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OCCURRENCE REPORT

Energy Research (PNNL)

(Name of Facility)

Balance-of-Plant

(Facility Function Involved)

HANFORD SITE

(Name of Laboratory, Site or Organization)

Name: [REDACTED]

Title: Manager, Facilities Operations

Telephone No.: [REDACTED]

(Facility Manager/Designee)

Name: [REDACTED]

Title: Manager, Molecular Biosciences

Telephone No.: [REDACTED]

(Originator)

Name: [REDACTED] Date: ___/___/___ Time: _____ hrs. Classified Unclassified

(Authorized Classifier (AC))

1. OCCURRENCE REPORT NUMBER: RL--PNNL-PNNLBOPER-2000-0008

2. STATUS AND REPORT DATE:	<u>Date Due</u>	<u>Date Submitted</u>
<input type="checkbox"/> Notification Report	04/03/00	04/03/00
<input type="checkbox"/> Update #2	05/26/00	05/22/00
<input checked="" type="checkbox"/> Final	06/16/00	06/15/00

3. OCCURRENCE CATEGORY:

- Emergency
- Unusual
- Off-Normal

4. NUMBER OF OCCURRENCES:

1 Original Occurrence Report: N/A

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17. OPERATING CONDITIONS OF FACILITY AT TIME OF OCCURRENCE:

N/A

18. ACTIVITY CATEGORY:

03 – Normal Operations

19. IMMEDIATE ACTIONS TAKEN AND RESULTS:

PNNL Waste Management staff disposed of the material in a safe manner. Hanford Fire Department personnel were brought into the area as a precautionary measure.

A critique was held at 1500 hours on Monday, April 03, 2000.

20. DIRECT CAUSE:

- 3) Personnel Error
 - b. Procedure Not Used or Used Incorrectly

21. CONTRIBUTING CAUSE(S):

- 2) Procedure Problem
 - a. Inadequate procedure
- 6) Management Problem
 - a. Inadequate Administrative Control

22. ROOT CAUSE:

- 6) Management Problem
 - e. Policy Not Adequately Defined, Disseminated, or Enforced.
-

23. DESCRIPTION OF CAUSE:

Direct Cause:

- The Cognizant Space Manager (CSM) failed to carry out his responsibilities (as defined in SBMS) for use and disposition of time sensitive chemicals.

Contributing Cause:

- The administrative controls in the Integrated Operations System (IOPS) and the Chemical Management System (CMS) failed to identify the potential hazard in a timely manner. CMS does not flag expired chemicals and there are no

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requirements for back filling expiration dates into CMS.

Root Cause:

- The requirement to periodically evaluate time-sensitive chemicals, which was published in December 1998, was not fully deployed throughout the Laboratory.

24. EVALUATION (By Facility Manager/Designee)

There was no effect on facility or research operations as a result of this event. An earlier PNNL event (RL--PNNL-PNNLBOPER-1998-0017) involved the discovery of a small container of perchloric acid with crystals around the top. The corrective actions from that event included local management actions with respect to management of chemical inventories as well as Lab-wide procedural changes. The revision to Lab-wide (SBMS) procedures for managing chemicals included adding guidance specific to unstable chemicals. That guidance calls for periodic review of inventories to identify chemicals with no specified use, and recommends review frequencies for unstable chemicals. Although the revision to the Lab-wide procedures was published in accordance with the corrective action identified in RL--PNNL-PNNLBOPER-1998-0017, implementation of the new procedure was left to the staff members responsible for managing chemicals. No tools or specific implementation assistance was provided. Consequently, many staff with responsibility for managing chemicals are unaware of the new requirement and/or do not have the support needed to ensure full deployment. The focus of the corrective actions identified for this event is intended to address the deployment of the requirement across the Laboratory.

25. IS FURTHER EVALUATION REQUIRED?: Yes[] No[X]

26. CORRECTIVE ACTIONS:

- 1) Counsel the CSM regarding his responsibilities for examining sensitive chemicals.

ACTION OWNER: TRM, Molecular Biosciences [REDACTED]
TARGET COMPLETION DATE: 03/31/00 **COMPLETION DATE:** 03/31/00

- 2) Review CMS inventories for all time sensitive chemicals that have exceeded their expiration date or which do not have an expiration date identified in CMS.

ACTION OWNER: Manager, Safety & Health [REDACTED]
TARGET COMPLETION DATE: 07/31/00 **COMPLETION DATE:** //

- 3) Develop action plan for evaluating each chemical container identified by the review described in action #2.

ACTION OWNER Manager, Safety & Health [REDACTED]

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TARGET COMPLETION DATE: 08/30/00 **COMPLETION DATE:** //

4) Evaluate each chemical container identified through action #2.

ACTION OWNER Manager, Safety & Health [REDACTED]

TARGET COMPLETION DATE: 11/30/00 **COMPLETION DATE:** //)

5) Develop a plan that will yield the process and tools to deploy the requirement to evaluate time sensitive chemicals periodically.

ACTION OWNER: EHSD Operations Manager [REDACTED]

TARGET COMPLETION DATE: 06/30/00 **COMPLETION DATE:** //

6) Roll out the process and tools that deploy the requirement to evaluate time sensitive chemicals periodically.

ACTION OWNER Manager, Safety & Health [REDACTED]

TARGET COMPLETION DATE: 09/30/00 **COMPLETION DATE:** //

7) Develop a lesson learned and distribute to Lab.

ACTION OWNER: TRM, Molecular Biosciences [REDACTED]

TARGET COMPLETION DATE: 07/15/00 **COMPLETION DATE:** //

27. IMPACT ON ENVIRONMENT, SAFETY, AND HEALTH:

None

28. PROGRAMMATIC IMPACT:

None

29. IMPACT UPON CODES AND STANDARDS:

None.

30. LESSONS LEARNED:

The Laboratory-wide Chemical Management System (CMS) provides an effective way to track chemicals, ensure that safety and health information for each individual chemical in a given space inventory is readily available and up-to-date, and to furnish an overall chemical management system. SBMS provides an appropriate set of requirements for the safe management of hazardous chemicals. However, it is not sufficient to simply publish new requirements in SBMS. Management must consider the need to provide appropriate tools and systems to aid in the deployment of requirements.

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In addition, the CSM did not understand the requirements in the "Working with Chemicals" Subject Area in SBMS. Because this chemical was not used, and because the system did provide appropriate prompts, the CSM did not identify the chemical container as beyond the manufacturers expiration date or perform checks for peroxides as required in SBMS.

31. SIMILAR OCCURRENCE REPORT NUMBERS:

RL--PNNL-PNNLBOPER-1998-0017

36. APPROVAL SIGNATURES:

Author _____ Date _____
[REDACTED] Staff Scientist
Molecular Biosciences

Originator _____ Date _____
[REDACTED] Manager
Molecular Biosciences

Facility Operations _____ Date _____
[REDACTED] Manager
Operations Support Group

Facility Manager _____ Date _____
[REDACTED] Manager
Facility Operations