

March 17, 2006

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-06-001

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

Facility

Palo Verde Nuclear Generating Station  
Arizona Public Service Company  
Tonopah, Arizona  
Docket: 50-528, 50-529, and 50-530  
License: NPF-41; NPF-51, and NPF-74

Licensee Emergency Classification

☐ Notification of Unusual Event  
☐ Alert  
☐ Site Area Emergency  
☐ General Emergency  
☒ Not Applicable

SUBJECT: FOLLOWUP FOR TRITIUM CONTAMINATION FOUND IN WATER ONSITE

DESCRIPTION:

On March 1, 2006, a water sample collected by the licensee from a test hole located within the licensee's Unit 3 Protected Area identified tritium levels of 71,400 picocuries/Liter (pCi/L). On March 2, 2006, the licensee notified the Arizona Department of Environmental Quality (ADEQ) that a release of tritium had occurred that had the potential to cause the EPA drinking water limit (20,000 pCi/L) for tritium to be exceeded in a groundwater aquifer. As required by 10 CFR Part 50.72(b)(2)(xi) the licensee also notified the NRC (Event # 42381).

Since February 15, 2006, the licensee has been investigating the source of water leakage into an underground pipe tunnel located within the Protected Area of Units 2 and 3. Test holes were drilled inside the Protected Area in an area between all three Units power block and spray pond in an effort to find the source of the tritiated water. A water sample that contained the elevated tritium levels was from the Unit 3 test hole.

As part of the NRC's followup to the onsite elevated tritium levels, NRC Region IV obtained a split water sample from the Unit 3 test hole for the NRC's independent analysis on March 3, 2006. The NRC's independent laboratory analyzed the split sample for tritium and gamma radioactive isotopes and results were consistent with the 71,400 pCi/L value obtained by the licensee.

On March 6, 2006, NRC Region IV, dispatched a Senior Health Physicist to supplement the NRC's onsite resident staff and further review the licensee's actions. To date the NRC's review has determined: (1) The tritiated water at elevated levels is confined onsite; (2) No elevated levels have been found in wells located outside the Protected Area. From a review of the analyzed sample results from both onsite and offsite groundwater monitoring wells, the NRC has found no evidence of an offsite release of the radioactive water.

The apparent cause or source of the elevated tritium levels in the test holes has not been found/determined to date and is still under investigation by the licensee. NRC Region IV health physicists and the resident inspectors continue to monitor the licensee's activities to address the source of the elevated tritium as well as and the licensee's measures to ensure it will be confined onsite. NRC Region IV is in the process of obtaining additional environmental water samples from the Palo Verde site and surrounding areas.

The information presented herein has been discussed with the licensee and is current as of 11 a.m. (CST) on March 17, 2006.

ADAMS ACCESSION NUMBER: ML060760584

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