the public before the NRC makes its determination as to the advisability of the site. The initial permit (which was withdrawn) indicated that radio nuclides would be discharged in to the Guadalupe River from the "blow-down" line; however, the permit was vague and did not state the type, nature or amount of radioactive pollution which would be discharged. Company spokesman, Bill Harris, would not disclose the information.

It is clear that the river lacks sufficient flow, particularly during dry summer months, to allow for dilution. Further, the blow down pipes would be real obstacles in the river. Temperature, as well as the constituents of the pollution of the outfall, would have significant impact on the river system. Downstream uses would be affected by this pollution. But upstream uses might be affected as well. Unique to this system is a plan being considered to build a water pipe line from the southern

downstream portion of Guadalupe River to upstream costumers in the upper lakes and upper reaches of the Guadalupe River. One plan actually proposed a pipeline which would take water out of the Guadalupe south of the proposed Exelon blow down discharge location. If a pipeline from a spot downstream of Exelon is selected for the pipeline, radionuclides and other reactor bi-products discharged from the Exelon facility would be circulated through the entire river system and to the metropolitan upstream users. Consideration should also be given for requiring cooling towers rather than lakes.

In September, 2010, the NRC released the attached list of tritium leaks and spills (attached and incorporated for all purposes by this reference). According to the attached NRC report nine (9) Exelon nuclear facilities have leaked and spilled radio active tritium. The Exelon facilities listed as having leaked or spilled tritium include the following facilities: Braidwood, Byron, Dresden, LaSalle, Oyster Creek, Peach Bottom, Quad Cities, and Salem. We would ask that the NRC consider the adverse affects of permitted and accidental releases on the Guadalupe River. We ask that the NRC require Exelon to re-evaluate the current permitted levels of tritium and other radionuclides. Also, we would ask the Exelon be required to do base line testing as part of the early site permitting process – and before being allowed to begin construction.

It is imperative to keep the radioactive material out of the Guadalupe environment. As BEIRS VII stated, there is no safe level of radiation exposure.

3. We are opposed to emitting radioactive gases, radioactive particles, noble gases, radioactive steam and vapors and other toxins into the air we breathe or into the air in and around the Guadalupe River. The city of Victoria is approximately 13.3 miles north of the proposed facility. It is known that noble gases and radioactive gases are emitted from nuclear power plants. The exact amount that will be emitted by this facility has not yet been disclosed and we would ask the NRC to determine the nature, type and amount of air pollution to be discharged before determining the early site permit process. And by discharge, we would ask the NRC to consider discharge from normal operations and releases due to upsets and mechanical failures. We would ask the NRC to require the preparation of catastrophic events on the Guadalupe River community.

4. We are concerned that the facility will create a public health threat from discharges and emissions of radioactive materials and contaminants into the air, ground and water. As BEIRS VII stated, there is no safe level of radiation exposure. Not only the are we concerned about the pollution from “normal” operations, and accidental releases or upsets, but also the cumulative and synergistic affects on human health.

Tritium and other radioactive materials released from nuclear power plants have been associated with altering DNA, causing cancer and causing mutagenic and teratogenic birth defects. The consequences to future generations are serious and must be considered in the early site permitting process.

5. The NRC should consider Exelon operating history and “lessons-learned” in determining whether Exelon should be allowed to construct a facility on the delicate ecosystem of the Guadalupe River community. Enforcements actions taken by the State of Illinois due to tritium leaks and contamination indicate a corporate operating history which required state legal action before compliance. As the attached exhibit shows, Exelon owns at least nine facilities where tritium has been released into the environment on numerous occasions, even after the State of Illinois enforcement actions.

6. We believe that there is not sufficient water in the Guadalupe River to support a nuclear power plant. Further the nuclear power plant, by consuming the underground and surface water, will damage the river system. There will not be sufficient water for human consumption and for the maintenance of the river and bay system. Besides the fact that a number of communities get drinking water from the Guadalupe River, a number of industries down stream depend upon the Guadalupe River (sports fishing, commercial fishing and some petro-chemical facilities). The bay system, which supports the endangered Whooping Crane, depends on the water from the Guadalupe and this bay system supports a host of tourist and real estate industries. Even if there is a desalinization of ground water, the introduction of this treated water, if not checked, could have damaging effects on the ecosystem. Further, the other issues addressed in this letter (regarding release and discharges of pollution) would still occur.

7. The proposed location is flawed, not just because there is not enough water, but because the site is geologically unstable (on a fault); is a heavily explored oil and gas well field (with well bores, possibly uncased allowing for surface pollution into the water table); and, would require the relocation of gathering lines and gas transmission pipe lines. Further, a hurricane or flood could significantly damage the facility and result in discharge of pollutants causing a significant public health threat.

8. We are concerned that the local economy will in the long run be damaged by the facility. Exelon is asking for a 20 year commitment – the water and local – will be committed but Exelon will not be required to build. Therefore other industries – which might come to the area – may not come due to Exelon’s commitment. Further - as was experienced in Matagorda County, Texas as a result of the construction of the South Texas Nuclear Plant - the local economy might boom with construction workers coming into the area but then the local economy might bust, after plant construction and because of added infrastructure costs (on the schools, sheriff, police, other community services). The proposed Exelon facility is located in the Refugio County Independent School District - taxes might go to Refugio ISD but the workers and their children would most probably be going to the schools in Victoria ISD – causing an imbalance in the school infrastructure. Further, pollution of the water or over usage would, at the very least, hurt the real estate value and over all economy of Victoria and the other communities along the Guadalupe (as mentioned above). And at the worst, an accident or terrorist action could have devastating results on the population. We would ask the NRC require Exelon to provide financial assurances.

A. Ryan Whited
U.S. Nuclear Regulatory Commission
January 3, 2011
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9. There continues to be a problem with where to store nuclear waste spent fuel rods. At present, these rods are being store on site. This location, 4 miles from the Guadalupe River, with the faults and geography mentioned above, is not a good location to store nuclear fuel rods. Further, storing the rods requires additional water and storage facilities. We would ask that the commission require Exelon to disclose the methods and structures proposed for the storage of the waste prior to issuing the early site permit.

10. We are opposed to a federal loan or federal subsidy to support Exelon's construction of this facility. We request that the NRC require Exelon to disclose the application for any federal loan guarantees which Exelon has made or makes regarding this proposed facility.

Sincerely,

A handwritten signature in black ink, appearing to read "S. McKenzie". The signature is fluid and cursive, with a large initial "S" and a long, sweeping underline.

Sandra L. McKenzie

Leaks and Spills of Tritium at U.S. Commercial Nuclear Power Plants

Introduction

This is a list of reactor sites that experienced a leak or spill to the environment at some time since initial startup. The list only includes those leaks or spills where tritium in the leak source or the groundwater sample was greater than 20,000 pCi/L. The term "leaks and spills" includes all types of non-routine releases in which tritium from reactor operation contacted the soil in an unintended fashion.

Source of Information

This information was compiled by NRC staff and is based on available records (e.g., Annual Effluent Reports, Annual Environmental Reports, Groundwater Questionnaires, Preliminary Notifications, Event Notifications, Licensee Event Reports (LERs), NRC Inspection Reports, Special Reports, and other documents submitted by the licensees to the NRC). Although the records search was extensive, extending back to the 1970s, the search was not all inclusive.

Purpose

The NRC has received many questions from the public, the news media, and politicians concerning spills and leaks at power reactor sites. Although most of these questions were similarly focused on groundwater contamination, the questions were different enough to produce significant variations in the responses. This list is intended to be the best single response to those questions involving "numbers" such as:

- How many sites have had leaks or spills of radioactive material?
- What concentrations of tritium were involved?
- What are the current tritium concentrations at each of the sites?

Contents

The tritium concentrations listed are approximate historical maximums, and approximate current concentrations. Some numbers have been rounded off for clarity. Although there may be some data in the historical records showing concentrations slightly different than the values listed, the values shown provide a reasonable indication of the magnitude and extent of the historical leaks and spills as well at the current conditions at these sites.

Onsite and offsite samples were evaluated for inclusion in this list. Samples were collected from both drinking water wells and non-drinking water sample points (e.g., storm drains, man holes, bore holes, piezometer tubes, monitoring wells, surface water, puddles, and rain water). It should be noted that no drinking water wells or municipal drinking water systems appear in this list because no drinking water has been found to contain tritium at concentrations greater than 20,000 pCi/L. As a result, a value of 20,000 pCi/L in this list does not imply the drinking water standard in EPA's Safe Drinking Water Act has been exceeded.

The current status of these sites reflects the most recently available information as of the date shown at the top of this page. This list will be revised as new information becomes available.

EXHIBIT I

After a radioactive spill or leak, tritium is generally the first radionuclide to be identified in groundwater. This is because tritium travels through the soil faster than other radionuclides. Leaks and spills at some sites (e.g., Indian Point, Braidwood) involved nuclides other than tritium (e.g., Cobalt-60, Cobalt-58, Cesium-134, Cesium-137, Strontium-90, Nickel-63), but those radionuclides are not included in this list.

Significant Changes in this Version

- The current status of each site was added to this list.
- Five reactor sites were added to the list based on recent information.
- Some of the dates for the historical releases were updated (with the month and day).

Summary

There are 65 sites with operating commercial nuclear power plants in the United States. Records indicate 37 of these sites have had leaks or spills that involved tritium in excess of 20,000 pCi/L at some time during their operating history. Fifteen sites are currently reporting tritium, from a leak or spill, in excess of 20,000 pCi/L. Although many sites have had leaks or spills involving tritium, no site is currently detecting tritium in the offsite environment, or in drinking water, in excess of 20,000 pCi/L.

Tritium rapidly disperses and dissipates in the environment, and as a result, tritium from leaks and spills is typically not detected outside the facility boundary. The historical data indicates in only one instance, at Braidwood, was tritium from a leak or spill found in the offsite environment in excess of 20,000 pCi/L. All samples from Braidwood since 2008 indicate tritium is no longer present in excess of 20,000 pCi/L in either the onsite or the offsite environment.

Conclusion

The existing compliment of 104 power reactors, each operating for 20-40 years, represents approximately 3000 reactor years of operation. During that time, leaks and spills involving tritium have occurred at many commercial power reactors in the United States. This list demonstrates that in all of that time, and with all the leaks and spills that have occurred, no drinking water supply has exceeded the allowable level for tritium specified in EPA's Safe Drinking Water Act.

Leaks and Spills of Tritium at U.S. Commercial Nuclear Power Plants

It is imperative that the preceding paragraphs accompany any reproduction of this list so that the information is communicated in the proper context.

#	Site	Approximate Historical Maximum Tritium Concentration, pCi/L	Approx Date of Historical Maximum Tritium	Status Update – Highest Tritium Concentration Currently On Site, pCi/L	Date of Status Update
1	Braidwood	247,000	1998	5,510	31-Dec-2009
2	Browns Ferry	2,050,000	7-Apr-10	2,050,000	7-Apr-10
3	Brunswick	1,300,000	2007	272,000	23-Nov-09
4	Byron	82,000	13-Feb-06	1,360	31-Dec-09
5	Callaway	200,000	Jun-2006	814	14-Dec-2009
6	Catawba	42,000	8-Oct-07	47,500	31-Dec-2009
7	Columbia	270,000	13-Mar-93	2,600	15-Jun-10
8	Davis-Besse	37,500	23-Oct-08	8,000	31-Dec-2009
9	Dresden	3,200,000	5-Jun-09	3,110,000	31-Dec-2009
10	Fitzpatrick, J.A.	>20,000	1991	No tritium is detectable from the 1991 event.	2-Jun-10
11	Ginna, R.E.	20,000	1996	No tritium is detectable from the 1996 event.	31-Dec-09
12	Hatch, E.I.	4,000,000	7-Nov-03	100,000	31-Dec-09
13	Indian Point	600,000	2005	164,000	31-Dec-09
14	Kewaunee	>20,000	2006	9,334	31-Dec-09
15	LaSalle	715,000	30-Jun-10	715,000	1-Jul-10
16	Millstone	34,000	28-Nov-07	3,660	13-Jan-09
17	Monticello	21,300	12-Sep-09	21,727	31-Dec-09
18	Oconee	35,400	26-Jan-10	32,700	15-Jul-10
19	Oyster Creek	10,800,000	24-Aug-09	600,000 to 700,000	14-Sep-10
20	Palisades	217,351	31-Dec-09	217,351	31-Dec-09
21	Palo Verde	4,200,000	19-Mar-93	Onsite wells show no detectable tritium.	31-Dec-09
22	Peach Bottom	127,000	6-Jul-09	110,000	31-Dec-09
23	Perry	59,900	2006	No tritium is detectable from the 2006 event.	31-Dec-09
24	Pilgrim	25,552	19-Jul-10	2,790	30-Aug-10
25	Quad Cities	7,500,000	2008	771,000	31-Dec-09
26	River Bend	129,000	16-Jan-08	No tritium is detectable from the 2008 event.	31-Dec-09

27	Salem	15,000,000	Apr-2003	20,000 to 28,000	6-Apr-10
28	San Onofre	330,000	7-Aug-06	1,290	31-Dec-09
29	Seabrook	750,000	1999	2,130	8-Dec-09
30	St. Lucie	161,000	2000	14,650	31-Dec-09
31	Surry	31,900	2007	17,900	20-Nov-08
32	Susquehanna	>20,000	1995	No tritium is detectable from the 1995 event.	9-Nov-09
33	Turkey Point	>20,000	1979	4,690	31-Dec-09
34	Vermont Yankee	2,500,000	8-Feb-10	400,000	2-Sep-10
35	Vogtle	>20,000	1990s	No tritium is detectable from the 1990s events.	31-Dec-09
36	Waterford	>20,000	1997	No tritium is detectable from the 1997 event.	31-Dec-09
37	Watts Bar	397,600	2005	3,420	31-Dec-09