



CHAIRMAN

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 9, 2011

The Honorable Edward J. Markey
United States House of Representatives
Washington, D.C. 20515

Dear Congressman Markey:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of October 21, 2011, which poses several questions regarding potential strontium-90 contamination from the Vermont Yankee Nuclear Power Plant.

The NRC's responses to your questions are enclosed. If you need any additional information, please contact me or Ms. Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory B. Jaczko".

Gregory B. Jaczko

Enclosure:
As stated

**Responses to Questions from Representative Edward J. Markey
Letter of October 21, 2011**

1. Is it the Commission's view that the statements made by Entergy's Lawrence Smith that "No groundwater sample from any well at Vermont Yankee has ever indicated the presence of strontium-90, or any other isotope other than tritium" and "There is absolutely no evidence to suggest that Vermont Yankee is the source for the strontium-90" in the fish from the Connecticut River," provide a truthful, accurate, and complete representation of the source of the strontium? If so, please provide me with full documentation that establishes the source of the strontium as anything other than releases from Vermont Yankee. If not, why not?

Based on effluent reporting to the NRC, the data indicate that no groundwater sample from wells at Vermont Yankee has ever included the presence of strontium-90 (Sr-90). The licensee has reported to the NRC and made public information regarding past gaseous releases of Sr-90 within legal limits, but river water sampling subsequent to these reported releases to the atmosphere has not detected the presence of Sr-90 in the Connecticut River. Because there are multiple potential sources of Sr-90, including nuclear weapons testing by multiple countries in the middle of the last century, it is very difficult to draw conclusions about the source of any particular Sr-90 contamination that is found in the environment unless there is additional supporting evidence. On this specific point, the Vermont Department of Health (VTDH) on its Web site concludes that "we cannot associate low levels of Sr-90 in fish in the Connecticut River with Vermont Yankee-related radioactive materials without other supporting evidence. Other supporting evidence would include measuring Sr-90 in groundwater samples as well as measuring other nuclear power plant-related radionuclides in both fish and groundwater samples. To date, the Health Department Laboratory has not measured other nuclear power plant-related radionuclides in fish or groundwater samples." The quoted licensee statements in your question are not without foundation based on the above information.

2. Please provide me with all documentation related to any NRC regulatory requirements regarding the veracity of statements that licensees provide to the public and the media. If there are no such requirements, please provide an explanation as to why the NRC is not concerned with the truthfulness of public statements made by licensees.

The NRC's legal authority does not extend to regulating all public statements made by companies that hold NRC licenses. As you noted in your letter, we do require that information provided to the NRC be complete and accurate in all material respects. This does not mean that the agency is unconcerned if licensee statements to the public are misleading or untrue. The NRC believes that all stakeholders involved in NRC-regulated activities should act in an open, honest, and transparent way, just as the agency seeks to do in its own action, and any failure by a licensee to do so could call into question the veracity of licensee information provided to the NRC.

3. The Vermont Department of Health stated that "One finding of (strontium-90) just above the lower limit of detection in one fish sample is notable because it is the first time strontium-90 has been detected in the edible portion of any of the fish samples." How is the NRC addressing the need for more study of the possible role of Vermont Yankee in the strontium-90? If Vermont Yankee is found to be the source of the strontium-90, what will be the consequences imposed by the NRC?

Enclosure

The licensee has found no Sr-90 in groundwater well sampling on site at Vermont Yankee. Further, neither licensee nor VTDH sampling of river water has shown the presence of Sr-90 in the Connecticut River. Finally, NRC analytical methods employ a somewhat different "band of uncertainty" than the VTDH when reviewing the findings of the VTDH fish samples, and, in our opinion, the VTDH results are too close to the level of uncertainty to be considered by themselves a conclusive indication of the presence of Sr-90. When taken together, these factors lead us to conclude that there is no need for further study of possible Sr-90 contamination from Vermont Yankee at this time. The plant will continue its regular effluent monitoring and reporting to the NRC. In the future, should there be an indication of Sr-90 releases above the licensed limits or Sr-90 contamination in the river that is tied to emissions from the plant, the NRC will take action, as appropriate, at that time.

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Chairman Correspondence

ADAMS Accession No.: ML

OFC	SECY	OCA <i>for Becke Schmidt</i>	OCM/GBJ	OCM/GBJ	
NAME	A.Lewis <i>aml</i>	R.Schmidt	J.Monninger	G.B.Jaczko	
DATE	11/4 /11	11/8 /11	11/ /11	11/9 /11	

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October 21, 2011

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

I write to request information about Nuclear Regulatory Commission (NRC) regulations and its expectations related to licensees' statements to the media and other members of the public. I am concerned that certain statements made by representatives of Entergy Nuclear, the licensee of the Vermont Yankee nuclear power plant, are at odds with the factual history of the plant, and that the NRC has not appropriately responded to concerns raised about this issue.

On August 2, 2011, the Vermont Health Department reported that strontium-90 was detected in the flesh of a small mouth bass roughly nine miles upstream from the Vermont Yankee nuclear power plant.¹ The Health Department has found strontium-90 in other, inedible portions of Connecticut River fish in earlier samples.

Strontium-90 exhibits biochemical behavior similar to calcium. If strontium-90 is ingested, it is deposited in bones and bone marrow while some remains in blood and soft tissue. This exposure can cause bone cancer, tissue cancer, and leukemia, hence the statement from Mr. Bill Irwin, Chief of Radiological Health at the Vermont Department of Health: "It obviously is of concern to us. It's a source that only comes from human activities. It's not natural."²

Mr. Laurence Smith, Manager of Communications for Entergy Nuclear Vermont Yankee, released a statement on August 2, 2011 that contained the following assertion: "We are aware that the Vermont Department of Health may have detected strontium-90 in some fish from the Connecticut River. There is absolutely no evidence to suggest that Vermont Yankee is the source for the strontium-90. We have 31 monitoring wells on site that are tested regularly. No groundwater sample from any well at Vermont Yankee has ever indicated the presence of

¹ Vermont Department of Health Tritium Investigation Archive 2011
(http://healthvermont.gov/enviro/rad/yankee/tritium_archive.aspx#results,
http://healthvermont.gov/enviro/rad/yankee/documents/Results_of_Hard-to-detect_Analyses_on_Fish_Collected_in_2010-2011_from_Connecticut_River.pdf)

² Vermont Public Radio, August 2, 2011 (http://www.vpr.net/news_detail/91555/)

strontium-90, or any other isotope other than tritium. We do not know why the Governor would suggest Vermont Yankee is the source, but there is no factual basis for that suggestion.”³

This statement is at odds with recent history at Vermont Yankee. On May 11, 2011, Entergy submitted a report to the NRC that stated 3.17×10^{-8} curies of strontium-90 were released in gaseous form at ground-level from Vermont Yankee during the first quarter of 2010.⁴ Past reports also show strontium-90 routinely released to the environment from Vermont Yankee.⁵

The clear implication of Mr. Smith’s August statement was that the strontium in the fish could not have come from the Vermont Yankee nuclear power plant, despite the earlier admission that the plant had released strontium-90 into the environment. On August 8, 2011, Mr. David Lochbaum, Director of the Nuclear Safety Project at the Union of Concerned Scientists, sent an email to Mr. Smith and Mr. Daniel Holody of NRC Region I characterizing this statement as “not the whole truth” and “so short of the whole truth as to be very misleading bordering on deceitful” (see Attachment 1).

In response, Dr. Bellamy stated in a August 29, 2011 email (see Attachment 2) that “the NRC does not regulate statements made by licensees to the media.” It seems Dr. Bellamy was referring to NRC Regulation 10 CFR 50.9, which states that information provided to the Commission by a licensee must be “complete and accurate in all material respects”.

If Dr. Bellamy’s statement can be considered to represent Commission policy, it would seem that the Commission does not mind if a licensee misleads the public, as long as the Commission itself receives truthful communications. This seems inimical to statements you have made regarding the role of transparency and openness in building public confidence in the NRC as a regulatory body. For example, in remarks you made in Tokyo, Japan on May 22, 2007, you stated that “Not only does the public need to have access to the same information that we have, but they have to have access to understand the decision-making process we use as a regulatory body.”⁶

I request that you provide me with responses to the following questions:

1. Is it the Commission’s view that the statements made by Entergy’s Lawrence Smith that “No groundwater sample from any well at Vermont Yankee has ever indicated the presence of strontium-90, or any other isotope other than tritium” and “There is absolutely no evidence to suggest that Vermont Yankee is the source for the strontium-90” in the fish from the Connecticut River provide a truthful, accurate and complete representation of the source of the strontium? If so, please provide me with full

³ Vermont Yankee press release August 2, 2011 (<http://www.safeandcleanreliable.com/statement-from-vermont-yankee-august-2-2011/>)

⁴ Vermont Yankee Radioactive Effluent Release Report for 2010 (http://wha.nrc.gov:8080/ves/view_contents.jsp)

⁵ 2003, 2004, 2005, and 2010 Vermont Yankee Radioactive Effluent Release Reports to the NRC

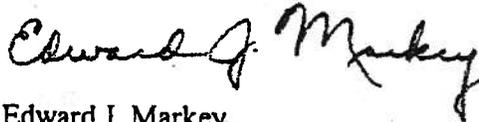
⁶ Organization for Economic Co-operation and Development’s Nuclear Energy Agency Workshop on the Transparency of Nuclear Regulatory Activities Tokyo, Japan May 22, 2007 (<http://pbadupws.nrc.gov/docs/ML0718/ML071870373.pdf>)

documentation that establishes the source of the strontium as anything other than releases from Vermont Yankee. If not, why not?

2. Please provide me with all documentation related to any NRC regulatory requirements regarding the veracity of statements that licensees provide to the public and the media. If there are no such requirements, please provide an explanation as to why the NRC is not concerned with the truthfulness of public statements made by licensees.
3. The Vermont Department of Health stated that "One finding of (strontium-90) just above the lower limit of detection in one fish sample is notable because it is the first time strontium-90 has been detected in the edible portion of any of our fish samples." How is the NRC addressing the need for more study on the possible role of Vermont Yankee in the strontium 90? If Vermont Yankee is found to be the source of the strontium-90, what will be the consequences imposed by the NRC?

Thank you very much for your consideration of this matter. Please provide your response no later than close of business Friday November 4, 2011. If you have any questions or concerns, please have your staff contact Dr. Makenzie Lystrup or Dr. Michal Freedhoff of my staff at 202-225-2836.

Sincerely,



Edward J. Markey

Attachment 1: October 21, 2011 letter from Congressman Markey

From: Dave Lochbaum
Sent: Monday, August 08, 2011 8:38 AM
To: lsmith14@entergy.com
Cc: Daniel.Holody@nrc.gov
Subject: Strontium in fish taken from the Connecticut River

Mr. Smith:

I was forwarded a copy of the statement you released on August 2, 2011, which contained the following statement:

"There is absolutely no evidence to suggest that Vermont Yankee is the source for the strontium-90. We have 31 monitoring wells on site that are tested regularly. No groundwater sample from any well at Vermont Yankee has ever indicated the presence of strontium-90, or any other isotope other than tritium."

'Absolutely no evidence'?

Really? Come on.

How about the report that Entergy submitted to the NRC on May 11, 2011 (pages attached)?

Table 1C from Entergy's report to the NRC stated that 3.17E-08 curies of strontium-90 were released in gaseous form at ground-level from Vermont Yankee during the 1st quarter of 2010. Past reports also show strontium-90 routinely released to the environment from VY.

So what you said in the statement about not detecting strontium-90 in monitoring wells may be true, it is not the whole truth is it Mr. Smith? In fact, it is so short of the whole truth as to be very misleading bordering on deceitful.

The whole truth is that Vermont Yankee routinely releases strontium-90 to the environment. This fact does not mean that Vermont Yankee is the primary or sole source of the strontium found in the fish. But this fact also means that Vermont Yankee cannot be excluded as a potential source, as your very misleading statement sought to establish.

I have copied Mr. Daniel Holody in NRC Region I. Mr Holody handles allegations. I trust he will look into whether Entergy was lying in its August 2,

Attachment 1: October 21, 2011 letter from Congressman Markey

2011, statement to the media or perhaps was lying in its May 2010 report to the NRC.

David Lochbaum
Director, Nuclear Safety Project
Union of Concerned Scientists
PO Box 15316
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(423) 488-8318 cell
dlochbaum@ucsusa.org

Attachment 2: October 21, 2011 letter from Congressman Markey

From: Bellamy, Ronald [Ronald.Bellamy@nrc.gov]
Sent: Monday, August 29, 2011 2:09 PM
To: Dave Lochbaum
Subject: Your August 8 email concerning Vermont Yankee

Dear Mr. Lochbaum:

I am the NRC Branch Chief with lead oversight responsibility for the Vermont Yankee Nuclear Power Station, and I am responding to your email dated August 8, 2011, to Mr. Laurence Smith, Manager of Communications for the Vermont Yankee Nuclear Power Station (Vermont Yankee). You copied Mr. Daniel Holody of the NRC Region I office in this email. The NRC appreciates your commitment to ensuring the safe operation of Vermont Yankee, and shares that same commitment in protecting public health and safety and the environment.

In your email, you questioned the validity of a statement made by Mr. Smith that there was "absolutely no evidence" that Vermont Yankee was the source of strontium-90 found in a fish sample taken from the Connecticut River nine miles upstream of Vermont Yankee. You also referenced the strontium-90 gaseous effluent, ground level release listed in the Vermont Yankee 2010 Radioactive Effluent Release Report, dated May 11, 2011 (ADAMS accession number ML11160A217).

The fish sample was taken by the Vermont Department of Health and was done as part of its routine environmental surveillance program around Vermont Yankee in the Connecticut River, and was not part of any NRC program or requirement. In accordance with 10 CFR 50.36a and the Vermont Yankee Technical Specifications, Vermont Yankee is required to report annually to the NRC a summary of the quantities of radioactive liquid and gaseous effluents, and solid waste released from the site. The NRC has reviewed this report, including the strontium-90 release listed in the Table you referenced to verify that radioactive effluents released from the site are within federal limits and are as low as is reasonably achievable (ALARA). To date, the NRC has not identified any violations with respect to the information provided by Vermont Yankee to the NRC in the Vermont Yankee 2010 Radioactive Effluent Release Report, dated May 11, 2011.

In addition, the statements made by Mr. Smith in the press release do not fall within the NRC's purview as the NRC does not regulate statements made by licensees to the media.

If I can be of additional assistance in this manner, please do not hesitate to contact me directly at (610)337-5200.

Sincerely,

Dr. Ronald R Bellamy, Chief
Projects Branch 5

Attachment 2: October 21, 2011 letter from Congressman Markey

Division of Reactor Projects

