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AR 00912827 Report

Aff Fac:	Oyster Creek	AR Type:	CR	Status:	APPROVED
Aff Unit:	01	Owed To:	A5332CAP	Due Date:	06/30/2009
Aff System:	--			Event Date:	04/26/2009
CR Level/Class:	3/D			Disc Date:	04/27/2009
How Discovered:	H03C			Orig Date:	04/28/2009
WR/PIMS AR:		Component #:			

Action Request Details

Subject: NOS ID: TRITIUM LOGKEEPING NOT CONSISTENT WITH PROCEDURE

Description: Originator: DAVID PEIFFER Supv Contacted: Bob Artz, Jhansi Kandasamy

Condition Description:
 NOS followed up on a false positive tritium analysis on a sample from the main condenser discharge that was reported over the weekend and found that Chemists are deviating from expected logkeeping standards. Records of the tritium analysis do not accurately indicate the minimum detectable activity (MDA) levels.

The tritium log was reviewed and deficiencies were noted in the data records. Sample times were not recorded as required by the procedure. The log sheet had information written into the margin at the bottom of the page that indicated three different MDA levels, depending upon the sample count time. The chemist was recording only < in the results column, where the activity level should be recorded. When asked which MDA applied to which samples, the chemist explained that it depended upon the length of time the sample was counted. NOS pointed out that the count time is not recorded on the log and it is impossible to discern which MDA applies to each sample. The technician then recorded < (50 min) in the column where uCi/mL should be recorded. Inaccurate logkeeping could cause inaccurate reports to regulators.

The chemist pointed out that the false positive occurred because the sample was filtered and not distilled and counted for only 10 minutes to obtain a quick indication of the tritium level. Environmental samples require a 50 minute count time to achieve the required MDA level. The chemist indicated that the sample may have had bioluminescence, which has caused false positive results in other samples in the past. When asked how to avoid this interference, he stated that the sample can be distilled to avoid bioluminescence interference. He said that filtering was faster and the main condenser discharge sample was not distilled to save time. When the positive tritium result was found, then the chemist distilled the sample and re-analyzed and no tritium was present. It was noted that the samples being analyzed on the day after the false positive were distilled and all indicated less than minimum detectable levels.

Immediate actions taken:
 Briefed the Chemistry Manager on the NOS observations.

Recommended Actions:
 Provide clear standards for processing environmental samples to avoid



analytical interferences.

Segregate environmental sample logsheets for from plant sample logsheets, to avoid confusion about MDA levels.

Reinforce standards for logkeeping to ensure the proper units of measurement and not recording data in the margins.

What activities, processes, or procedures were involved?
Tritium analysis

Why did the condition happen?
Chemists were not adhering to log keeping standards.

Unclear standards for processing environmental tritium samples.

What are the consequences?
False positive results could potentially cause wrong information being reported to regulators.

Repeat or similar condition?
Yes, false positive tritium results were reported to the NJDEP in 2008.

Operable Basis:
n/a

Reportable Basis:
n/a

Reviewed by: THOMAS A DUNN 04/28/2009 18:58:50 CDT
Reviewer Comments:

SOC Reviewed by: RONALD W FITTS 05/07/2009 09:19:00 CDT
SOC Comments:
Follow up Chem.

04-30-09 JJV: PCRA created to revise the procedure in accordance with Recommended Actions.

5/5/09 jek (MRC) Back to SOC for Sev Level 3.

5/7/09 rwf - revised to sig level 3 based on failure to follow a level 2 or 3 procedure with undesirable consequences. Risk/Uncertainty - Medium/Low, Class D - Crew Clock Reset added.

Dynamic AR Attributes

CREW RESET1: Chem Lab

Trend Codes

TC1	TC2	TC3	Proc	Org	Rank
ECY103	*	*	CY20	CH	P

Assignments

Assign #:	<u>01</u>	Assigned To:		Status:	COMPLETE
Aff Fac:	Oyster Creek	Prim Grp:	ACAPALL	Due Date:	05/06/2009

Assign Type:	TRKG	Sec Grp:		Orig Due Date:	05/03/2009
Priority:					
Schedule Ref:					
Unit Condition:					
Subject/Description:	NOS ID: TRITIUM LOGKEEPING NOT CONSISTENT WITH PROCEDURE				
Assign #:	<u>02</u>	Assigned To:	U777RJA	Status:	ACC/ASG
Aff Fac:	Oyster Creek	Prim Grp:	A5332CHEM	Due Date:	06/30/2009
Assign Type:	PCRA	Sec Grp:		Orig Due Date:	06/30/2009
Priority:					
Schedule Ref:					
Unit Condition:					
Subject/Description:	Add a column to the tritium analysis data log for counting protocol number, and add LLD values for all three protocols, in CY-OC-130-530.				