[redacted]

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Exelon Nuclear Issue - Statement of Confirmation

Issue #: 00934636 **Originator:** CALVIN C TAYLOR **Submit Date:** June 24, 2009

Basic Information

Affected Facility: Oyster Creek

Dscv Date: 06/22/2009 23:00

How Discovered Code: H03A

Event Date: 06/22/2009 23:00

Affected Unit: NA

Affected Sys: --

Subject: NRC COMMENTS ON TRITIUM MASS FLUX ANALYSIS OF H-3 GROUNDWATE

Required Information

Condition Description:

NRC inspector stated that he believes that we are underestimating the plume in the Conhansey aquifer by up to a factor of 10 and therefore believes our release could be as much as 10 times the 66 Currie value we stated in the CRA mass flux report. The NRC inspector stated that there was a potential direct path to the Cohansey through the Cape May with a smaller leak rate and also a potential direct and preferential path to the intake because of last year's ESW excavation creating a loose fill and penetrating the clay layer between the Cape May and Cohansey. In addition, the NRC inspector has an issue with Exelon's decision to characterize the intake canal sample that indicated an elevated level of tritium as invalid (IR 931098).

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The station maintains a position that it would have required the leak to have gone undetected for greater than one year in order to reach 66 Curries of H-3. Any leak of this magnitude would have been detected during sampling for the License Renewal inspection of the ESW cable vault in October 2008. In addition, exposure of the exterior of the piping to this leakage would have resulted in significantly more corrosion than what was found. The following data support this conclusion:

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800,000 gallons of 6 million pCi/L tritiated water equals 18 Curries of H-3.

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Releasing 66 Ci of H-3 requires 3 million gallons of 6 million pCi/L tritiated water.

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In 2008, the station had a demineralized water through-put of 4.4 million gallons.

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During the period January 1 – April 26, 2009, there was a 1.25 million gallon demineralizer through-put.

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The above through-puts do not include documented usage of 175,000 gallons for the new Demineralized Water Storage Tank, 100,000 gallons for the Isolation Condenser bleed and feed, steam leaks, aux boiler operation, and other known losses/uses.

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The ESW cable vault was pumped late last year October and no tritium was detected. . In addition, a cable replacement was performed in 2006 from the ESW cable vault to and through the turbine building penetration.

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Engineering observation that the corrosion on the exterior of the pipe appeared to be the result of being exposed to the leak environment for less than a year.

Immediate actions taken: None required.

Recommendation for action: Provide positions on elevated intake sample result and on bounding value for release volume.

Supervisor Verbally Jhansi Kandasamy

Contacted

Optional Additional Information

Routing

Owed To Group: ACAPALL

Routed to Group: CR-OSC