



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064**

June 29, 2000

Ms. Jill ZamEk  
San Luis Obispo Mothers For Peace  
P.O. Box 164  
Pismo Beach, CA 93448

SUBJECT: May 15, 2000, Diablo Canyon Nuclear Power Plant, Unit 1, Fire

Dear Ms. ZamEk:

Thank you for your letter of June 5 regarding the fire that occurred at the Diablo Canyon Nuclear Power Plant, Unit 1, facility. As an independent regulatory agency, the Nuclear Regulatory Commission's primary responsibility is to protect public health and safety through rigorous regulation of the commercial nuclear power industry. In my capacity as the Director of Region IV's Division of Reactor Projects, I am responsible for routine oversight of the Diablo Canyon facility and the response to nonroutine events.

The fundamental public health and safety objective for nuclear technology applications has always been, and will remain, that these uses would not pose unacceptable risks. Our regulations have been developed so that citizens can receive the benefits of nuclear technologies without compromising health or safety. As such, federal regulations establish "release limits" and we enforce these regulations by strictly controlling the amount of radiation that nuclear power plants may release. Some small radiation releases are permitted -- as long as they do not exceed limits which have been determined to be adequate protection. At Diablo Canyon Nuclear Power Plant, Unit 1, the amount of radiation released to the environment as a result of the May 15, 2000, fire was minute and fell well below these limits.

Diablo Canyon is a pressurized water reactor. The reactor coolant (which is heated by the nuclear reactor and is slightly radioactive) circulates through steam generator tubes. The steam generator acts much like a large radiator, passing the heat from the reactor coolant to a separate feedwater system. As the feedwater passes across the outside of the tubes, it is heated by the reactor coolant and becomes steam. The steam is then routed to power the electric turbogenerator. During the May 15, 2000, fire, the turbogenerator was isolated to protect the main condenser. As a result, the steam from the feedwater was released directly to the atmosphere.

The steam released during the event was not directly monitored for radioactivity; however, it was indirectly monitored. Throughout the event, a small amount of feedwater from the steam generators was intermittently sent to the steam generator blowdown system. Radiation monitors in the system are designed to identify radioactive materials in the water that would result from a gross failure between the reactor coolant and feedwater systems. These monitors did not detect radioactivity in the steam released during the event.

Approximately 2 hours after the first steam release, plant chemists sampled the blowdown system water and conducted more sensitive tests to determine the exact level of radioactive materials in the steam generators. This test confirmed that there was no release of radioactive iodine, cesium, or xenon. The presence of these gamma radiation emitters would have

indicated a more serious event. The sampling process did indicate, however, that approximately 1.1 curies of tritium gas were released over the 64 hours following the event. The total amount of tritium released is less than 2/100,000 of a percent of Diablo Canyon's Technical Specification limit for noble gases.

The Diablo Canyon release limits are designed to ensure that a radiation dose at the site boundary is very small. The licensee measures the dose at the site boundary by using ion chamber detectors; their program is verified by NRC inspection. For this event, the detector at PG&E's shooting range was downwind at the time of the steam release and, therefore, was best positioned to identify any increased dose caused by the event. Before, during, and after the event, this detector measured a constant dose rate of .01 millirem (mR) per hour. This level of radiation is considered to be extremely low and is well within the NRC's regulatory limits.

As part of our immediate response to the event, NRC inspectors onsite determined that there was a minimal amount of leakage from the reactor coolant system into the feedwater system. The leakage rate was approximately 1.5 to 2 gallons per day and was well within the unit's Technical Specification limits. I was present in the Region IV office when we became aware of this leakage and, even though the steam generator blowdown monitors did not indicate that a release was in progress, we knew that it was theoretically possible that minute amounts of radioactivity were being released to the atmosphere. We decided that it was best to provide the public with the most accurate information possible and, therefore, reported this fact. However, as we specified in our communications, we did not have any concerns for public health and safety because the release was so small.

I have provided you with the above information to put into context the significance of the release on May 15 and the basis for the NRC's description of the facts. I will now attempt to answer the specific questions you provided in your letter.

In answer to your first question, the instrument used to measure the steam generator blowdown is required to be, and was, sensitive enough to detect significant amounts of radiation. The NRC has established release limits to protect public health and safety. Diablo Canyon is allowed to make releases provided the radioactive material present remains below these limits. Additionally, the NRC requires every licensee to continuously monitor the environment around their nuclear power plant site to detect any radiation releases. The license for the Diablo Canyon Nuclear Power Plant requires PG&E to annually report the quantities of radioactive liquids and gases released to the environment and the amount of solid waste shipped from each unit. This report was last submitted on April 28, 1999, and is available in the Public Electronic Reading Room at <http://www.nrc.gov/NRC/ADAMS/index.html>. You can obtain copies of these reports by calling (202) 634-3273 or by sending an e-mail via the Internet to [pdr@nrc.gov](mailto:pdr@nrc.gov).

In answer to your second question, during an event, I expect the resident inspectors to monitor the plant response from one of Diablo Canyon's emergency response facilities. That is where they can best ascertain the significance of the event, communicate information, and assure public health and safety. On May 15, the resident inspectors were dispatched to the plant to monitor the licensee's response to the fire. Support was provided to the residents when we entered the monitoring phase of the normal mode of the NRC's response plan. All in all, the NRC had personnel onsite, in its Arlington regional office, and at its Washington, DC, headquarters. This allowed us to closely monitor the event to ensure that state and local governmental officials and the public would be notified if conditions warranted.

When the resident inspectors are not available in their offices, their phone system should allow a caller to leave a message or be provided with information by which they can call the NRC's 24-hour-per-day operations officer. This allows the NRC to receive information or allegations regarding events that require additional NRC attention. The agency also has an Office of Public Affairs to keep citizens informed of developments at commercial nuclear power plants and receive accurate, timely, and credible information. Unfortunately, on the day in question, the voice mail system on the resident's phone did not function properly. It has been repaired and I can only offer you my humblest apologies for it not working when needed. For your future information, if you call the NRC's headquarters operations officer, you will be put into contact with our Public Affairs Office. Additionally, the Region IV Public Affairs Officer is Mr. Breck Henderson, and he can be reached during daytime hours by calling (817) 860-8128, by e-mail at [bwh@nrc.gov](mailto:bwh@nrc.gov), and after hours by calling (817) 917-1227.

In answer to your third question, the NRC relies on the honesty and credibility of all information supplied by its licensees; however, we do independently verify the accuracy of information supplied to us. This is accomplished through independent inspections and periodic reviews of records (including an inspection of the licensee's control of releases to the environment). We also evaluate the safety and risk significance of all nonroutine events and, when warranted, dispatch special inspection teams. In this case, we chartered a special inspection with three inspectors to evaluate the event cause and ensure that appropriate corrective actions were taken prior to restarting the unit. The public exit meeting for this inspection will be conducted on June 29, 2000, in the PG&E Community Center, 6588 Ontario Road, at 2 p.m. (PDT).

I believe that your fourth question has been answered elsewhere in our letter, where we defined the reporting requirements incumbent upon licensees and our oversight responsibilities and processes.

One of the NRC's primary goals is to function effectively as a regulatory body and, thereby, promote public confidence. To accomplish this goal, we plan our meetings to allow public access to the information regarding plant performance. We appreciate your interest and your attendance at the May 19, 2000, meeting to discuss the results of the Diablo Canyon site safety-culture survey. We hope you will be able to attend either the public exit meeting discussed above or the presentation regarding the revised reactor oversight program scheduled for 7 p. m., June 29, 2000, at the Embassy Suites.

Should you have any questions regarding the response, please contact Linda Joy Smith at 817-860-8137.

Sincerely,

Ken E. Brockman, Director  
Division of Reactor Projects

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