

# CR SUMMARY REPORT

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APPROVED  
DRE

Status Date: 08/30/2004  
Sig Level: 4

AR Type: CR  
Eval Class: D

HIGH TRITIUM ACTIVITY IN ON-SITE WELLS AND STORM DRAINS

00248494 Event Date: 07/31/2004 Event Time: 0000 Disc Date: 08/30/2004 Disc Time: 1010

Affected Facility: DRE Affected Unit: 00 Affected System: 00

## ORIGINATOR SECTION

### Condition Description:

Tritium activity as high as 6,125,891 (6.13E+06) pCi/L has been detected in on-site tritium monitoring wells in the vicinity of the 2/3 Reactor Building Trackway Interlock near the Unit 3 LPCI Suction Line from Condensate Storage Tank 'B.' The wells were sampled on 7-31-04. The following preliminary results were received from Environmental, Inc. on 8-26-04:

Well	Tritium specific activity (pCi/L)
W-3	6,125,891
W-1	3,613,931
T-6	1,960,331
T-7	377,168
T-5	41,662
T-3	38,885

Re-analysis of the samples was directed at that time, including gamma spectroscopy analysis for gamma-emitting nuclides. The Environmental, Inc. Program Coordinator was contacted on 8-30-04, and preliminary re-analysis results confirmed the high levels of tritium.

Tritium was also detected in a storm sewer located northeast of Unit 1 (DSP-132). Initial analysis results are 79,351 pCi/L.

The wells above are the shallow (baby) wells. The W- wells are located on the west side of the 2/3 Rx Building Trackway, the T- wells are on the east side.

### Immediate actions taken:

When the high results were communicated to the site, the use of proper sample preparation techniques (distillation) was confirmed and re-analysis of the samples for tritium and re-sampling of the wells for tritium analysis was directed. Existing samples that indicated greater than 20,000 pCi/L tritium were requested to be analyzed for gamma-emitting nuclides by gamma spectroscopy. The wells were re-sampled on 8-28-04 by Environmental, Inc.

Recommended action is to investigate the source of the tritium, including the Unit 3 LPCI suction line. Hydrostatic testing may indicate the system that is leaking. Testing of site domestic water for tritium is also recommended.

### What activities, processes, or procedures were involved?

Tritium sampling was being performed to determine if the recent earthquake had any adverse effect on the plant.

### Why did the condition happen?

Indeterminate until further testing is performed. The likely cause is a leak in an underground pipe that contains radioactive plant fluids. Reactor water tritium levels are 9 to 10 million pCi/L.

### What are the consequences?

Because tritium is a low-energy pure beta emitter, this is not a dose issue. This occurrence should be evaluated for impact on the 10CFR50.75(g) files from the previous occurrence of this nature. If excavations are performed, the dirt removed should be used to fill the

## SUPERVISOR SECTION

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