

December 21, 2005

Steve Irwin
12723 W. Cambridge
Avondale, AZ 85323

Dear Mr. Irwin,

Thank you for your inquiry on October 14, 2005, to the Nuclear Regulatory Commission (NRC) regarding the removal of the Post-Accident Sampling System (PASS) from the Palo Verde nuclear power plant. I understand you are interested in obtaining an understanding of the mechanism that allowed this facility to remove the PASS system.

Since the criteria for PASS have been issued, the NRC has performed three generic evaluations pertinent to the NRC staff review of CE NPSD-1157, Revision 1, "Technical Justification for the Elimination of the Post-Accident Sampling System from the Plant Design and Licensing Bases for CEOG Utilities" (CD NPSD-1157). In the mid 1980s, the staff sponsored a contractor to review regulatory requirements that may have marginal importance to risk. One of the issues reviewed was the NUREG-0737 criteria for PASS. The conclusion reported in NUREG/CR-4330, "Review of Light Water Reactor Regulatory Requirements" (May 1987), was that several of the PASS criteria could be relaxed without impacting safety.

In 1993, during its review of licensing issues pertaining to evolutionary and advanced light water reactors, the staff evaluated requirements for PASS specified in 10 CFR 50.34(f)(2)(viii). The staff recommended to the Commission in SECY 93-087, "Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-water Reactor (AWLR) Designs" (April 2, 1993), that: (1) elimination of hydrogen analysis of containment atmosphere samples is appropriate, given that the safety grade hydrogen monitoring instrumentation will be installed; (2) relaxation of dissolved gas (including dissolved hydrogen) sampling time to 24 hours is appropriate; (3) elimination of the mandatory requirement for chloride samples is appropriate; (4) relaxation of the boron sampling time to 8 hours after an accident is appropriate; and (5) relaxation of the sampling time for radionuclides (used to determine the degree of core damage) to 24 hours is appropriate.

In addition, in 1993, the staff evaluated the Combustion Engineering Owners Group Topical Report CEN-415, "Modifications of Post Accident Sampling System Requirements," (Revision 1, December 1991). In a letter dated April 12, 1993, the NRC approved: (1) deletion of pH measurement in the containment sump, (2) deletion of hydrogen sampling of the containment atmosphere, (3) deletion of sampling for iodine (if core damage assessment procedures are based on samples of xenon or krypton activities), and (4) deletion of oxygen analysis of reactor coolant.

Furthermore, in parallel with review of CE NPSD-1157, the staff concurrently reviewed a Westinghouse Owners Group Topical Report (WCAP-14986-P, Revision 1, "Westinghouse Owners Group Post Accident Sampling System Requirements: A Technical Basis," (August 1998)) which requested similar changes to PASS requirements for Westinghouse pressurized water reactors.

Finally, the staff had published in the Federal Register on November 24, 1999, (64 FR 66213), a notice that requested public comment on the NRC's pending action to approve the industry topical reports justifying elimination of PASS. In particular, the staff sought comment from offsite emergency response organizations so that any impact of the elimination of PASS on their response could be factored into the staff's evaluation.

Based on the review of the justification provided in CE NPSD-1157 and the three generic issues discussed above, as well as evaluations and insights from public comments, the staff concluded that there is reasonable assurance that the health and safety of the public will not be endangered by operation of nuclear power plants without PASS. You can find the NRC safety evaluation for CE NPSD-1157 in the NRC ADAMS document manager by referencing ML003715250. This document details the justification for the elimination of each of the PASS. Go to www.nrc.gov and click on Electronic Reading Room/ADAMS Documents/Web-based access/Begin ADAMS search. Type the above referenced ML number in the search box and you will see several documents related to the NRC approval to remove the PASS system from nuclear power plants.

I hope this answers your question. Should you need any assistance regarding this matter, please contact Kathryn Brock at 301-415-2015.

Sincerely,

/RA/ Robert E. Kahler for:

Anthony C. McMurtray, Section Chief
Inspection and Communications Section
Emergency Preparedness Directorate
Division of Preparedness and Response
Office of Nuclear Security and Incident Response

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Anthony C. McMurtray, Section Chief
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Office of Nuclear Security and Incident Response

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EPD Reading File
A. McMurtray, EPD/NSIR
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SISP Review Completed by: Kathryn M. Brock

*See Previous Concurrence

ADAMS Accession Number: ML053120237

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