

## Morrison, Catherine

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**From:** Davis, Angel  
**Sent:** Thursday, May 06, 2010 11:12 AM  
**To:** Morrison, Catherine  
**Subject:** FW: List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe  
**Attachments:** 100323\_RLC\_--Final-- Plant List GT 20000 pCi per liter\_Boston Globe.doc

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**From:** Hoeg, Tim  
**Sent:** Thursday, May 06, 2010 10:23 AM  
**To:** Sykes, Marvin  
**Cc:** Davis, Angel  
**Subject:** FW: List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe

Marvin,

Who should we send this FOIA information to?

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**From:** Sykes, Marvin  
**Sent:** Monday, March 29, 2010 8:05 AM  
**To:** Hoeg, Tim; Stewart, Scott  
**Cc:** Sanchez, Steven; Barillas, Martha  
**Subject:** FW: List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe

FYI

It appears that some information has been compiled and posted in the Boston Globe listing plants that have identified >20k pci/l tritium during the life of the plant. In response, the NRC has developed the attached listing which identifies when these values were initially identified and reported but it is important to note that these values may not be indicative of the current situation at your site. Please make sure that your site is aware of the newspaper article and ask if they have developed any type of response.

**The attachment is an internal NRC developed listing that has not yet been validated. DO NOT SHARE w/LICENSEE.**

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**From:** Wert, Leonard  
**Sent:** Friday, March 26, 2010 12:17 PM  
**To:** Bartley, Jonathan; Guthrie, Eugene; Hopper, George; McCoy, Gerald; Musser, Randy; Shaeffer, Scott; Sykes, Marvin  
**Subject:** FW: List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe

Info only....

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**From:** Brown, Frederick  
**Sent:** Friday, March 26, 2010 8:10 AM  
**To:** Boland, Anne; Caniano, Roy; Chamberlain, Dwight; Cheok, Michael; Christensen, Harold; Croteau, Rick; Roberts, Darrell; Lew, David; Clifford, James; Kennedy, Kriss; Munday, Joel; OBrien, Kenneth; Shear, Gary; Pruettt, Troy; Vegel, Anton; Weerakkody, Sunil; Wert, Leonard; West, Steven; Wilson, Peter  
**Cc:** Camper, Larry; Holian, Brian; Giitter, Joseph; Evans, Michele; Tracy, Glenn  
**Subject:** FW: List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe

FYI – more in the media frenzy. Note that a couple of the numbers look large (on their face), so it is possible for there to be more questions that come from this.

(copy to Larry for general awareness, and Glenn/Rick because of Vogtle)

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**From:** Conatser, Richard  
**Sent:** Thursday, March 25, 2010 4:56 PM  
**To:** Burnell, Scott  
**Cc:** Shoop, Undine; Garry, Steven; Screnci, Diane; Brown, Frederick; Cheek, Michael; Werner, Greg; White, John; Dickson, Billy; Bonser, Brian  
**Subject:** List of Power Plants with Leaks >20,000 pCi/l -- Boston Globe

Scott,

Here's the list. Getting the dates for the events really extended the original scope, but we like a challenge. I wish I had a little more time to complete the dates, but we're at the end of the day, and I know you need this data today.

I'm going to continue to collect data, and I plan to have the current status of each of these sites in the next week or so. We'll be in touch...

I'm sending this to the Branch Chiefs in the Regions also, and they may have additional input to the list we're developing.

Best Regards,

*Richard L. Conatser*  
Health Physicist  
Nuclear Regulatory Commission  
301-415-4039  
[RLC5@NRC.gov](mailto:RLC5@NRC.gov)

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**From:** Burnell, Scott  
**Sent:** Thursday, March 25, 2010 4:23 PM  
**To:** Conatser, Richard  
**Cc:** Shoop, Undine; Garry, Steven; Screnci, Diane  
**Subject:** RE: DRAFT List -- Do not use  
**Importance:** High

Rich;

We're at the end of the day -- where are we at on finalizing the table? Please CC Diane on your response. Thanks.

Scott

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**From:** Burnell, Scott  
**Sent:** Thursday, March 25, 2010 11:52 AM  
**To:** Conatser, Richard  
**Cc:** Shoop, Undine; Garry, Steven  
**Subject:** RE: DRAFT List -- Do not use

Rich;

Summarizing data is a necessary compromise in these sorts of cases; as long as we can point to documented submittals from the plants, we have a reasonable basis for creating the table. We can use "Event Report Date"

or something similar, but we must fix initial awareness of the incidents to a point in time. We need to provide the table today.

Take two:

These plants have leaked or spilled tritiated water to the environment at some time since they began operating. There is no evidence to suggest any of these events presented any public health risk. The list includes spills or leaks where the tritium concentration in the leak source or groundwater sample was greater than 20,000 pCi/l. The list does not reflect the current groundwater status of these sites.

The concentrations listed are approximate historical maximums, and some numbers have been rounded off for clarity. Although some historical data may show concentrations slightly different than what's listed, the values shown provide a reasonable perspective of the historical leaks. The numbers listed are for on-site sample points, and none of these results are from drinking water wells. As a result, any values beyond 20,000 pCi/l do not imply the EPA's safe drinking water standard was violated. Those plants listed as >20,000 pCi/l reflect the best data available at this time.

**Subject: List of Historical Leaks and Spills At U.S. Commercial Nuclear Power Plants**

This is a list of plants that have had a leak or spill to the environment at some time since initial startup. The list only includes those spills or leaks where the tritium in the leak source or the tritium in the groundwater sample was greater than 20,000 pCi/l. It does not contain routine releases.

The concentrations listed are approximate historical maximums, and 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 perspective of the historical leaks. The numbers listed are for on-site sample points, and none of these results are from drinking water wells. As a result, a value of 20,000 pCi/l in this list does not mean it exceeded EPA's safe drinking water standard.

Many of these leaks or spills occurred many years ago, and this list does not reflect the current (2010) status of these plants. We are gathering the current information, but that will take some additional time, and you wanted this data today. Some plants are listed as >20,000 pCi/l because that is the best data available at this time. We will be able to find the exact values later; I just don't have them today. Similarly, some dates are blank because that information has not been fully researched yet.

#	Plant	Approximate Historical Maximum Concentration pCi/l	Approx Date
1	Braidwood	247,000	1998
2	Brunswick	1,300,000	2007
3	Callaway	29,000	
4	Catawba	30,600	2005
5	Columbia	>20,000	2006
6	Davis-Besse	24,000	1990
7	Dresden	3,200,000	2004
8	Fitzpatrick, J. A.	>20,000	1991
9	Fort Calhoun	110,000	2007
0	Ginna R.E.	20,000	
11	Hatch, Edwin, I.	>20,000	1986
12	Indian Point	600,000	2005
13	Kewaunee	>20,000	2006
14	Millstone	34,000	
15	Monticello	21,300	2009
16	Oconee	34,500	2010
17	Oyster Creek	6,000,000	2009
18	Palisades	34,600	
19	Palo Verde	4,200,000	1993
20	Peach Bottom	123,000	
21	Perry	59,900	2006
22	Quad Cities	3,000,000	2008
23	River Bend	28,000	2008
24	Salem	15,000,000	2002

25	Seabrook	750,000	1999
26	St. Lucie	161,000	2000
27	Surry	31,900	2007
28	Susquehanna	>20,000	1995
29	Turkey Point	>20,000	1979
30	Vermont Yankee	2,500,000	2010
31	Vogtle	>20,000	1990s
32	Waterford	>20,000	1997
33	Watts Bar	397,600	2005