One Team. One Culture.

Administrative Procedure

PRC-PRO-EM-060

Reporting Occurrences and Processing Operations Information

Revision 6, Change 1

Published: 10/30/2018
Effective: 10/30/2018

Program: Emergency Preparedness
Topic: Emergency Management

Technical Authority: Riel, Dennis
Functional Manager: Nye, Lynn

Use Type: Administrative

- 100 K Facility :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Williams, James
- 324 Facility :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Enghusen, Mark
- Canister Storage Building/Interim Storage Area :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Covey, Lori
- Central Plateau Surveillance and Maintenance :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Hicks, Jarrod
- Plutonium Finishing Plant :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: King, Jeffry
- Solid Waste Operations Complex :
  Screening Determination Performed: (Screening/Determination Performed (no issues))
  GCX-7 (SWOC-17-050)
  Screener: Geary, Daniel
- Transportation :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Bridges, Alvia
- Waste Encapsulation Storage Facility :
  Categorical Exclusion: GCX-7 (Minor Change)
  Screener: Covey, Lori

JHA: Administrative
Periodic Review Due Date:09/25/2022
Rev. 6, Chg. 1

Change Summary

Description of Change

Additional clarification added to procedure regarding 2 hour categorization

TABLE OF CONTENTS

1.0 INTRODUCTION 2
1.1 Purpose 2
1.2 Scope 2
1.3 Applicability 2
1.4 Implementation 2
1.5 Training 3
2.0 RESPONSIBILITIES 3
3.0 PROCESS 4
3.1 Base Program Operational Emergencies (BPOE) 4
3.2 Abnormal Event Notifications 5
3.3 DOE-RL Facility Representative (RL-FR) Notifications 6
3.4 Reportable Occurrences 8
3.4.1 Discovery and Categorization 8
3.4.2 Information Security 12
3.4.3 Oral Notifications 13
3.4.4 Submitting Notification Reports 14
3.4.5 Status Changes and ORPS Data Changes 14
3.4.6 Submitting Update Reports 15
3.4.7 Submitting Final Reports 17
3.4.8 Corrective Action Management 18
3.5 Off-Site Response to Events 19
4.0 FORMS 20
5.0 RECORD IDENTIFICATION 20
6.0 SOURCES 20
6.1 Requirements 20
6.2 References 20
6.3 Bases 21

List of Appendixes

Appendix A - Base Program Operational Emergency Criteria 22
Appendix B - Abnormal Event Category List 26
Appendix C - Occurrence Reporting Categories and Criteria 28
Appendix D - Occurrence Reporting Model 45
Appendix E - Guidance on Reporting Suspect/Counterfeit and Defective Items or Material 46
Appendix F - Recurring Event Worksheet 47
Appendix G - Occurrence Reporting Definitions 49

1.0 INTRODUCTION

1.1 Purpose

This is the implementing procedure for the following four reporting processes:

- Base Program Operational Emergencies (BPOE) (Section 3.1)
- Abnormal Event notification process (AE) (Section 3.2)
- U.S. Department of Energy (DOE) Richland Operations Office (RL) Facility Representative (FR) Notification Process (Section 3.3)
- Occurrence reporting process (Section 3.4)

Event reporting utilizes a graded approach, based on severity and risk potential. This procedure provides the process for determining, in descending order, if an event meets the requirements of a BPOE (Appendix A, “Base Program Operational Emergency Criteria”), AE (Appendix B, “Abnormal Event Category List”), and/or the requirements of a reportable occurrence (Appendix C, “Occurrence Reporting Categories and Criteria”).

Personnel should utilize this procedure after evaluating an event or condition against the Hazardous Material Operational Emergency (HMOE) criteria as delineated by the applicable Emergency Action Levels (EAL) in DOE-0223, *Emergency Plan Implementing Procedures.*

1.2 Scope

NOTE: *Affiliate companies are not responsible for generating occurrence reports unless formally tasked with that scope of work through an official contract mechanism.*

This Level 1 management control procedure is applicable to all CH2M HILL Plateau Remediation Company (CHPRC) team employees responsible for the four reporting processes listed in Section 1.1, including occurrence reports generated by affiliate companies, subcontractors, or vendors during work performed for their facility, project, service, or activity.

1.3 Applicability

This document applies to all CHPRC employees and subcontractors involved in CHPRC work scope. CHPRC project organizations shall ensure that their areas or facilities meet the requirements of this document, as appropriate.

1.4 Implementation

This procedure is effective upon publication.

1.5 Training

For management or designated staff responsible for event notification/categorization of adverse conditions or reportable occurrences, the following training course is required:

- 170640, *Introduction to Occurrence Reporting*

For management or designated staff responsible for writing or submitting occurrence reports, the following training courses are required:

- 170640, *Introduction to Occurrence Reporting*
- 170642, *Occurrence Report Writing*
- 600081, *CHPRC Cause Evaluator Training* (or equivalent)
- 000032, *Reviewing Information for Public Release*

For management or designated staff responsible for performing the duties of a trained investigator, the following training courses, or equivalent, are required:

- 604230, *Critique Leader Training*
- 604233, *Initial Investigation Training*
- 600081, *CHPRC Cause Evaluator Training*

2.0 RESPONSIBILITIES

All responsibilities associated with this procedure are identified in the process steps.

3.0 PROCESS

3.1 Base Program Operational Emergencies (BPOE)

Actionee	*Step*	*Action*
Project/Facility (P/F) Management	1.	EVALUATE (immediately) events and conditions against the criteria in Appendix A, "Base Program Operational Emergency Criteria."
	2.	CONTACT Hanford Emergency Operations Center (EOC) Shift Office personnel (**376-2900**) for assistance with event categorization.
	3.	IF the event/condition qualifies as a BPOE, THEN CATEGORIZE the event/condition as a BPOE within 15 minutes once adequate information has been collected to determine categorization.
	4.	IF the event does NOT meet the criteria for a BPOE, THEN GO TO Section 3.2.

NOTE:
- *Taking mitigative actions to stabilize the facility/operation to a safe condition takes precedence over notifications.*
- *The EOC Shift Office will complete the BPOE notification to the DOE Headquarters Operations Center (HQ-OC) within 30 minutes following categorization. All categorized BPOE events are also categorized as Abnormal Events.*

5. For events categorized as BPOEs, NOTIFY the RL-FR within 30 minutes of categorization.
   - IF the cognizant RL-FR is not available, THEN CONTACT the on-call RL-FR. (Refer to the Hanford Site Weekly On-Call Directory, EOC Shift Office Business Line – **376-3030**.)

NOTE:
- *Security and safeguards reporting requirements are available in MSC-PRO-416, Reporting Security Incidents.*
- *Occurrence reports for "Off-site DOE Transportation Activities" will be assigned to the facility of shipment origin.*

6. SUBMIT an Occurrence Report as described in Section 3.4.5 for events categorized as BPOEs.

3.2 Abnormal Event Notifications

The intent of Abnormal Event notification is to notify off-site agencies of site events/conditions that could potentially escalate into emergencies, or where local residents or the media would expect off-site organizations to be aware of the event.

Following notification of an event by the facility, EOC Shift Office personnel will gather information and immediately evaluate and perform final Abnormal Event categorization of reported events/conditions using specific criteria negotiated with off-site agencies and contained in EOC Shift Office procedures. (The EOC Shift Office will provide facility management with the latest revision of the specific abnormal event criteria upon request.) Upon EOC Shift Office declaration of an Abnormal Event, EOC Shift Office personnel will notify off-site agencies of the event/condition.

Events/conditions categorized as Abnormal Events by the EOC Shift Office should also be evaluated against the reporting criteria in Appendix C, "Occurrence Reporting Categories and Criteria."

Actionee	*Step*	*Action*
NOTE:	•	*The EOC Shift Office is responsible for categorization of an Abnormal Event, using EOC Shift Office-specific Abnormal Event criteria. Upon categorization of an Abnormal Event, the EOC Shift Office will notify the facility.*
	•	*Notifications are made with an understanding that the information is preliminary and may not include details.*
	•	*Mitigative actions taken to stabilize the facility/operation to a safe* condition *takes precedence over notifications.*
P/F Management	1.	EVALUATE events and conditions against the criteria in Appendix B, "Abnormal Event Category List."
	2.	REPORT events or conditions that meet the categories listed in Appendix B, to the EOC Shift Office (**376-2900**) as soon as possible (within 30 minutes) following discovery by cognizant facility staff.
	3.	NOTIFY the cognizant RL-FR. • If the cognizant RL-FR is not available, the on-call RL-FR can be contacted. (Refer to the Hanford Site Weekly On-Call Directory, EOC Shift Office Business Line – **376-3030**.)
	4.	NOTIFY the EOC Shift Office prior to any press release.
	5.	IF the EOC Shift Office determines the event does NOT meet the abnormal event criteria, THEN GO TO Section 3.3.

Actionee	*Step*	*Action*
NOTE:		• *The EOC Shift Office will provide initial and updated Abnormal Event notifications (when applicable) to the off-site agencies.* • *The list of off-site agencies, as negotiated and approved by DOE-RL, is maintained in the EOC Shift Office.* • *If an off-site agency contacts the EOC Shift Office with questions regarding a possible incident at Hanford, the EOC Shift Office contacts facility management or appropriate contractor management for additional information, and depending on the information received, may prepare an Abnormal Event notification. At a minimum, the EOC Shift Office provides the off-site agency with a response to the question.*
P/F Management	6.	When appropriate, PROVIDE follow-up information to the EOC Shift Office and the RL-FR.

NOTE: *Abnormal Events should be evaluated against the reporting criteria in Appendix C, Occurrence Reporting Categories and Criteria. At a minimum, the Group 10(1) criterion should be considered. Other criteria may apply to the event, including additional notifications or other actions.*

7. EVALUATE the event against the reporting criteria in Appendix C, "Occurrence Reporting Categories and Criteria," <u>AND</u>, if appropriate, REPORT in accordance with Section 3.4.

3.3 DOE-RL Facility Representative (RL-FR) Notifications

Actionee	*Step*	*Action*
P/F Management	1.	NOTIFY the RL-FR on a 24-hour real-time basis (immediately) for all of the following: If Facility Management is unable to contact the FR, then the On-Call FR shall be notified. (Refer to the Hanford Site Weekly On-Call Directory, EOC Shift Office Business Line – **376-3030**.) • Events involving personnel injuries, personnel radioactive contamination or internal deposition, work stoppages, or chemical exposures • Events that have the potential to receive public, regulatory, or DOE-HQ attention • Events that reach a threshold to notify the Facility Manager, including non-reportable and adverse conditions • Events meeting the specific criteria below:

Actionee	*Step*	*Action*
P/F Management		a. Where employees: • Receive occupational injuries or are exposed to hazards that result in transport to first aid, a hospital, or cause the individual to be entered into a medical monitoring program. • Are unexpectedly exposed to hazardous substances (e.g., beryllium, asbestos, mercury, lead, etc.) in excess of regulated limits, or unplanned immediately dangerous to life or health (IDLH) conditions. • Receive skin or personal clothing contamination where decontamination is performed. Distinguish between clothing contamination and skin contamination. • Have indications of radioactive internal deposition as verified by positive nasal smears, positive workplace monitoring results requiring follow-up (i.e., whole body count, bioassay), or other measured indication of a potential internal deposition. b. When stop work is invoked for any safety related reason, either by workers or contractor management. **NOTE:** *Contractor management actions are addressed by Appendix C, Group 4.B 1(H).* c. Whenever a situation is discovered that presents an imminent danger to workers, the environment, or the public or when it is determined such a condition was known to exist and was not mitigated. d. Whenever any of the following barriers associated with determining isolation conditions for hazardous energy fail: • Tagout preparation • Technical Review • Installation • Verification • Safe Condition Check • Safe-to-Work Check e. Any type of transportation incident/accident involving radioactive or hazardous materials. f. Whenever any incident occurs that involves the potential loss of control or compromise of classified or nuclear material. g. Whenever noncompliance with an environmental permit or requirement is identified and self-notification to a regulatory authority is planned.

Actionee	*Step*	*Action*
P/F Management		h. Prior to conducting formal meetings associated with investigation of abnormal events. 1) Event investigation related meetings may include formal post jobs, In-progress ALARA reviews, critique meetings, etc. i. Notifications will be made allowing sufficient time for the RL-FR to attend. j. Declaration of a Potential Inadequacy of the Documented Safety Analysis (PISA).

3.4 Reportable Occurrences

3.4.1 Discovery and Categorization

Actionee	*Step*	*Action*
All Employees	1.	IF any events or conditions that could have an adverse effect on safety, health, operations, or the environment are observed, THEN NOTIFY direct manager.
	2.	CALL 911 **immediately** for an actual or potential emergency event or condition.
On-Scene Manager	3.	INITIATE OR COMPLETE the immediate actions necessary to stabilize the facility/operation to a safe condition, ensuring that any potential environmental effects are stabilized, and workers are treated for any injuries sustained.

NOTE: *PRC-PRO-EM-058, Event Initial Investigation and Critique Meeting Process, contains further information.*

	4.	PRESERVE conditions for the subsequent investigation; these actions should not interfere with establishing a safe condition.
	5.	NOTIFY the Building Emergency Director/Building Warden and Facility Manager of the event or condition.
P/F Management	6.	RETAIN all supporting information pertaining to each occurrence or report (e.g., graphs, analyses, and formal investigation reports) in accordance with PRC-PRO-EM-058 and PRC-PRO-IRM-10588, *Records Management Processes*.
	7.	CALL the EOC Shift Office (**376-2900**) if other Hanford Site contractor personnel or facilities are involved in the occurrence, AND REQUEST assistance in notifying that contractor.

Actionee	*Step*	*Action*
P/F Management	8.	CALL the EOC Shift Office (**376-2900**) as soon as possible after discovery (within 30 minutes) of a spill, release, fire, explosion, or condition where there is an actual or potential non-compliance with an environmental permit condition or regulation. • Additional regulatory reporting requirements may apply in the event of a spill or release. • Refer to PRC-PRO-EP-15333, *Environmental Protection Processes*, for further information on Environment Event Notification (including Spills and Releases and Agency Notifications).

NOTE:
- *When the reporting criteria is not clear, or the occurrence exceeds the threshold of more than one reporting criteria, the occurrence is categorized at the highest reporting level.*
- *Categorization is elevated or lowered (as needed) as information becomes available.*

9. CATEGORIZE the occurrence within 2 hours of discovery, or as soon thereafter as reasonably possible, using Appendix C.

   Certain events may require additional time beyond 2 hours to categorize. Examples include personal injuries where a formal diagnosis is required prior to categorization, or Management Concerns (Group 10), when a critique meeting may reveal additional information to support categorization of an event.

10. NOTIFY the cognizant RL-FR as soon as practical (i.e., promptly) but no later than 2 hours after categorization.

    - <u>IF</u> the cognizant RL-FR is not available,
      <u>THEN</u> CONTACT the on-call RL-FR. (Refer to the Hanford Site Weekly On-Call Directory, EOC Shift Office Business Line – **376-3030.**)

NOTE: *The operating facility is responsible for issuing the occurrence report when conditions in step 11 apply.*

11. <u>IF</u> the event or condition involves groundwater contamination, after criteria in Appendix C have been exceeded,
    <u>THEN</u> ISSUE an occurrence report when the following condition(s) is/are met:

    - Facility operations have directly contributed to an increase in groundwater contamination through remobilization of contaminants in the unsaturated zone, or;
    - Facility operations have directly contributed to an increase in groundwater contamination through operations that have not followed appropriate standard practices.

Actionee	Step	Action

NOTE:
- *Legacy biological contamination occurrences categorized using Group 6B(4), criteria from Appendix C are submitted to the Occurrence Reporting and Processing System (ORPS) by the Mission Support Contract (MSC) on a quarterly Short Form report. The final decision on what constitutes a legacy biological contamination occurrence, for the purposes of the quarterly report, rests with the Integrated Biological Control (IBC) Program Manager, or delegate. If the condition or concern is determined to meet the criteria for legacy biological contamination reporting, the MSC IBC Program Manager will perform all ORPS reporting functions.*
- *Further details and information on the quarterly occurrence report are available in PRC-GD-EM-40409, CHPRC Occurrence Report Writer's Guide.*

P/F Management

12. IF an event or condition involves contamination related to biological sources such as animals, animal wastes, or vegetation, THEN CONTACT the MSC IBC organization Program Manager or delegate for assistance in categorizing legacy ***biological*** events.
    - CALL the EOC Shift Office (Business Line **376-3030***)* for the IBC Program Manager on-call contact information.

13. IF the IBC Program Manager or delegate determines the event or condition meets the criteria for legacy ***biological*** contamination reporting under Group 6B(4) from Appendix C, THEN PERFORM the following:
    - PROVIDE verbal notification containing the following information to the IBC Program Manager or delegate:
      - Date/Time of Discovery
      - Occurrence Description
      - Contamination values [units of disintegrations per minute (dpm)/100 cm^2]
      - Immediate Actions Taken
      - Site Area (i.e., 200-E, 200-W)
      - Project
      - Identifying Contractor (CHPRC)
    - TRANSMIT via e-mail notification the same information to the IBC Program Manager or delegate.
    - NOTIFY the cognizant project/facility RL-FR within 2 hours of categorization, including in the notification that the issue is being reported in the site legacy biological roll-up quarterly report.

Actionee	*Step*	*Action*
NOTE:		• *The Subject Matter Expert (SME) for PRC PRO EM-060 may be contacted for assistance (when appropriate) with categorization of a recurring occurrence.* • *DOE CRD O 232.2A requires ongoing analyses on all reportable and non-reportable occurrences and events to be performed to look for trends, determine if corrective actions are effective and conditions/occurrences are recurring. Newly discovered events, conditions, and increasing trends must be reviewed for potential categorization as a recurring event. Recurring issues identified by this analysis must be categorized and reported collectively as a Group 10(1) Management Concern occurrence no matter what the previous individual categorizations were, even **if** they were previously non-reportable (see Appendix F).*
P/F Management	14.	IF an event or condition is determined to meet the definition of "Recurring" as discussed in Appendix F, "Recurring Event Worksheet," THEN CATEGORIZE under Group 10(1) Management Concerns. • ENSURE processing of issues and events identified as "Recurring" are in accordance with requirements associated with High Level reports. • ENSURE the appropriate functional area organization has been advised.
	15.	IF the occurrence involved property damage, personnel injury, or motor vehicle damage, for additional reporting requirements, THEN REVIEW PRC-PRO-SH-077, *Reporting, Investigating, and Managing Health, Safety and Property/Vehicle Events.*
P/F Mgmt. (Hazard Category 2 and 3 nuclear facilities)/ Transportation Safety Manager	16.	REVIEW occurrences marked with Unreviewed Safety Question (USQ) in Appendix C using the PISA process given in PRC-PRO-NS-062, *Unreviewed Safety Question Process*.

3.4.2 Information Security

Actionee	*Step*	*Action*
NOTE:		• *More information is available from MSC-PRO-407, Obtaining Classification or Declassification Reviews, PRC-PRO-IRM-184, Information Protection and Clearance, and your project/facility Technical Authority (TA).* • *Care should be taken when attaching documents or photographs in the ORPS system.*
P/F Management	1.	REVIEW all occurrence reports for controlled-use information. • ENSURE a review is performed prior to ORPS database entry, as draft occurrence reports containing any classified information, Unclassified Controlled Nuclear Information (UCNI), Official Use Only (OUO), or other controlled-use information must not be entered into the ORPS database. For any attachment(s), ENSURE the following in accordance with PRC-PRO-IRM-184: • The attachment(s) does not contain any controlled unclassified Information (CUI). • The attachment(s) has been cleared for public release.
	2.	SUBMIT occurrence reports determined to be classified or controlled-use (by current classification or control guidance) using the appropriate secure transmission means. • With the exception of entry into the ORPS database, meet all other reporting requirements of this procedure. • Submit an unclassified version of the occurrence report that has been sanitized of all controlled information to ORPS within the required time frames. (Refer to Appendix D, “Occurrence Reporting Model.”) • Neither enter nor reference occurrence reporting-related information involving incidents of counterintelligence concern (e.g., foreign persons, governments, organizations, entities or influence) in the ORPS database. • Such reporting is not intended to interfere with or delay any actions directed toward protection of personnel or property. As soon as possible, notify the Patrol Operations Center (**373-3800**).
	3.	CONTACT CHPRC RadCon to verify dose information <u>AND</u> PROVIDE individual radiation dose information to the affected individual(s) before transmitting a report to ORPS.

3.4.3 Oral Notifications

Actionee	*Step*	*Action*
P/F Management	1.	COMPLETE notifications for a Hazardous Material Operational Emergency in accordance with DOE-0223.

NOTE:
- *All of the specific reporting criteria from Appendix C applicable to the event or condition must be identified when categorizing occurrences.*
- *The EOC Shift Office shall notify the DOE Accident Investigation point-of-contact when any occurrence is identified that appears to be included in the "Accident Investigation Criteria" (Appendix A) to DOE O 225.1B, Accident Investigations.*
- *The Information Security requirements in Section 3.4.2 must be met prior to transmitting this information to the EOC Shift Office, per step 3.4.2.2.*

2. COMPLETE oral notifications for all categorized occurrences as follows:

   - CALL the cognizant RL-FR and the EOC Shift Office (**376-2900**) within 2 hours of categorization
     AND PROVIDE details of the occurrence, categorization, and immediate actions taken.
   - IF the cognizant RL-FR is unavailable,
     THEN CALL the on-call RL-FR. (Refer to the Hanford Site Weekly On-Call Directory, EOC Shift Office Business Line – **376-3030**.)

3. NOTIFY responsible oversight organizations and facility operating organization management, as appropriate.

4. TRANSMIT a follow-up e-mail notification to the EOC Shift Office (^EOC Shift Office) that contains the following information:

   - Date/Time of Discovery
   - Date/Time of Categorization
   - Date/Time of RL-FR Notification
   - Occurrence Description
   - Immediate Actions Taken
   - Site Area (i.e., 200-E, 200-W)
   - Project
   - Identifying Contractor (CHPRC)

3.4.4 Submitting Notification Reports

NOTE:
- *PRC-GD-EM-40409 contains detailed instructions and requirements on completing the occurrence report.*
- *Written notification reports for Informational Level and Low Level reports will reflect "Notification/Final." For reports requiring subsequent cause evaluation (Reference the Occurrence Reporting Model [Appendix D]), an update report will be required. Reference Section 3.4.7.)*

Actionee	Step	Action
NOTE: *Legacy biological contamination occurrences categorized under Group 6.B (4) in Appendix C are reported in a single occurrence report on a quarterly basis, by the EOC Shift Office. Further details and information are available in PRC-GD-EM-40409.*		
P/F Management	1.	COMPLETE the Notification Report using the ORPS and instructions, as well as PRC-GD-EM-40409. • COMPLETE any other fields for which information is known. • SUBMIT the report.
NOTE: *Timeline requirements are located in the Occurrence Reporting Model (Appendix D).*		
	2.	ENTER all Notification occurrence reports into the Condition Reporting and Resolution System (CRRS) in accordance with PRC-PRO-QA-052, *Issues Management,* and PRC-PRO-NS-2243, *Identification, Reporting, and Tracking of Nuclear Safety and Worker Safety and Health Requirement Noncompliances & PAAA/Worker Safety and Health Enforcement Activities*.

3.4.5 Status Changes and ORPS Data Changes

Actionee	Step	Action
P/F Management	1.	COMPLETE follow-up notifications to the RL-FR and the EOC Shift Office (**376-2900**) under the following conditions: • Further degradation in the level of safety or impact on the environment, health, or operations of the facility (or other worsening conditions subsequent to the initial notification), • An upgrade in category is declared (including if conditions require an emergency classification be declared), • Any other changes in category (downgraded, cancelled, etc.).
	2.	ENSURE notifications are completed as required for the new category, per Appendix D. • PROVIDE the occurrence report number when making notifications.

Actionee	*Step*	*Action*
P/F Management	3.	NOTIFY the EOC Shift Office and cognizant RL-FR within 2 hours when requesting changes to an occurrence report from the ORPS program administrators involving changes to categorization.
	4.	TRANSMIT a follow-up email to the EOC Shift Office (^EOC Shift Office).
	5.	TRANSMIT an update report in accordance with Section 3.4.6.
	6.	If it is determined the event does not meet reportable criteria, CANCEL the report by performing the following steps:

NOTE: *See PRC-GD-EM-40409 for further guidance on cancelling a report.*

- COMPLETE follow-up notifications to the RL-FR and the EOC Shift Office (**376-2900**).
- DOCUMENT clearly why the reporting criteria does not apply to the occurrence in the "Description of Occurrence" field.
- DO NOT CHANGE the original occurrence description.
- SUBMIT the cancelled report.
- MAKE appropriate modifications to the CRRS if an entry has been made.

3.4.6 Submitting Update Reports

For detailed instructions and requirements on completing the occurrence report, refer to PRC-GD-EM-40409.

Actionee	*Step*	*Action*
NOTE:		• *Any significant or new information identified for reports reviewed under the USQ process, must also be reviewed under the USQ process (either the USQ must be revised, or a new USQ performed). PRC-PRO-NS-062 contains additional information.* • *An update report must be submitted to the ORPS database under the following conditions:* ○ *There is significant or new information available.* ○ *A final report is delayed beyond the 45-day due date.* ○ *A rejected report cannot be re-submitted within the 21-day due date.* ○ *The occurrence is re-categorized (reporting criteria added, deleted, or upgraded report level).* ○ *To correct editorial errors.*
P/F Management	1.	NOTIFY the cognizant RL-FR prior to submission of an Update Report.
	2.	<u>WHEN</u> an Update Report must be submitted to the ORPS database, <u>THEN</u> SUBMIT an Update Report as follows:

Actionee	*Step*	*Action*
P/F Management		a. IF there is significant or new information available (i.e., status of the investigation, recurring consequences, identification of additional component defects, corrective action status), THEN SUBMIT an Update Report to the ORPS database. b. IF a Final Report is delayed beyond the 45-day due date, THEN INCLUDE a justification statement and a new target completion date in the Description of Occurrence field. c. IF a rejected report cannot be re-submitted within the 21-day due date, THEN INCLUDE a justification statement and a new target completion date in the Description of Occurrence field. d. IF the occurrence is re-categorized, THEN PERFORM the following: 1) ENSURE the rationale for re-categorizing the occurrence is clear in the report, and the oral notification requirements in Section 3.4.3 are met. • INCLUDE this information in the Description of Occurrence field. 2) SUBMIT the Update Report within the required Notification Report time frames based on the reporting criteria, per Appendix D. e. IF editorial errors need to be corrected, THEN SUBMIT an Update Report to the ORPS database.

3.4.7 Submitting Final Reports

NOTE:
- *PRC-PRO-EM-058, PRC-PRO-QA-052, and PRC-GD-QA-33900, Issues Management Reference Guide, contain information on conducting the investigation, causal evaluation and corrective action management of the occurrence prior to submitting the Final Report.*
- *For detailed instructions and requirements on completing the occurrence report, refer to PRC-GD-EM-40409.*

Actionee	***Step***	***Action***
NOTE: • *It is expected that the analysis of most occurrences will be completed and the Final Report submitted within 45 calendar days. For certain occurrences (i.e., accident investigations), it is understood that the required information may not be available within this time frame. In these instances, an Update Report must be submitted per step 3.4.6.2.b.* • *When appropriate for clarification, photos, sketches, and drawings must be maintained with the ORPS occurrence report file.*		
P/F Management	1.	For all High (H) level reports, SUBMIT a Final Report into the ORPS database within 45 calendar days from initial categorization.
	2.	For Low Level and Informational reports requiring causal analysis in accordance with the requirements of this procedure, SUBMIT an update report into the ORPS database within 45 calendar days from initial categorization.
	3.	For reports submitted per steps 3.4.7.1 and 3.4.7.2, DOCUMENT the following: • The significance, nature, and extent of the event or condition. • The applicable causal evaluation, per Appendix D. • Applicable Corrective Actions.
	4.	NOTIFY via email, the DOE-RL Occurrence Reporting Point of Contact, and DOE Fac Rep that a final report has been submitted to ORPS.

Actionee	*Step*	*Action*
NOTE: • *Within 14 days after finalizing a Low Level or Informational Level report where causal analysis was required, the RL-FR will review the report and provide approval or rejection and any comments in an Operational Awareness (OA) report.* • *For High Level Occurrence reports, the approval process occurs within the ORPS database.*		
P/F Management	5.	For rejected High (H) Level, Low (L) Level, and Informational (I) occurrence reports requiring causal evaluation, SUBMIT a revised Final Report into the ORPS database within 21 calendar days of the DOE-RL report rejection. If the revised report cannot be resubmitted within this time, an update to the Occurrence Report must be submitted explaining the delay and providing an estimated date for resubmittal (see step 3.4.6.2.c). a. CONTACT the cognizant RL-FR to determine the cause of the rejection. b. RESOLVE the RL-FR concerns and resubmit the occurrence report into ORPS using the appropriate method.

3.4.8 Corrective Action Management

NOTE: *ORPS and CRRS must align, relative to addressing all key causal evaluation issues and corrective action due dates.*

Corrective Actions associated with Occurrence Reports are tracked in the CRRS system. For High (H) Level Reportable Occurrences, any proposed changes to corrective actions previously approved by the FR in ORPS (including completion dates) require FR approval. Minor administrative changes do not require approval (e.g., typographical errors, actionee change).

Actionee	*Step*	*Action*
P/F Management	1.	PERFORM the appropriate causal evaluation as identified in Appendix D.

NOTE: *The RL-FR may waive the root cause evaluation for High Level occurrence reports, Occupational Injury and Exposure occurrences categorized under Group 2 A(4), occurrences categorized under Group 10(1) as recurring issues, and Near Miss occurrences categorized under Group 10(2) on a case-by-case basis (i.e., when the benefit of root cause evaluation is not necessary to develop corrective actions to prevent recurrence, and an apparent cause determination is adequate).*

2. TRACK corrective actions to closure (per PRC-PRO-QA-052) in the CRRS as follows:
   - ENTER corrective action text, target date, and Condition Report (CR) number to ORPS directly, as applicable.
   - INCLUDE an action to complete an Effectiveness Review for all issues reported as High Level occurrence report, as identified in Appendix D.

3.5 Off-Site Response to Events

This section applies to any staff that may, as part of their work scope, represent the CHPRC, and includes direct off-site actions in response to events involving CHPRC material, activities, or personnel, substantiated requests for assistance made by an off-site party (including members of the public) directly affected by such an event(s); or any other off-site actions that may involve risk or liability to the CHPRC or DOE. **This section does not apply to**:

- Normal day-to-day off-site activities or activities governed by current procedures or agreements, including mutual aid agreements between the Hanford Fire Department or Hanford Patrol and off-site agencies, subcontracts, memoranda of understanding, government requirements, or directives issued by DOE
- Non-substantiated or invalid requests for assistance made by members of the public
- Radiological activities performed within the scope of the CHPRC Radiation Protection Program, unless radioactivity above background from DOE activities is detected in an off-site situation

Actionee	*Step*	*Action*
NOTE:	*Updates must be provided to the EOC Shift Office as conditions change or more information is obtained.*	
P/F Management	1.	CONTACT the EOC Shift Office (**376-2900**) <u>AND</u> PROVIDE information when an off-site event occurs involving DOE or CHPRC material, activities involving CHPRC, or personnel representing CHPRC, substantiated requests for assistance made by an off-site party (including members of the public) directly affected by such an event(s); **or** any other off-site actions that may involve risk or liability to CHPRC or DOE.
NOTE:	*The EOC Shift Office will gather information on the event and contact the Emergency Duty Officer (EDO). The EDO will, in consultation with Environmental On-Call personnel, Emergency Preparedness personnel, and DOE on-call personnel, determine if additional event notifications are warranted.*	
	2.	Prior to implementing a decision to send CHPRC or CHPRC subcontracted personnel off-site to respond to any event, regardless of the circumstances, CONTACT the EOC Shift Office (**376-2900**) to assure proper approvals are obtained.

4.0 FORMS

Hazardous Materials Incident Report, Form DOT F 5800.1

5.0 RECORD IDENTIFICATION

All records are required to be managed in accordance with PRC-PRO-IRM-10588, *Records Management Processes*.

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility
Occurrence report files (including a copy of the notification and final report, Prompt Notification Form(s), related correspondence, technical data, statements of witnesses and employees, other relevant information and data, i.e., lessons learned)	Facility Manager	IRM Service Provider

6.0 SOURCES

6.1 Requirements

CRD O 151.1D, *Comprehensive Emergency Management System*
CRD O 232. 2A (Supp), *Occurrence Reporting and Processing of Operations Information*
DOE-0223, *Emergency Plan Implementing Procedures*
CRD O 422.1 (Supp), *Conduct of Operations*

6.2 References

7 CFR 331, *Possession, Use, and Transfer of Biological Agents and Toxins*
9 CFR 121, *Possession, Use, and Transfer of Biological Agents and Toxins*
10 CFR 835, *Occupational Radiation Protection*
10 CFR 851, *Worker Safety and Health Program*
29 CFR 1910, *Occupational Safety and Health Standards*
33 USC 1321, *Oil and Hazardous Substance Liability*
40 CFR 61, *National Emission Standards for Hazardous Air Pollutants*
40 CFR 98, *Mandatory Greenhouse Gas Reporting*
40 CFR 302, *Designation, Reportable Quantities, and Notification*
40 CFR 355, *Emergency Planning and Notification*
42 CFR 73, *Select Agents and Toxins*
49 CFR 171, *General Information, Regulations, and Definitions*
49 CFR 173, *Shippers--General Requirements for Shipments and Packaging*
49 CFR 390, *Federal Motor Carrier Safety Regulations: General*
CHPRC-00073, *CH2M HILL Plateau Remediation Company Radiological Control Manual*
CRD O 225.1B, (Supp) *Accident Investigations*
CRD O 414.1D, *Quality Assurance*
CRD O 460.1C, *Packaging and Transportation Safety*

CRD O 460.2A, *Departmental Materials Transportation & Packaging Management*
DOE O 458.1, Chg 2, *Radiation Protection of the Public and the Environment*
DOE-STD-1098-2008, *Radiological Control*
HNF-7098, *Criticality Safety Program*
IAEA-TECDOC-1169, *Managing Suspect and Counterfeit Items in the Nuclear Industry*
MSC-PRO-407, *Obtaining Classification or Declassification Reviews*
MSC-PRO-416, *Reporting Security Incidents*
PRC-GD-EM-40409, *CHPRC Occurrence Report Writer's Guide*
PRC-GD-QA-33900, *Issues Management Reference Guide*
PRC-PRO-EM-058, *Event Initial Investigation and Critique Meeting Process*
PRC-PRO-EP-15333, *Environmental Protection Processes*
PRC-PRO-HR-042, *Fitness for Duty*
PRC-PRO-IRM-184, *Information Protection and Clearance*
PRC-PRO-IRM-10588, *Records Management Processes*
PRC PRO-MS-067, *Lessons Learned*
PRC-PRO-NS-062, *Unreviewed Safety Question Process*
PRC-PRO-NS-2243, *Identification, Reporting, and Tracking of Nuclear Safety and Worker Safety and Health Requirement Noncompliances & PAAA/Worker Safety and Health Enforcement Activities*
PRC-PRO-NS-8317, *Safety Basis Implementation and Maintenance*
PRC-PRO-QA-052, *Issues Management*
PRC-PRO-QA-301, *Control of Suspect/Counterfeit and Defective Items*
PRC-PRO-QA-24741, *Performance Analysis Process*
PRC-PRO-SH-077, *Reporting, Investigating, and Managing Health, Safety and Property/Vehicle Events*
Public Law 92-500, *Federal Water Pollution Control Act (commonly referred to as the Clean Water Act)*

6.3 Bases

10 CFR 830, *Nuclear Safety Management*
CRD O 471.1B, *Identification and Protection of Unclassified Controlled Nuclear Information*
DOE-STD-7501-99, *The DOE Corporate Lessons Learned Program*
ERG2008, *Emergency Response Guidebook,* Department of Transportation
MSC-RD-12223, *Protecting and Controlling Classified Matter*
PRC-PRO-WKM-12115, *Work Management*

Appendix A - Base Program Operational Emergency Criteria

NOTE: *When considering categorization of an occurrence in this section, PRC-PRO-HR-042, Fitness for Duty, should be reviewed to determine if a Fitness for Duty evaluation is required. Timeliness is a factor in this decision.*

Health and Safety

NOTE: *The following events or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.*

1. The discovery of radioactive or other hazardous material contamination from past DOE operations that may have caused, is causing, or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria.

2. An off-site hazardous material event not associated with DOE operations that is observed to have or is predicted to have an impact on a DOE Site, such that protective actions are required for on-site DOE workers.

NOTE: *For this criterion, "on-site DOE workers" includes any DOE leased buildings occupied by DOE or DOE prime contractor personnel (e.g., Federal Building, Stevens Center, etc.) where protective actions are taken. The EOC Shift Office Duty Officer shall categorize these events.*

3. An occurrence (e.g., earthquake, tornado, aircraft crash, fire, explosion) that causes or can reasonably be expected to cause significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death.

4. Any facility evacuation in response to an actual occurrence that requires time-urgent response by specialist personnel, such as hazardous material responders or mutual aid groups not normally assigned to the affected facility.

NOTE:
- *Routine Hanford responders (i.e., Hanford Fire Department, Hanford Patrol, and Benton County Sheriff) are considered assigned to CHPRC projects/facilities for purposes of this criteria.*
- *The event must clearly exceed Group 4.B(4) criteria (Appendix C) to be reportable under this criteria.*

5. An unplanned nuclear criticality.

NOTE: *This criterion is an HMOE that meets an EAL. Review DOE-0223.*

6. Any mass casualty event.

NOTE: *This criterion includes any leased buildings occupied by DOE or DOE prime contractor personnel (e.g., Federal Building, Stevens Center, etc.). The EOC Duty Officer shall categorize these events when the EOC Shift Office is unable to make timely contact with a cognizant BED, Shift Manager, Building Warden (BW), or contractor single-point-of-contact.*

Appendix A - (Cont.)

Environment
NOTE: *The following events or conditions represent, cause, or have the potential to cause serious detrimental effects on the environment.*
1. Any actual or potential release of hazardous material or regulated pollutant to the environment, in a quantity greater than five times the Reportable Quantity (RQ) specified for such material in 40 CFR Part 302, that could result in significant off-site consequences, such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes.
2. Any release of greater than 1,000 gallons (24 barrels) of oil to inland waters; greater than 10,000 gallons (238 barrels) of oil to coastal waters; or a quantity of oil that could result in significant off-site consequences (e.g., need to relocate people, major wildlife kills, wet-land degradation, aquifer contamination, need to secure downstream water supply intakes, etc.) [Oil (Clean Water Act, 33 USC 1321) means any kind of oil and includes petroleum.] **NOTE:** *This is **not** an identified Hanford hazard.*
Security and Safeguards
NOTE: *The following events or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment.*
1. Actual unplanned detonation of an explosive device or a credible threat of detonation resulting from the location of a confirmed or suspicious explosive device. **NOTE:** *This criterion includes any leased buildings occupied by DOE or DOE prime contractor personnel (e.g., Federal Building, Stevens Center, etc.). The EOC Duty Officer shall categorize these events when the EOC Shift Office is unable to make timely contact with a cognizant BED, Shift Manager, BW, or contractor single-point-of-contact.*
2. An actual terrorist attack or sabotage event involving a DOE site/facility or operation. **NOTE:** *This criterion includes any leased buildings occupied by DOE or DOE prime contractor personnel (e.g., Federal Building, Stevens Center, etc.). The EOC Duty Officer shall categorize these events when the EOC Shift Office is unable to make timely contact with a cognizant BED, Shift Manager, BW, or contractor single-point-of-contact.*
3. Kidnapping or the taking of hostage(s) involving a DOE site/facility or operation. **NOTE:** • *This criterion includes any leased buildings occupied by DOE or DOE prime contractor personnel (e.g., Federal Building, Stevens Center, etc.). The EOC Duty Officer shall categorize these events when the EOC Shift Office is unable to make timely contact with a cognizant BED, Shift Manager, BW, or contractor single-point-of-contact.* • *MSC-PRO-416 contains more information about this criterion.*

Appendix A - (Cont.)

Off-site DOE Transportation Activities
NOTE: *The following events or conditions represent an actual or potential release of hazardous materials from a DOE shipment*
1. The accident/incident involves a DOE shipment of hazardous materials and causes the first responders to initiate ***protective actions*** (a shelter or evacuation) beyond the event scene. **OR** The accident involves a DOE shipment of hazardous materials and causes the first responders to establish an *initial isolation distance* greater than 100 meters beyond the incident. **OR** The accident/incident results in damage to a Category I or II quantity of Special Nuclear Materials. **NOTE:** *The EOC Duty Officer shall categorize these events.*
2. Failures in safety systems threaten the integrity of a nuclear weapon, component, or test device. **NOTE:** *This is **not** an identified Hanford hazard.*
Hazardous Biological Agent or Toxins
NOTE: *The following events or conditions involving the release of a hazardous biological agent or toxin [identified in Base Order, paragraph 4a(14)(c)] represent major failure of safety systems, protocols, and/or practices with the potential to have a serious impact on health and safety of workers, collocated workers, emergency responders, members of the public, or the environment.*
1. Any actual or potential release of a hazardous biological agent or toxin outside the secondary barriers of the bio-containment area. **NOTE:** *At a minimum, specific hazardous biological agents and toxins must include Federally regulated agents and toxins identified in lists published by the Department of Health and Human Services (HHS) in 42 CFR Part 73 and the Department of Agriculture (USDA) in 7 CFR Part 331 and 9 CFR Part 121. Toxins listed in 42 CFR Part 73 and 9 CFR Part 121 must exceed the minimum quantities specified to be Federally regulated.*

Appendix A - (Cont.)

Hanford Site-Specific Criteria

NOTE: *The following events or conditions are specific to the Hanford Site and may represent degradation to facilities or result in the need to take protective measures from flooding, or from the release or pending release of hazardous materials from a transportation shipment. This specific criterion is allowed per DOE O 151.C, Chapter V "Operational Emergency Events and Conditions," Item #1, second paragraph.*

1. Notification that a dam failure of Grand Coulee, Wanapum, or Priest Rapids either has or will occur (Level 3 or Level A).

NOTE: *The EOC Duty Officer shall categorize these events.*

2. An onsite transportation accident/incident involves a DOE shipment of hazardous materials that is not listed in the Green Section of the Emergency Response Guidebook, and the Incident Commander:

   a. Implements ***Protective Actions*** (a shelter/take cover) or evacuation) beyond the event scene;

   OR

   b. Implements an ***Initial Isolation Zone*** distance greater than 100 meters.

NOTE:
- *The EOC Shift Office is responsible for event categorization/classification for transportation events occurring outside the cognizance of the BED, as noted below, and for events on Hanford roadways (e.g., 600 Area events).*
- *The BED is responsible for event categorization/classification if the transportation event occurs WITHIN the facility boundary or complex (i.e., inside a facility's fenced area), before departure from a site/facility's loading area when a fenced area does not exist, or between facilities within a project when identified in facility-specific EAL procedures (e.g., Solid Waste Operations Complex).*

3. An onsite transportation accident/incident involves a non-DOE shipment of hazardous materials, and the Incident Commander implements ***Protective Actions*** (a shelter/take cover or evacuation) for DOE workers.

NOTE: *The EOC Duty Officer shall categorize these events.*

Appendix B - Abnormal Event Category List

Site and/or Facility Condition
1. Any fire on-site requiring suppression by fire department personnel.
2. Any activation of a fire suppression system involving an actual discharge.
3. Any explosion on-site.
4. Any radioactive contamination off-site expected to have originated from Hanford.
5. Any event or condition disrupting facility operations (excluding false indicators) or causing degradation of Safety Class systems.
6. Any evacuation or sheltering within a facility in response to an actual occurrence that could involve the release of radioactive or hazardous materials, or could cause media interest or public concern.

Environmental
1. Any unplanned release of a radiological or hazardous substance above established limits defined in applicable regulations, and requiring verbal notification to a regulator.
2. Any spill or release to the environment from a tank farm waste tank or associated transfer line.
3. Any event or condition affecting ecological resources (i.e., destruction of a critical habitat, damage to a historic/archeological site, damage to wetlands, etc.) or agreement/compliance areas reportable to a regulator.

Personnel Safety
1. Any occupational (work related) illness or injury resulting in any transport (i.e., private vehicle, government vehicle, ambulance, etc.) to a local hospital.
2. Any vehicular or aircraft incident on-site resulting in a fatality, or an injury resulting in any transport (i.e., private vehicle, government vehicle, ambulance, etc.) to a local hospital.
3. Any unplanned exposure to a radiological or hazardous material resulting in any transport (i.e., private vehicle, government vehicle, ambulance, etc.) to a local hospital.

Appendix B - (Cont.)

Safeguards and Security
1. Any criminal, malevolent, or significant disruptive activities causing injury or property damage, or that disrupt normal site activities.

Cross-Category Items
1. Any activation of an Incident Command System in response to an actual event (excluding false indicators or personal illnesses).
2. Any event that results or may result in media attention or public concern.
3. Any event or condition where EAL criteria were met at some point in the past, but no longer exist when the event or condition is reviewed for classification purposes. These events or conditions (termed “transitory event”) do not pose a threat to workers or the public since there is no release of hazardous materials, but may generate public concern or media interest.

Appendix C - Occurrence Reporting Categories and Criteria

Report Levels provide a means to reflect the impact associated with a given occurrence in terms of health, safety, and security to personnel, the public, the environment, and the operational mission. The three report levels are High (H), Low (L), and Informational (I). Operational Emergency (OE) occurrences reflect management's judgment that circumstances pose an immediate or near term potential for harm unless promptly mitigated or that the occurrence meets reporting thresholds established by other regulatory requirements.

Definitions:

High Level Report: Occurrences in this category meet any of the following conditions:

1. Impacted worker or public safety and health, including significant personnel injuries, environmental harm, regulatory compliance, or public/business interests;
2. Constituted a noncompliance with regulatory requirements that created the potential for actual harm;
3. Posed the potential for mission interruption and require prompt mitigative action; or
4. Involved circumstances that reflected degraded safety necessitating prompt management attention along with modified normal operations to prevent an adverse effect on safe facility operations.

Low Level Report: Occurrences are those that do not meet High Level Report occurrences but involve personnel injury, environmental releases, equipment damage, or hazardous circumstances, and additional time is appropriate for Written Notifications.

Informational Level Report: Occurrences are those that do not meet High or Low Level Report occurrences and generally meet the following conditions:

1. Determined to be a safety, environmental, or mission concern; or
2. Provides potential learning opportunities for others.

NOTE:	• *Items marked USQ, are to be reviewed using the PISA process given in PRC-PRO-NS-062.* • *An event can meet multiple reporting criteria that establish it as an occurrence. All of the specific reporting criteria applicable for an occurrence must be identified. Some criteria are "secondary" in that they complement other reporting criteria that require occurrence reporting. In these cases, all of the applicable criteria must be recorded.* • Safeguards and security events are not reported in ORPS unless they involve other consequences that meet the ORPS reporting criteria presented herein. • *This procedure does not absolve the cognizant parties from making required reports to other agencies.*

Appendix C - (Cont.)

GROUP 1 – OPERATIONAL EMERGENCIES (Includes Base Program and Hazardous Material Operational Emergencies)
(1) H An Operational Emergency, Alert, Site Area Emergency, or General Emergency as defined in DOE O 151.1D. (See Appendix A, "*Base Program Operational Emergency Criteria*" and DOE-0223 "*Emergency Plan Implementing Procedures*")
GROUP 2 – PERSONNEL SAFETY AND HEALTH **NOTE:** *When considering categorization of an occurrence in this section, PRC-PRO-HR-042 should be reviewed to determine if a Fitness for Duty evaluation is required. Timeliness is a factor in this decision.* See "Personnel Exposure" in Appendix G, "Occurrence Reporting Definitions." 29 CFR Sections 1904.7(b)(5)(i) and (ii) define "medical treatment" and "first aid." For reporting ionizing radiation exposures, see Group 6 Contamination/Radiation Control, Subgroup C Radiation Exposure.
Subgroup A – Occupational Injuries and Exposures
(1) H Any occurrence due to DOE operations resulting in a fatality or terminal injury/illness.
(2) H Any single occurrence, injury, or exposure requiring in-patient hospitalization of three or more personnel.
(3) H Any single occurrence, injury, or exposure resulting in an occupational injury that requires in-patient hospitalization for five or more days, commencing within seven days from the date of the injury.
(4) L Any single occurrence, injury, or exposure resulting in three or more personnel having Days Away, Restricted or Transferred (DART) cases per 29 CFR Section 1904.7, Recordkeeping Forms and Recording Criteria.
(5) L Any single occurrence resulting in an occupational injury or exposure that: a) Requires in-patient hospitalization for more than 48 hours, commencing within seven days from the date the injury or exposure was received; b) Results in a fracture of any bone (except bone chips; simple fractures of fingers, toes, or nose; or a minor chipped tooth); c) Causes severe hemorrhages or severe damage to nerves, muscles, tendons, or ligaments. (Note: Severe damage is generally considered to have occurred if surgery is required to correct the damage); d) Damages any internal organ; e) Causes (1) a concussion or (2) loss of consciousness due to an impact to the head, or f) Causes second- or third-degree burns, affecting more than 5% of the body surface. **NOTE:** *The intent of Group 2A(5) reporting criterion is to report injuries based on the initial or first-line diagnosis and treatment. Events reported in this category are those for which the diagnosis was obtained within 21 calendar days after the event occurred. If changes occur from the initial diagnosis, resulting in revised treatment plans (i.e., misinterpretation of initial test results, additional evaluations performed), then reporting will need to be re-evaluated based on corrected diagnosis.*

Appendix C - (Cont.)

(6) H	Personnel exposure to chemical, biological, or physical hazards that exceed 10 times the limits established in 10 CFR Part 851, Worker Safety and Health Program (see 10 CFR Section 851.23 Safety and Health Standards) or exceed levels deemed Immediately Dangerous to Life and Health (IDLH).
(7) L	Personnel exposure to chemical, biological or physical hazards above limits established in 10 CFR Part 851, Worker Safety and Health Program (see 10 CFR Section 851.23, Safety and Health Standards), but below levels deemed IDLH.
	Subgroup B - Fires
(1) H	Any fire within primary confinement/containment boundaries of a nuclear facility, except a fire that self-extinguishes in ten minutes or less. **NOTE**: *Facility specific documents need to define what constitutes the primary confinement/containment boundary.*
(2) H	Any fire that: a) Activates a fixed automatic fire suppression system (e.g., clean agent or wet-pipe automatic sprinkler protection), b) Takes longer than ten minutes to extinguish following the initiation of firefighting efforts by the emergency response organization (Hanford Fire Department), or c) Disrupts normal operations in the facility for more than four hours. **NOTE:** *The activation or degradation of Safety Class and Safety Significant fire suppression systems should also be reported under Group 4 Criteria.*
(3) I	Any fire in a nuclear facility.
(4) I	Any wild land fire (e.g., forest fire, grassland fire) or other fire outside of a DOE facility that has the potential to threaten the facility.
	Subgroup C – Explosions
(1) H	Any unplanned explosion that disrupts normal operations.

Appendix C - (Cont.)

Subgroup D – Hazardous Energy
(1) H Any unexpected or unintended personal contact (e.g., burn, shock, injury, etc.) with a hazardous energy source (e.g., live electrical power circuit, mechanical hazards, steam, pressurized gas, etc.).
(2) L Any failure to follow a prescribed hazardous energy control process that results in potential worker exposure to uncontrolled hazardous energy (e.g., live electrical power circuit, powered mechanical hazards, steam, pressurized gas, etc.); OR, any discovery of an uncontrolled hazardous energy source (e.g., live electrical power circuit, powered mechanical hazards, steam, pressurized gas, etc.). This criterion does not include discoveries made by zero energy checks and other precautionary investigations made before work is authorized to begin. Work is authorized to begin when the associated work document has been released and zero-energy (safe condition and/or safe-to-work) checks have been completed. **NOTE**: *Potential Worker exposure includes:* 1. *lockout/tagout not utilized when required* 2. *lockout/tagout in place does not identify and control all potential hazardous energy sources* 3. *lockout/tagout on incorrect component or missing from correct component* 4. *component in wrong position with lockout/tagout installed; etc.*
BELOW ORPS REPORTABLE: Any failure to follow a prescribed hazardous energy control process (e.g., Technical Error) that did not result in potential worker exposure to hazardous energy shall be entered into the CRRS and screened at a minimum of Track Until Fixed (TUF). A Technical Error is defined as the failure to properly execute a hazardous energy control process requirement that could have resulted in hazardous energy being present, unidentified, in the work location but was prevented by other credited process controls (i.e., technical review, installation, verification, safe condition and/or safe-to-work checks).

Appendix C - (Cont.)

GROUP 3 – NUCLEAR SAFETY BASIS	
Subgroup A – Technical Safety Requirement and Other Hazard Control Violations (Excluding Nuclear Criticality)	
NOTE: *For Technical Safety Requirement/Operational Safety Requirement events, PRC-PRO-NS-8317, Safety Basis Implementation and Maintenance, contains additional information.* Report nuclear criticality events under Group 3, Subgroup C below.	
(1) H	Any violation or noncompliance of a Technical Safety Requirement (or Operational Safety Requirement) Safety Limit, Hazard Category 1, 2, or 3 nuclear facility's Technical Safety Requirement (or Operational Safety Requirement) Limiting Control Setting, Limiting Condition for Operation, Specific Administrative Control, or Surveillance Requirement. **(USQ)** **Exception**: An event consisting solely of a surveillance test (to include any periodic activity explicitly captured in the Documented Safety Analysis that is used to ensure operability or viability of a structure, system, or component) performed after the prescribed surveillance period, and in which the structure, system, or component was found to be capable of performing its specified safety function. (See separate criterion for late surveillance tests below.)
(2) L	Any violation or noncompliance of a credited hazard control specified in a Hazard Category 1, 2, or 3 nuclear facility's DOE approved Documented Safety Analysis [issued pursuant to 10 CFR Section 830.204, *Documented Safety Analysis*, and including Basis for Interim Operation, etc.], or DOE issued Safety Evaluation Report that are not addressed by Criterion 3A(1) or exception (a) or (b). **(USQ)** **Exceptions:** a) An event consisting solely of a violation of a safety management program (e.g., quality assurance, personnel training) cited in the Documented Safety Analysis. b) An event consisting solely of a surveillance test (to include any periodic activity explicitly captured in the Documented Safety Analysis that is used to ensure operability or viability of a structure, system, or component) performed after the prescribed surveillance period, and in which the structure, system, or component was found to be capable of performing its specified safety function. (See separate criterion for late surveillance tests below.)
(3) I	An event consisting solely of a surveillance test (to include any periodic activity explicitly captured in the Documented Safety Analysis that is used to ensure operability or viability of a structure, system, or component) performed after the prescribed surveillance period, and in which the structure, system, or component was found to be capable of performing its specified safety function.

Appendix C - (Cont.)

Subgroup B – Documented Safety Analyses
(1) H Identification of a radioactive material inventory that causes a nuclear facility to exceed its current approved/authorized Hazard Category.
(2) L Determination of a positive Unreviewed Safety Question (USQ) that reveals a currently existing inadequacy in the Documented Safety Analysis. **(USQ)**
NOTE: *A formal written report will only be required in the ORPS database if the PISA results in the determination of a Positive USQ per Group 3, Subgroup B (2) L Determination of a positive Unreviewed Safety Question (USQ) that reveals a currently existing inadequacy in the Documented Safety Analysis. Notification to the DOE-RL Fac. Rep. is required.*
Subgroup C – Nuclear Criticality Safety Control Violations **NOTE:** *HNF-7098, Criticality Safety Program, contains CHPRC Criticality Safety Program Definitions.*
(1) H A criticality accident occurs.
(2) H A condition in which no documented controls are available to prevent a criticality accident. An accident has not occurred due to other, non-documented barriers or controls. **(USQ)** **NOTE:** *For ORPS reporting purposes, this criterion applies to an issue identified as a criticality Violation. HNF-7098 contains additional information.*
(3) H A loss of one or more nuclear criticality documented controls such that an accidental criticality is possible from the loss of one additional documented control (Criticality Infraction). **(USQ)** **NOTE:** *For ORPS reporting purposes, this criterion applies to an issue identified as criticality Infraction in a facility where a criticality accident is credible;* ***OR*** *an issue identified as a criticality Infraction in a facility where a criticality accident is documented as not credible and a criticality accident is possible from the loss of one additional documented control. HNF-7098 contains additional information.*
(4) L A deficiency in criticality safety analysis or degradation of a documented criticality control (or controls) such that adequate controls were not in place for a credible criticality accident scenario. **NOTE:** *For ORPS reporting purposes, this criterion applies to an issue identified as a Criticality Discrepancy;* ***OR*** *an issue identified as a Criticality Infraction in a facility where a criticality accident has been documented as not credible and the as found condition remains equivalent to a double contingent process/operation. HNF-7098 contains additional information.*

Appendix C - (Cont.)

GROUP 4 – FACILITY STATUS **NOTE:** *The criteria below apply to both nuclear and non-nuclear facilities. However, criteria specific to Safety Class (SC) or Safety Significant (SS) Structures, Systems, or Components (SSC) would apply only to nuclear facilities.*	
Subgroup A – Safety Structure/System/Component Degradation (Nuclear Facilities) **NOTE**: *Appendix G contains definitions applicable to this criterion:* • *Performance degradation includes the absence of or deficiency with Design Features for which credit has been taken in the Documented Safety Analysis.* • *This subgroup applies even if all actions and completion times of the Limiting Condition for Operations are met, with no compromise to the authorization basis.*	
(1) L	Performance degradation of any Safety Class (SC) or Safety Significant (SS) Structure, System, or Component (SSC), or any support system that is required for safety operation of the SC or SS SSCs, which prevents satisfactory performance of its design function when it is required to be operable. (**USQ**)
(2) I	Performance degradation of any SC SSC when not required to be operable. (**USQ**)
Subgroup B – Operations	
(1) H	A formal shutdown of an activity or operation for safety reasons, directed by the DOE Field Element Manager, Contracting Officer or senior contractor management requiring corrective actions prior to continuing operations (e.g., a Stop Work Order). A Stop Work by Senior Contractor Management only requires reporting when a formal declaration is officially transmitted to DOE.
(2) H	Actuation of a Safety Class (SC) Structure, System, or Component (SSC), or its alarms as a result of an actual unsafe condition. Spurious alarms (e.g., due to electronic noise, radon/thoron decay) should not be reported.
(3) L	Actuation of a Safety Significant (SS) SSC, or its alarms as a result of an actual unsafe condition. Spurious alarms (e.g., due to electronic noise, radon/thoron decay) should not be reported.
(4) L	A facility operational event which resulted in an adverse effect on safety, such as, but not limited to: 1) an inadvertent facility or operations shutdown (i.e., a change of operational mode or curtailment of work or processes); 2) a manual facility or operations shutdown due to alarm response procedures; 3) an inadvertent process liquid transfer; or 4) an inadvertent release of hazardous material from its engineered containment **(USQ)**
(1) I	Any event or condition that would prevent immediate facility or offsite emergency response capabilities. **(USQ)**

Appendix C - (Cont.)

Subgroup C – Suspect/Counterfeit and Defective Items or Material		
NOTE: • *Any suspect/counterfeit or defective item or material found in **receipt inspection is exempt** from this Subgroup. Findings meeting the below criteria shall be reported by the facility/project where they are found. Once an item has been confirmed to be Suspect/Counterfeit through the nonconformance report (NCR) dispositioning process, an occurrence report should be initiated in accordance with this procedure. The date and time the reporting facility receives confirmation is the date and time of discovery for this procedure; categorization is then required within 2 hours.* • *Reports on suspect/counterfeit and defective items or material, must provide the manufacturer/supplier/vendor (including a contact, phone number, and website); the model and part numbers; the quantity found; why the item/material is suspect/counterfeit or defective; and how the item/material is being used. Reports must also include the method of detection (i.e., craft inspection prior to installation, in-service inspection, or failure) and identify any resulting consequences, along with any photos via attachments, as appropriate. In some instances, the **information may be considered sensitive** (such as contact names and phone numbers). In those instances, the information need not be included in the occurrence report but may be obtained by contacting the Originator of the occurrence report.* • *Appendix E contains additional guidance and definitions applicable to this criterion.* • *PRC-PRO-QA-301, Control of Suspect/Counterfeit and Defective Items, contains additional information.*		
(1)	L	Discovery of any suspect or counterfeit item or material found in a Safety Class (SC) or Safety Significant (SS) Structure, System, or Component (SSC). **(USQ)**
(2)	I	Discovery of any other suspect or counterfeit item or material (i.e., not found in a SC or SS SSC) that is found in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety.
(3)	I	Discovery of any defective item or material, other than a suspect/counterfeit item or material, in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety. **(USQ)**

Appendix C - (Cont.)

GROUP 5 – ENVIRONMENTAL

NOTE: *When considering categorization of an occurrence in this section, PRC-PRO-HR-042 should be reviewed to determine if a Fitness for Duty evaluation is required. Timeliness is a factor in this decision.*

Subgroup A – Releases

(1) L Any release (on-site or off-site) of a hazardous or extremely hazardous substance, including radionuclides from a DOE facility above federally permitted releases in a quantity equal to or exceeding the federal reportable quantities specified (see specifications in 40 CFR Part 302, *Designation, Reportable Quantities, and Notification*, 40 CFR Part 355, *Emergency Planning and Notification*, and CERCLA Section 101(10), *Federally Permitted Releases*.)

NOTE: *See Group 1, for situations under which releases of hazardous or extremely hazardous substances would be reported under "Operational Emergencies."*

(2) I Any release (on-site or off-site) of a pollutant from a DOE facility that is above levels or limits specified by outside agencies in a permit, license, or equivalent authorization, when reporting is required in a format other than routine periodic reports.

This criterion does not apply to the following:

- Discharges (including potable water) that do not result in leaching or erosion of contaminated material from a known or suspected boundary of a Potential Release Site.
- Discharges (including potable water) capable of reaching surface or groundwater that do not require remediation/repair. (The contractor's environmental subject matter experts make the determination of environmental impact and the need for remediation/repair activities.)

NOTE:

- *Oral notifications in a regulatory agreement (i.e., Air Operating Permits) are considered "routine" reporting, although the event being reported may require categorization under other criteria in this procedure. Occurrences requiring a follow-up written report to a regulator are reported under this criterion, at a minimum. PRC-PRO-EP-15333.*
- *See Group 1, Criterion 1, for situations under which releases of pollutants into the environment exceeding permit limits would be reported under "Operational Emergencies."*

(3) I Any release (onsite or offsite) that exceeds 100 gallons of oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. For operations involving oil field crude or condensate, any discharge that must be reported to outside agencies in a format other than routine periodic reports is reportable under this criterion.

NOTE: *See Group 1, Criterion 1, for situations under which releases of pollutants into the environment exceeding permit limits would be reported under "Operational Emergencies."*

Appendix C - (Cont.)

(4) I	Any discrete release of sulfur hexafluoride (SF_6) due to an event or DOE operation equal to or exceeding 115 pounds (1,247 metric tons of CO2e according to 40 CFR Part 98, Subpart A, Table A-1, *Global Warming Potentials*) or 115 pounds more than the normal release quantity if the SF_6 release is a common byproduct of the operation. **NOTE:** *For this criterion, discrete means the event or operation has defined start and stop points less than seven full days apart.* • *See Group 1, Criterion 1, for situations under which releases of pollutants into the environment exceeding permit limits would be reported under "Operational Emergencies."*
Subgroup B – Ecological and Cultural Resources	
(1) H	Any occurrence, including releases causing significant impact to ecological or cultural resource for which DOE has responsibility under applicable laws, regulations, and Executive Orders. For Example, extensive damage to, or destruction of: a) Ecologically preserved areas, or pristine or protected wetlands**;** b) Threatened or protected flora or fauna or critical habitats**;** c) Potable drinking water intake or well usage**;** or d) Historical/archeological sites
(2) H	Any occurrence, including releases, resulting in extensive environmental degradation (e.g., fish kill, notable loss or relocation of native species, need for interdiction of crop sales; or restriction to human access). **NOTE:** *See Group 1, Criterion 1 for situations under which occurrences affecting ecological or cultural resources would be reported under "Operational Emergencies."*

Appendix C - (Cont.)

GROUP 6 – CONTAMINATION/RADIATION CONTROL
Subgroup A – Loss of Control of Radioactive Materials **NOTE:** *Subgroup 6A criteria apply to bulk radioactive materials, sealed sources, and property containing radioactive materials, including discovered legacy radioactive materials, but do not apply to surface radioactive contamination on property. Surface radioactive contamination is addressed in Subgroup 6B.*
(1) H Identification of radioactive material offsite due to DOE operations/activities that exceeds applicable DOE limits (pursuant to DOE O 458.1 Chg. 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13).
(2) H Loss or unexpected discovery of radioactive material that exceeds 100 times the values in 10 CFR Part 835, *Occupational Radiation Protection*, Appendix E (excluding consumer products such as smoke detectors, if they are handled in accordance with manufacturer's instructions), or loss of accountability of such material for more than 24 hours. The 24-hour time period begins when the loss of accountability is discovered and must include one business day. **NOTE:** *CHPRC-00073, CHPRC Radiological Control Manual, Appendix 4A contains guidance about reporting values under this criterion.*
(3) L Loss or unexpected discovery of radioactive material which exceeds 1 times and no greater than 100 times the values in 10 CFR Part 835, Appendix E (excluding consumer products such as smoke detectors, if they are handled in accordance with manufacturer's instructions) or loss of accountability of such material for more than 24 hours. The 24-hour time period begins when the loss of accountability is discovered and must include one business day. **NOTE:** • *Legacy radioactive material discovered through a routine radiological monitoring program, compliant with 10 CFR 835 may be summarized in a single Occurrence report, for example, on a quarterly basis. Each instance of legacy radioactive material must be identified in the report and contain the details required for reporting in accordance with this Order.* • *CHPRC-00073, Appendix 4A contains guidance about reporting values under this criterion.*

Appendix C - (Cont.)

Subgroup B – Spread of Radioactive Contamination
(1) H Identification of offsite radioactive contamination due to DOE operations/activities that exceeds applicable DOE approved authorized limits (pursuant to DOE O 458.1 Chg. 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13) or, if there are none, the total contamination values in 10 CFR Part 835, Appendix D. **NOTE:** *Release or clearance of property containing or potentially containing residual radioactive material is subject to requirements in DOE O 458.1 Chg 3, Compliance with 10 CFR Part 835, Appendix D values does not necessarily satisfy the requirements in DOE O 458.1 Chg 3.* *CHPRC-00073, Table 2-2 (10 CFR Part 835, Appendix D) and Table 4-1 (DOE O 458.1) contains reporting values.*
(2) H Identification of onsite radioactive contamination greater than 100 times the total contamination values in 10 CFR Part 835 Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted, controlled and monitored for contamination, areas controlled in accordance with10 CFR Section 835.1102(c), and, per Section 835.604(a), any non-posted area that is under the continual observation and control of an individual knowledgeable of and empowered to implement required access and exposure control measures. For tritium, the reporting threshold is 100 times the removable contamination values in 10 CFR Part 835, Appendix D. **NOTE:** • *This does not apply to surface contamination from residual radioactive material meeting applicable DOE-approved authorized limits.* • *This does not apply to legacy radioactive contamination that is to be reported under a separate criterion below.* • *The exclusion from reporting contamination in a Radiological Buffer Area applies only when the area has been established for Contamination Area, High Contamination Area, or Airborne Radioactivity Area and its exit requirements have adopted guidance from Article 338.2 of DOE-STD-1098-2008.* • *The discovery of radioactive contamination from a past DOE/NNSA operation that may have caused, is causing, or may reasonably be expected to cause uncontrolled personnel exposure exceeding protective action criteria may be reportable as an Operational Emergency under Group 1, Criterion 1.* • *CHPRC-00073, Table 2-2 contains reporting values.*
(3) L Identification of on-site radioactive contamination greater than 10 times and no greater than 100 times the total contamination values in 10 CFR Part 835, Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted, controlled and monitored for contamination, areas controlled in accordance with 10 CFR Section 835.1102(c), and, per Section 835.604(a), any non-posted area that is under the continual observation and control of an individual knowledgeable of and empowered to implement required access and exposure control measures. For tritium, the reporting threshold is 10 times the removable contamination values in 10 CFR Part 835, Appendix D.

Appendix C - (Cont.)

NOTE:

- *This does not apply to contamination from residual radioactive material meeting applicable DOE-approved authorized limits.*
- *This does not apply to legacy radioactive contamination that is to be reported under a separate criterion below.*
- *The exclusion from reporting contamination in a Radiological Buffer Area applies only when the area has been established for a Contamination Area, High Contamination Area, or Airborne Radioactivity Area and its exit requirements have adopted guidance from Article 338.2 of DOE-STD-1098-2008. (Article 337.2 of CHPRC-00073).*
- *This reporting criterion does not apply to packages monitored in accordance with 10 CFR Section 835.405 that meet Department of Transportation (DOT) contamination limits specified in 49 CFR Section 173.433(a).*
- *CHPRC-00073, Table 2-2 contains reporting values*

(4) I Identification of on-site legacy radioactive contamination greater than 10 times the total contamination values in 10 CFR Part 835 Appendix D, exclusive of footnote 3 to Appendix D, and that is found outside of the following locations: areas routinely posted, controlled and monitored for contamination, and areas controlled in accordance with 10 CFR Section 835.1102(c), and per Section 835.604(a), any non-posted area that is under the continual observation and control of an individual empowered to implement access and exposure control measures. For tritium, the reporting threshold is 10 times the removable contamination values in 10 CFR Part 835, Appendix D.

NOTE:

- *Legacy contamination is defined as contamination not attributable to current operations.*
- *This does not apply to contamination from residual radioactive material meeting applicable DOE-approved authorized limits.*
- *Legacy contamination identified through a routine radiological monitoring program, compliant with 10 CFR 835 may be summarized in a single occurrence report, for example, on a quarterly basis. Each instance of legacy contamination must be identified in the report and contain the details required for reporting in accordance with this Order.*
- *CHPRC-00073, Table 2-2 contains reporting values*
- *Legacy biological contamination occurrences categorized under this criteria are submitted to ORPS by the MSC on a quarterly Short Form occurrence report. The final decision on what constitutes a legacy biological contamination occurrence, for the purpose of the quarterly report, rests with the IBC Program Manager, or delegate. If the condition or concern is determined to meet the criteria for legacy biological contamination reporting, the MSC IBC Program Manager will perform all ORPS reporting functions. Section 3.4.1, steps 11 and 12, contain direction on categorizing these types of events.*

Appendix C - (Cont.)

Subgroup C – Radiation Exposure **NOTE:** *For all of subgroup C, reportability should be determined promptly following an event, using field indicators when dosimetry results are not available. Quantitative dose estimates should only be reported using established dosimetry, dose assessment, and modeling processes. Resulting confirmed dose estimates may overturn initial reportability determinations.*	
(1) H	Determination of a dose that exceeds the limits specified in 10 CFR Part 835, "Occupational Radiation Protection," Subpart C, "Standards for Internal and External Exposure," or in DOE O 458.1 Chg 3, Radiation Protection of the Public and the Environment, dated 1-15-13, paragraph 4.b(1)(a) [paragraph 2.b(1)(a) of the CRD], "Public Dose Limit".
(2) H	Failure to provide the required monitoring for an exposure estimated to exceed the values for providing personnel dosimeters and bioassays as stated in 10 CFR Section 835.402(a) or 10 CFR Section 835.402(c).
(3) L	Determination of a single occupational dose, attributable to an identified event that exceeds an expected dose by: (1) 500 mrem Committed Effective Dose (CED), or (2) 100-mrem effective dose due to external exposure.
(4) L	A radiological release that exceeds any limit contained in paragraphs 4.f.(2), 4.f.(5), 4.g.(4), 4.g.(5)(a), 4.g.(7), 4.g.(8)(a)4 or 4.i.(1) [and paragraphs 2.f.(2), 2.f.(5), 2.g.(4), 2.g.(5)(a), 2.g.(7), 2.g.(8)(a)(4) or 2.i.(1) of the CRD] of DOE O 458.1 Chg 3, Radiation Protection of the Public and the Environment, dated 1-15-13 or exceeds the 40 CFR Section 61.92 requirements.
Subgroup D – Personnel Contamination	
NOTE: *Personnel contamination occurrences will be reported in 100cm^2 units.*	
(1) H	Any occurrence requiring offsite medical assistance for contaminated personnel, including transporting a person with personnel or clothing contamination due to DOE operations/activities that exceeds 1 times the total contamination values in 10 CFR 835, Appendix D to an offsite medical facility or bringing offsite medical personnel onsite to perform treatment or decontamination.
(2) H	Identification of offsite personnel or clothing contamination due to DOE operations/activities that exceeds 1 times the total contamination values in 10 CFR Part 835, Appendix D. For tritium, the reporting threshold is 1 times the removable contamination value found in 10 CFR Part 835, Appendix D. **NOTE:** *CHPRC-00073, Table 2-2, contains reporting values.*
(3) L	Identification of onsite personnel or clothing contamination (excluding anti-contamination clothing provided by the site for radiological protection) that exceeds 10 times the total contamination values identified in 10 CFR Part 835, Appendix D. The contamination level must be based on direct measurement and not averaged over any area. This criterion does not apply to tritium contamination. **NOTE:** *CHPRC-00073, Table 2-2, contains reporting values.*

Appendix C - (Cont.)

GROUP 7 – NUCLEAR EXPLOSIVE SAFETY

NOTE: *This criteria group does not apply to CHPRC facilities, and is not included in this procedure.*

GROUP 8 – PACKAGING AND TRANSPORTATION

NOTE*: When considering categorization of an occurrence in this section, PRC-PRO-HR-042 should be reviewed to determine if a Fitness for Duty evaluation is required. Timeliness is a factor in this decision.*

- The CHPRC Transportation Compliance Officer (373-9594) can provide guidance for categorizing under the following criteria.
- For categorization under this criteria, "In Transit" shipments (i.e., outside of a facility boundary) shall be reported by the shipper of record. Events under this criteria that occur within a facility boundary are the responsibility of the facility prime contractor. "In Transit" shipments that utilize a federal driver shall be reported by the DOE prime contractor associated with the shipment.

(1) H Any off-site transportation incident involving hazardous materials that would require immediate notice pursuant to 49 CFR Section 171.15(b).

NOTE: *Any occurrence involving an offsite DOE/NNSA shipment containing hazardous materials that causes the initial responders to initiate protective actions at locations beyond the immediate/affected area should also be reported as an Operational Emergency under Group 1. Group 8 will be a secondary reporting criterion.*

(2) L Any deviation that would require a written report to the Nuclear Regulatory Commission (per 10 CFR Section 71.95) or to DOE HCO/NNSA CO (per CRD O 460.1C or CRD O 461.1C), namely:

a) Instance in which there is a significant reduction in the effectiveness (as defined by the certificate holder) of any approved fissile or Type B packaging during use
b) Discovery of a defect with safety significance (as determined by the certificate holder) in a fissile or Type B packaging, after first use (by any shipper)
c) Instance in which the conditions of approval in the Certificate of Compliance (or equivalent) were not performed in making a shipment

(3) L Any offsite "accident" (per 49 CFR Section 390.5) involving a motor vehicle carrying DOE hazardous materials operating on a highway in interstate or intrastate commerce.

(4) L Any transportation activity for onsite transfer resulting in onsite release of radioactive materials, hazardous materials, hazardous substances, hazardous waste, or marine pollutants that is above permitted levels and exceeds the Reportable Quantities (RQ) specified in 40 CFR Part 302 or 40 CFR Part 355.

Appendix C - (Cont.)

(5) I	Any offsite transportation incident involving DOE hazardous materials that requires submission of a Hazardous Materials Incident Report on DOT Form F 5800.1 pursuant to 49 CFR Section 171.16. **NOTE**: *For reporting under this criterion, the occurrence report belongs to the party that initiated the shipment (i.e., the occurrence report belongs to the shipper of record). Exemption from this criterion applies when the shipper is external to DOE.*
(6) I	Any offsite transportation of hazardous material, including radioactive material, whose quantity or nature (e.g., physical or chemical composition) is such that it is noncompliant with the receiving facilities Waste Acceptance Criteria (WAC) or other receipt requirements and the receiving organization's operations were significantly impacted or disrupted (e.g., material cannot be accepted, possessed, or stored at that facility; must be treated or repackaged to be accepted; or exceeds a license or permit limit). (USQ)
(7) I	Violation of applicable Hazardous Materials Regulations requirements for activities listed in 49 CFR Section 171.1(b) performed during the preparation of offsite hazardous materials shipments and discovered during shipment in commerce or at the receiving site. **NOTE:** *Issues discovered and corrected prior to truck departure are not reportable under this criterion.*
(8) I	Any onsite transfer of hazardous material, including radioactive material, whose quantity or nature (e.g., physical or chemical composition) is such that it is noncompliant with the receiving facilities Waste Acceptance Criteria (WAC) or other receipt requirements and the receiving organization's operations were significantly impacted or disrupted (e.g., material cannot be accepted, possessed, or stored at that facility; must be treated or repackaged to be accepted; or exceeds a license or permit limit. (USQ)
(9) I	Unauthorized deviation from DOE instructions to commercial motor carriers for DOE hazardous materials shipments (e.g., designated route, prohibited route, designated time of the day).
GROUP 9 – NONCOMPLIANCE NOTIFICATIONS	
(1) I	Any written notification from an outside regulatory agency that a site/facility is considered to be in noncompliance with a schedule or requirement. **NOTE:** • *This criterion is not applicable to DOE Office of Enforcement actions. Formal notification must be received by CHPRC or a subcontractor in writing.* • *Reference PRC-GD-EM-40409 for guidance on reporting, required report content and CRRS data entry.*

Appendix C - (Cont.)

GROUP 10 – MANAGEMENT CONCERNS/ISSUES **NOTE:** *When considering categorization of an occurrence in this section, PRC-PRO-HR-042 should be reviewed to determine if a Fitness for Duty evaluation is required. Timeliness is a factor in this decision.*
(1) I An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern for that facility or other facilities or activities in the DOE complex. **NOTE:** *Recurring issues identified by analysis must be categorized and reported collectively as a Group 10(1) Management Concern/Issues occurrence no matter what the previous individual categorizations were, even if they were previously non-reportable.*
(2) I A near miss to an injury, where something physically happened that was unexpected or unintended **AND** where no barrier prevented an event from having a reportable consequence (i.e., happenstance was the main reason the event did not result in a reportable injury). **NOTE**: *Near miss events shall be processed in accordance with requirements of the corresponding near miss reporting criteria (e.g., Group 2A, Occupational Injuries and Exposures).*
(3) I Any occurrence that may result in a significant concern by affected state, tribal, or local officials, press, or general population; that could damage the credibility of the Department; or that may result in inquiries to Headquarters.

Appendix D - Occurrence Reporting Model

Report Level	***Timelines[1]***	**RL-FR Notification**	***Causal Evaluation/Final Report Submission***	***Report Approvals***	***Corrective Action Effectiveness Review***
Hazardous Material OE ***Base Program OE*** ***Both***	*Cat: ASAP (Alert, Site Area, General)* *Cat: ASAP (15 min)* *WN: COB next business day not to exceed 80 hrs.* *UR: As needed* *Final Report: 45 days*	NLT 30 min.	*Root Cause Determined*	*RL-FR & DOE Program Manager (PM) Approval*	*Document Independent Verification & Assessment of Effectiveness to Prevent Recurrence*
High (H) Level Reportable Occurrence	*Cat: NLT 2 hrs.** *WN: COB 2 business days* *UR: As needed* *Final Report: 45 days*	*As soon as practical NLT 2 hours*	*Root Cause unless waived by FR, then Apparent Cause*	*RL-FR Approval*	*Document Effectiveness Review*
Low (L) Level Reportable Occurrence	*Cat: NLT 2 hrs.** *WN: 10 business days* *Final Update Report: 45 days* *UR: As needed*	*As soon as practical NLT 2 hours*	*Apparent Cause – See NOTES for Group 2A (4)*	*RL-FR Approval*	*Optional*
Informational (I) Reportable Occurrence	*Cat: NLT 2 hrs.** *WN/Final: 10 business days* *Final Update Report: 45 days if Causal Evaluation is required* *UR: As needed*	*As soon as practical NLT 2 hours*	*None Required – See NOTES for Group 2 B(3), 10 (1) and 10(2)*	*See NOTES **	*Optional*
NOTES:	***Occupational Injury and Exposure occurrences categorized under Group 2 A (4), Recurring issues categorized under Group 10 (1), and Near Miss events categorized under Group 10(2) require a Root Cause Evaluation unless waived by the FR on a case by case basis, and requires RL-FR approval.*** ***Group 2 B (3) "Fire in a Nuclear Facility" requires an Apparent Cause Evaluation and RL-FR approval.*** *** Certain events may require additional time beyond 2 hours to categorize. See section 3.4.1 step 9.***				

Cat: Categorization Time from Discovery Date & Time
WN: Written Notification from Categorization Date & Time
UR: Update Report
Final Report from Categorization Date & Time
NLT: No Later Than
COB: Close of Business
OE: Operating Experience
RL-FR - DOE RL Facility Representative

Appendix E - Guidance on Reporting Suspect/Counterfeit and Defective Items or Material

The following examples are provided as guidance for reporting under Group 4, Facility Status, Subgroup C, Suspect/Counterfeit and Defective Items or Materials. These are examples only and are not all-inclusive of issues that may fall under these criteria.

NOTE: *Regardless of ORPS reporting, all S/CI must be controlled, a NCR written/resolved, and the item reported to the DOE Inspector General in accordance with CRD O 414.1D, Quality Assurance.*

Group 4(1) L: Discovery of any suspect or counterfeit item or material found in a SC or SSC.

- This criteria would be applicable if the item was installed or identified as a spare in a warehouse.

Group 4(2) I: Discovery of any other suspect or counterfeit item or material (i.e., not found in a SC or SS SSC) that is found in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety.

- This criteria **would be** used in the following applications:
    - S/CI fastener found in an office chair
    - S/CI components installed in permanently affixed or mobile systems and equipment
    - S/CI item found in a tool crib or shop ready spares bin
    - S/CI fastener found in proximity to an ongoing maintenance/construction job

The following are examples where an occurrence report **would not** be required:

- S/CI components identified in a structural member or building equipment identified during demolition of the structure.
- S/CI components identified in an area separate from where the item would actually be used such as excess material areas, recycling lugers, or waste dumpsters.
- S/CI components identified during vendor visits to an offsite manufacturer or supplier
- S/CI item identified during receipt inspection.

Appendix F - Recurring Event Worksheet

DOE CRD O 232.2A requires ongoing analyses on all reportable and non-reportable occurrences and events to be performed to look for trends, determine if corrective actions are effective and conditions/occurrences are recurring. *Newly discovered events, conditions, and increasing trends must be reviewed for potential categorization as a recurring event. Areas of stable performance should also be reviewed periodically to determine if the current level represents an acceptable risk, as determined by management. The analysis must include both reportable AND non-reportable events and conditions (Reference PRC-PRO-QA-24741, Performance Analysis Process).*

The criterion below are useful in determining if an emerging or established trend should be identified as recurring and reported as a Group 10 (1) Management Concern. Each question should be followed with discussion supporting the answer. This worksheet can also be used to communicate the logic associated with that decision.

Ultimately, the determination of whether a recurring event is warranted is a management decision. The answers in this worksheet can be used to present the logic of that determination to management and to external customers (DOE).

1. The set of events or conditions are similar in nature. This may be based on common characteristics, (e.g., similar causes, reporting criteria, etc.).

   AND

2. a. There is a worsening trend.

   OR

   b. The rate of events or conditions or level of performance is stable but has been determined to be at an unacceptable level.

If the answer to any of the above questions is no, then no Recurring Event/Condition report is warranted. If the answer to 1 ***AND*** *2.a* ***OR*** *2.b are true,* ***then*** *continue to question 3.*
If any part of question 3 is true, ***then consider submitting*** *an occurrence report under group 10 (1) Management Concern.*

3. a. The events or conditions represent:

   i. An unacceptable near term risk of a serious event/consequence (e.g., employee injury, environmental hazard, equipment damage) **OR**
   ii. An increased probability that a more significant event or consequence will occur (e.g., nuclear safety violation, employee injury, environmental hazard, equipment damage).

   OR

   b. Collectively the events or conditions may indicate a systemic or programmatic issue that represents:

   1) An unacceptable risk of a serious event/consequence, **OR**
   2) An increased probability that a more significant event or consequence will occur, **OR**
   3) An unacceptable frequency that has a serious impact on facility operations, budget, or schedule.

Appendix F – (Cont.)

OR

c. The events or conditions are indicative of a failure of compensatory, corrective, or preventative actions from previous events that, if left uncorrected, could lead to an additional similar or more significant event.

Appendix G - Occurrence Reporting Definitions

1. ABNORMAL EVENT. An event that does not meet the alert, site area, or general emergency classification levels, but is significant enough to generate the immediate interest of offsite agencies, the media, or generate public concern. Abnormal Event is a Hanford term used to decide when timely notification of offsite agencies is required.

2. APPARENT CAUSE. The most probable cause(s) that explains why the event happened, that can reasonably be identified, that local or facility management has the control to fix, and for which effective recommendations for corrective action(s) to remedy the problem can be generated.

3. BARRIER. A physical or administrative control used to provide separation between a person and a hazard. Common types of barriers include equipment (including personal protective equipment), administrative procedures and processes, supervision/management, warning devices, and physical objects.

4. BASE PROGRAM OPERATIONAL EMERGENCIES. Major unplanned, significant events or conditions that involve or affect facilities/activities by causing or having the potential to cause serious health and safety or environmental impacts; and require time urgent response from outside the immediate affected site or facility. Base Program Operational Emergencies may involve degradation of personnel health or safety, the environment, security and safeguards, or the release or loss of control of hazardous materials.

5. BUSINESS DAY. For occurrence reporting purposes, the normal administrative day of the reporting organization (e.g., Monday through Thursday, 0600 to 1630 local time). Example: A Notification Report for a Significance Category 1 occurrence must be submitted before Close of Business (COB) the next business weekday (not to exceed 80 hours) after the occurrence is categorized (1630). Example: A Notification Report for a High (H) Level occurrence is due no later than 2 business days from event categorization; therefore a High Level occurrence categorized on Tuesday at 1400 hours would be due Thursday at 1630 hours, and a High Level occurrence categorized on Thursday at 1400 hours would be due Tuesday at 1630 hours.

6. CONDITION. Any as-found state, whether or not resulting from an event, that may have adverse safety, health, quality assurance, operational or environmental implications. A condition is usually programmatic in nature; for example, errors in analysis or calculation; management process are all conditions.

7. CRITICALITY. Condition in which a nuclear fission chain reaction becomes self-sustaining.

8. DEFECTIVE ITEMS. A defective item or material is any item or material that does not meet the commercial standard or procurement requirements as defined by catalogues, proposals, procurement specifications, design specifications, testing requirements, contracts, or the like. It does not include parts or services that fail or are otherwise found to be inadequate because of random failures or errors within the accepted reliability level.

Appendix G – (Cont.)

9. DISCHARGE. Includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes discharges in compliance with a permit under Chapter 402 of the Clean Water Act (CWA, Public Law 92-500, *Federal Water Pollution Control Act [commonly referred to as the Clean Water Act]*); discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under Chapter 402 of the CWA and subject to a condition in such permit; or continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under Chapter 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems.

10. DISCOVERY DATE AND TIME. The discovery date and time is when the facility staff discovered or became aware of the event or condition. Discovery date is NOT the date and time when the event or condition is determined to be reportable. The facility staff are those personnel assigned to the facility and cognizant of the area in which the event or condition is identified.

11. DISRUPTION OF NORMAL OPERATIONS. The point at which alarms, emergency response, evacuation, or shelter in place results in a suspension of an activity or activities for any length of time.

12. ELECTRICALLY SAFE WORK CONDITION. A state in which the conductor or circuit part to be worked on or near has been disconnected from energized parts, locked/tagged in accordance with established standards, tested to ensure the absence of voltage, and grounded if determined necessary.

13. EQUIVALENT DOSE.

    Committed Equivalent Dose ($H_{T,50}$). Refer to 10 CFR Section 835.2 or to DOE O 458.1 Chg 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13, Attachment 2 (Definitions).

    Committed Effective Dose (E_{50}). Refer to 10 CFR Section 835.2 or to DOE O 458.1 Chg 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13, Attachment 2 (Definitions).

    Effective Dose (E). Refer to 10 CFR Section 835.2 or to DOE O 458.1 Chg 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13, Attachment 2 (Definitions).

    Total Effective Dose (TED). Refer to 10 CFR Section 835.2 or to DOE O 458.1 Chg 3, *Radiation Protection of the Public and the Environment*, dated 1-15-13, Attachment 2 (Definitions).

14. EVENT. Something significant and real-time that happens (e.g., pipe break, valve failure, loss of power, environmental spill, earthquake, tornado, flood).

15. EXPLOSION. A sudden, rapid release of energy that produces potentially damaging pressures. Explosions can result from ignition events involving energetic materials, a pressurization event, or a chemical reaction.

Appendix G – (Cont.)

16. FACILITY. Any equipment, structure, system, process, or activity that fulfills a specific purpose. Examples include accelerators, storage areas, fusion research devices, nuclear reactors, production or processing plants, coal conversion plants, magnetohydrodynamic experiments, windmills, radioactive waste disposal systems and burial grounds, environmental restoration activities, testing laboratories, research laboratories, transportation activities, and accommodations for analytical examinations of irradiated and un-irradiated components.

17. FACILITY MANAGER. A federal (including government-owned, government-operated sites) or contractor individual, or designee, with direct line responsibility for operation of a facility or group of related facilities, including authority to direct physical changes to the facility. For purposes of occurrence reporting, a Facility Manager could also be responsible for a program or activity.

18. FACILITY REPRESENTATIVE. For each major facility or group of lesser facilities, an individual or designee assigned responsibility by the Head of Field Element/Operations Organization (including NNSA) for monitoring the performance of the facility and its operations. This individual should be the primary point of contact with the facility operating personnel and will be responsible to the appropriate Secretarial Officer/Deputy Administrator (NNSA) and Head of Field Element/Operations Organization for implementing the requirements of CRD O 232.2A.

19. HAZARDOUS ELECTRICAL ENERGY EXPOSURE. Within the Limited Approach Boundary (LAB) of an energized part not suitably guarded, isolated, or insulated. This includes de-energized parts for which a safe work condition has not been established, e.g., lockout/tagout.

20. HAZARDOUS MATERIAL OPERATIONAL EMERGENCY: An Operational Emergency that represents a specific threat to workers and the public due to the release or potential release of significant quantities of radiological and nonradiological hazardous materials. Hazardous Material Operational Emergencies are classified as either Alert, Site Area Emergency, or General Emergency, in order of increasing severity.

21. HAZARDOUS SUBSTANCE OR MATERIAL.

    a. Department of Energy - Hazardous Material. Any solid, liquid, or gaseous material that is chemically toxic, flammable, radioactive, or unstable upon prolonged storage, and that exists in quantities that could pose a threat to life, property, or the environment.

    d. Department of Transportation - Hazardous Materials (see 49 CFR Sections 171.8 and 172.101). A substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated.

    e. Comprehensive Environmental Response, Compensation and Liability Act Hazardous Substances (see 40 CFR Part 302).

Appendix G – (Cont.)

f. Occupational Safety and Health Administration (OSHA) Hazardous Chemical (see 29 CFR Section 1910.1000 and 29 CFR Section 1910.1200). Any chemical which is a physical or a health hazard.

g. Superfund Amendments and Reauthorization Act Title 3 Extremely Hazardous Substances (see 40 CFR Part 355). These are not defined but appear on lists in Appendix A, "Base Program Operational Emergency Criteria," and Appendix B, "Abnormal Event Category List," of 40 CFR Part 355.

22. IN-PATIENT HOSPITALIZATION. Admission to a hospital requiring at least one overnight stay. This would include admission for purposes of observation only.

23. ITEM. An all-inclusive term used in place of the following: appurtenance, sample, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, system, unit, or support systems, documented concepts, or data.

    When used in reference to nuclear material, a visible, single piece or container of nuclear material with a unique identification and known nuclear material mass.

24. LESSONS LEARNED. A "good work practice" or innovative approach that is identified and shared, or an adverse work practice or experience that is shared to prevent recurrence.

25. NOTIFICATION REPORT. The initial documented report, to DOE, of an event or condition that meets the reporting criteria defined in PRC-PRO-EM-060 (and DOE M 232.2A).

26. NUCLEAR FACILITY. A reactor or nonreactor nuclear facility where an activity is conducted for or on behalf of DOE and includes any related area, structure, facility, or activity to the extent necessary to ensure proper implementation of the requirements of 10 CFR Part 830.

27. OCCURRENCE. One or more (i.e., recurring) events or conditions that adversely affect, or may adversely affect, DOE (including NNSA) or contractor personnel, the public, property, the environment, or the DOE mission. Events or conditions meeting the criteria thresholds identified in PRC-PRO-EM-060 (or DOE O 232.2A) or determined to be recurring through performance analysis are occurrences.

28. OCCURRENCE REPORT. A documented evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications and to evaluate the actions being proposed or employed to correct the condition or to avoid recurrence.

29. OFFSITE. Property or location that is not DOE/NNSA or DOE/NNSA contractor owned, leased, or directly controlled.

30. OFFSITE TRANSPORTATION EVENT. Involves movement of materials that are considered to be in commerce, thus requiring compliance with Department of Transportation Hazardous Materials Regulations. (49 CFR Parts 171 – 18)

Appendix G – (Cont.)

31. OIL. Oil of any kind or in any form, including but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

32. ONSITE. Property or location that is DOE/NNSA or DOE/NNSA contractor owned, leased, or directly controlled by DOE, including NNSA.

33. ONSITE TRANSPORTATION EVENT. Involves movement of material not in commerce and subject to regulations in 10 CFR Part 830 or DOE onsite procedures and safety requirements.

34. OPERATIONAL EMERGENCY (as defined in DOE O 151.1D). Major unplanned or abnormal events or conditions that: involve or affect DOE/National Nuclear Security Administration (NNSA) facilities and activities by causing, or having the potential to cause, serious health and safety or environmental impacts; require resources from outside the immediate/affected area or local event scene to supplement the initial response; and require time-urgent notifications to initiate response activities at locations beyond the event scene. Operational emergencies are the most serious occurrences and require an increased alert status for onsite personnel and, in specified cases, for offsite authorities.

35. OPERATIONS. The general term to encompass the work activities accomplished by the facility or project. Examples include, but are not limited to, operating science and technology machines; operating equipment; construction, decontamination and decommissioning; dismantlement; environmental characterization and monitoring activities; waste handling; research and development; maintenance; and laboratory analysis activities. This can apply to facilities regardless of mode (shutdown, standby, operational) or state (construction, operational, deactivated, decommissioning).

36. PACKAGING AND TRANSPORTATION. Packaging and Transportation activities/functions include: (1) Packaging – Activities related to the design, manufacture, and qualification of packaging represented as qualified for use in the transportation of hazardous materials; (2) Pre-transportation functions; (3) Transportation functions (movement of hazardous materials and loading, unloading, and storage incidental to the movement); and (4) shipping in accordance with applicable international, Federal, state, local, and tribal laws, rules, and regulations governing materials transportation that are consistent with Federal regulations (e.g., 10 CFR Parts 830, 835 and 49 CFR Parts 171-180) and DOE Packaging and Transportation Directives (e.g., DOE Order 460.1D, Hazardous Materials Packaging and Transportation Safety, dated 12-20-16; DOE Order 460.2A, Departmental Materials Transportation and Packaging Management, dated 12-22-04; DOE Manual 460.2-1A, Radioactive material Transportation Practices Manual, dated 6-4-08; DOE Order 461.1C, Packaging and Transportation for Offsite Shipment of Materials of National Security Interest, dated 7-20-16; and 10 CFR Part 830, Nuclear Safety Management).

Appendix G – (Cont.)

37. PERFORMANCE DEGRADATION. Failure or degradation of a facility, process, system, or component that reduces the reliability of critical components of the facility whose loss or degradation prevents the system from performing its intended function. Performance degradation includes the absence of or deficiency with Design Features for which credit has been taken in the Documented Safety Analysis. Performance degradation does not include: (1) a burned out power indicator light on a piece of radiation monitoring equipment which does not prevent the equipment from detecting elevated radiation levels and alarming as designed; (2) a piece of equipment that is determined to be out of calibration on the conservative side (such as a low level alarm that alarms at a higher value than it should); or (3) the temporary loss of a component where redundant components are maintained operable or in operation and the authorization basis is not compromised.

38. PERSONNEL EXPOSURE. An incident of an individual's contact or encounter with a hazardous chemical, radiological, physical, biological, or energetic agent at one of the exchange boundaries of the individual (e.g., skin, respiratory system, eyes, ears, or digestive system). "Exposure" does not refer to a situation where personnel, protected by appropriate personal protective equipment, are subjected to an environment whose ambient conditions present a harmful level of any one, or combination of, the hazards.

39. POLLUTANT. Any material requiring a permit for release into the environment.

40. PRE-TRANSPORTATION FUNCTION. A function specified in the Hazardous Materials Regulations (HMR) that is required to assure the safe transportation of a hazardous material in commerce, including: materials classification, packaging, marking, labeling, shipping paper preparation, loading, blocking, bracing, segregating, securing, and placarding (49 CFR Section 171.8).

41. PRIMARY CONFINEMENT. Provides confinement of hazardous material to the vicinity of its processing. This confinement is typically provided by piping, tanks, glove boxes, encapsulating material, and the like, along with any off gas systems that control effluent from within the primary confinement.

42. RELEASE. Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type of receptacle containing substances in an unenclosed containment structure but does not include permitted containment structures.

43. ROOT CAUSE. The causal factor(s) that, if corrected, would prevent recurrence of the occurrence. It is the most basic cause that explains why the event happened, that can reasonably be identified, that senior management has the control to fix, and for which effective recommendations for corrective actions to remedy the problem, prevent specific recurrence of the problem, and preclude occurrence of similar problems can be generated, if necessary. This is typically one level further in the analysis beyond the Apparent Cause(s) (i.e., one level beyond the Level C node of the Corrective Action Tree.

Appendix G – (Cont.)

44. SAFETY CLASS STRUCTURES, SYSTEMS, OR COMPONENTS (SAFETY CLASS SSCs). The structures, systems, or components, including portions of process systems, whose preventive or mitigative function is necessary to limit radioactive hazardous material exposure to the public, as determined from safety analyses. (10 CFR Section 830.3).

45. SAFETY SIGNIFICANT STRUCTURES, SYSTEMS, OR COMPONENTS (SAFETY SIGNIFICANT SSCs). The structures, systems, or components that are not designated as safety class structures, systems, or components, but whose preventive or mitigative function is a major contributor to defense in depth and/or worker safety as determined from safety analyses. (10 CFR Section 830.3)

46. SECRETARIAL OFFICER. Secretarial Officers are the Secretary, Deputy Secretary, and Under Secretaries; and the Assistant Secretaries and Staff Office Directors reporting to the Secretary either directly or through the Deputy Secretary or Under Secretary. The following designations are also used to identify Secretarial Officers with specific responsibilities in various areas. (1) A Program Secretarial Officer (PSO) is an Assistant Secretary, Office Director, or NNSA Deputy Administrator. In the context of field operations, a PSO funds work at a particular site, facility, or laboratory and is a "customer" of the field office. (2) A Lead Program Secretarial Officer (LPSO) is a PSO to whom designated field offices directly report and who has overall landlord responsibilities for the assigned direct reporting elements. (3) A Cognizant Secretarial Officer (CSO) is a term used in the context of field operations to designate a PSO, not the LPSO, who is responsible for a laboratory or bounded set of facilities within a field office's jurisdiction.

47. SUBCONTRACTOR. A subcontractor is defined as a contractor doing a discrete scope of work under the direction and responsibility of the Prime Contractor. This does *not* include personnel filling a position with the CHPRC as augmented staff or from work performed by CHPRC pre-select subcontractors.

48. SUSPECT/COUNTERFEIT ITEMS (S/CIs). An item which is suspect when inspection or testing indicates that it may not conform to established Government or industry-accepted specifications or national consensus standards or whose documentation, appearance, performance, material, or other characteristics may have been misrepresented by the vendor, supplier, distributor, or manufacturer. A counterfeit item is one that has been copied or substituted without legal right or authority or whose material, performance, or characteristics have been misrepresented by the vendor, supplier, distributor, or manufacturer.

49. TECHNICAL SAFETY REQUIREMENTS (TSRS). The limits, controls, and related actions that establish the specific parameters and requisite actions for the safe operation of a nuclear facility and include, as appropriate for the work and the hazards identified in the documented safety analysis for the facility: safety limits, operating limits, surveillance requirements, administrative and management controls, use and application provisions, and design features, as well as a bases appendix. (10 CFR Section 830.3)

Appendix G – (Cont.)

50. UNREVIEWED SAFETY QUESTION (USQ). A situation where (1) the probability of the occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the documented safety analysis could be increased, (2) the possibility of an accident or malfunction of a different type than any evaluated previously in the DSA could be created, (3) a margin of safety could be reduced, or (4) the DSA may not be bounding or may be otherwise inadequate. (10 CFR Section 830.3)

51. WRITTEN NOTIFICATION. The initial documented report to the Department of Energy of an event or condition that meets the reporting criteria defined in this Order.