

TEMPORARY CHANGE REQUEST

TCR NO. TCR-GEN-006,R11-001

(e.g., TCR-ENG-021,R0-001)

The Temporary Change Request (TCR) Form is to be used to process urgent or minor changes for PPPL Policies, Organization/Mission Statements and Procedures. The TCR should be used when changes are:
1) urgent, and can not wait the 2-4 week period for Department Head review/comment, or
2) minor, and do not warrant Department Head review.

Person Requesting Change: Fran White Phone Ext: 2899

Department Name: Site Protection

Document Number: GEN-006 Revision No.: 11

Document Title: Investigation and Follow-up of Adverse Events and Conditions

Reason for change:

Update names and phone numbers for several personnel on Attachment 2.

Change description: (Summarize and attach changed pages, with changes clearly indicated)

Update Associate Director for Engineering and Infrastructure, Deputy Director for Operations, Public Information Officer and ORPS Facility Manager names and phone numbers.

1. Does this TCR significantly alter the intent or scope of the document? YES: NO:

2. Does this TCR significantly impact ES&H? YES: NO:

If 1 or 2 is YES, Explain why the changes should not be routed for Department Head review:

Fran White
Department/Division Head Approval

4/13/2016
Date

John DeLooper
Head, Best Practices and Outreach/designee

4/14/2016
Date

Release/Effective date of this TCR: 4/15/2016

Incorporate this TCR into next revision of this document? YES: NO:

Subject: Investigation and Follow-up of Adverse Events and Conditions (including Occurrence Reporting and Price Anderson Amendment Act Reviews)	Effective Date: September 18, 2015	Initiated by: Head, Site Protection Division
	Supersedes: Rev 10 October 30, 2012	Approved: Director

TCR-GEN-006,R11-001

Management System (primary): 10.00 Safeguards and Security
Management System Owner: Head, Best Practices and External Affairs
Management Processes: 10.01 Emergency Planning
 10.02 Emergency Management
Process Owner: Head, Best Practices and External Affairs
Subject Matter Expert (SME): Head, Site Protection

APPLICABILITY

This procedure applies to all activities conducted at PPPL.

INTRODUCTION

This procedure is used to report, investigate, analyze and develop corrective actions for adverse events and conditions (see Attachment 1) that occur as a result of Laboratory operations.

PPPL employees, subcontractors, visitors or other individuals are responsible for identifying issues that may require correction, improvement, or management attention; and for reporting any adverse event or condition.

The Laboratory conducts investigations and causal analysis of adverse events and conditions to: prevent recurrence; improve safety, health, and environmental protection systems; and promote efficiency, compliance, and effectiveness of Laboratory operations. The depth and formality (“graded approach”) of investigations and analysis is based on the categorization of the severity or potential severity of an event or condition. Individuals who lead investigations or perform formal root cause analyses or apparent cause analyses must be appropriately trained. Quality Assurance provides this training.

Notifications required by this procedure are subordinate to the stabilization of the event, communications and notifications directly related to the control of the event, and support of the National Incident Management System Incident Command System requirements [i.e., calls requesting mutual aid emergency responder assistance, recalling personnel, and activation of the Emergency Operations Center].

REFERENCE DOCUMENTS

- 10 CFR 820, Appendix A Code of Federal Regulations, General Statement of Enforcement Policy
- 10 CFR 835 Nuclear Safety Management
- 10 CFR 851 Worker Safety and Health Program
- 15CFR764.5 Export Administration Regulations, Voluntary Self Disclosure
- DOE Order 151.1C Comprehensive Emergency Management System
- DOE Order 210.2A DOE Corporate Operating Experience Program
- DOE Order 225.1B Accident Investigations
- DOE Order 231.1B Environment, Safety and Health Reporting
- DOE Order 232.2 Occurrence Reporting and Processing of Operations Information
- DOE Order 458.1 Radiation Protection of the Public and the Environment
- P-012 Stop Work Authority
- P-083 Lessons Learned and Their Promulgation
- P-101 Export Control
- GEN-011 ES&H Deficiency Reporting
- ESH-013 Non-Emergency Environmental Release-Notification and Reporting
- QA-002 PPPL Audit Program
- QA-005 Control of Nonconformances
- QA-012 Corrective Action Request
- QA-017 PPPL Tracking and Trending System
- QA-019 Root Cause Analysis/Extent of Condition Analysis
- QA-020 Identifying and Dispositioning Suspect Parts

DEFINITIONS

Apparent Cause	The most probable cause(s) that explains why the event or condition happened, that can reasonably be identified, that local or facility management has the control to fix, and for which effective recommendations for corrective actions(s) to remedy the problem can be generated, if necessary. Copy of the DOE O 232.2 ORPS Causal Analysis Tree is available at: http://www-local.pppl.gov/qa/Forms/o232.2%20Causal%20Analysis%20Tree%20Table.pdf .
Condition	Any as found state, whether or not resulting from an event, that may have adverse safety, health, quality assurance, security, operational, or environmental implications. A condition is usually programmatic in nature; for example, errors in analysis or calculation; anomalies associated with design or performance; or items indicating a weakness in the management process are all conditions (see Attachment 1).
Discovery Date and Time	Time when an ORPS Facility Manager becomes aware of a condition or event.
Event	Something significant and real-time that happens (e.g., pipe break, valve failure, loss of power, environmental spill, earthquake, tornado, flood, injury) (see Attachment 1).
Facility	Any equipment, structure, system, process, or activity that fulfills a specific purpose.
Noncompliance Tracking System (NTS)	DOE supported centralized database utilized for reporting of significant events of a nuclear, radiological or worker safety & health nature (violations of 10CFR820, 10CFR835, and 10CFR851 rules)
Occurrence	Events or conditions that adversely affect (or may affect), DOE or contractor personnel, the public, property, the environment, or the DOE mission. Events or conditions meeting the criteria in this procedure or DOE O 232.2, or via performance analysis are occurrences.
Occurrence Report	Documented evaluation of an occurrence 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 event or condition and/or to avoid recurrence.
ORPS	Occurrence Reporting and Processing System (ORPS). A DOE system used to report accidents, injuries, illnesses, etc.
ORPS Facility Managers (ORPS FM)	PPPL individuals assigned direct line responsibility of providing response to events or conditions, which have the potential to have ORPS or PAAA implications. The ORPS FM has the authority to direct changes, recall and assign personnel, and/or commit resources to stabilize or mitigate the event or condition and to implement corrective actions.
Price-Anderson Amendment Act (PAAA)	The statute, which indemnifies DOE contractors, subcontractors and suppliers and subjects them to potential civil and criminal penalties for violations of DOE rules, regulations and compliance orders relating to nuclear safety requirements (defined in 10CFR820, 10CFR835, and 10CFR851). Under the PAAA, DOE may undertake enforcement actions against contractors who violate nuclear safety requirements. Enforcement sanctions are intended to minimize the risk to workers and the public, thus minimizing the risk of indemnification.
PAAA Coordinator	The Head, Site Protection is responsible for implementation of PPPL's Enforcement (i.e., PAAA and Worker Safety & Health Enforcement) Program.
<u>PAA Review Committee (PAARC)</u>	A committee responsible for determining if potential PAAA or worker safety & health non-compliances are significant and therefore reportable via NTS. The Committee, established by the PAAA Coordinator with the approval of the Deputy Director for Operations, currently includes: PAAA Coordinator; Head, Best Practices and Outreach; Associate Director for Engineering and Infrastructure; Head ES&H; Head Quality Assurance; Head Electrical Engineering; and the Head, Health Physics and Nuclear MC&A. Additional staff can be requested based upon the specific event.

PROCEDURE

This procedure is segmented into the following sections:

- A. Reporting Adverse Events and Conditions (Recognition and Immediate Response)
- B. Evaluation of Adverse Events and Conditions (Determination of Severity; Investigation; Extent of Condition; Human Factors Review)
- C. Conduct of Formal Investigation for Significant Adverse Event/ Condition
- D. Recovery from Adverse Event/ Condition
- E. Evaluation of ORPS or Safety and Health Event or Condition Against Price Anderson Amendments Act
- F. Data Entry and Tracking of ORPS and NTS Reports In the DOE Database
- G. Performance Analysis and Lessons Learned
- H. Training
- I. Equipment

A. Reporting Adverse Events and Conditions (Recognition and Immediate Response)

<u>Responsibility</u>	<u>Action</u>
Cognizant Individual or Supervisor; ORPS Facility Manger; Head ES&H; Occupational Medicine	<ol style="list-style-type: none"> 1. Identifies that an adverse event or condition has occurred (examples provided in Attachment 1). 2. Notifies Site Protection Division (SPD), Emergency Services Communications Center (ESCC), via extension 3333 for an emergency, or via extension 2536 for all other events or conditions.
Communications Officer (ESCC)	<ol style="list-style-type: none"> 3. Receives notification of event and/or condition. 4. Determines if an emergency and if so, dispatches Emergency Services Unit [ESU], as appropriate. 5. Notifies ESU Captain of event/condition report and determines whether the ORPS Facility Manager (ORPS FM) should be contacted immediately or whether notification can be via email (minor event – e.g., first aid case). If formal notification is required, contacts ORPS FM (Attachment 2 provides sample key contact numbers). If ORPS FM does not respond within 15 minutes, contacts alternate ORPS FM. If alternate ORPS FM does not respond in 15 minutes, contacts another ORPS FM. (Note: The ORPS Facility Manager duty schedule is updated frequently and distributed to ORPSFacilityManagers@pppl.gov.)

Key contact numbers may be found at the following link for authorized access users only:
[https:// sites.google.com/ a/ pppl.gov/ ero-spd-contacts/ home/ emergency-response-organization-contacts](https://sites.google.com/a/pppl.gov/ero-spd-contacts/home/emergency-response-organization-contacts) TCR-GEN-006,R11-001

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| ESU Captain | <ul style="list-style-type: none"> 6. Implements Incident Command System for emergencies. Mitigates event. 7. Determines in consultation with ORPS FM whether to activate the Emergency Operations Center (EOC). If so, activates through ESCC and transfers command when EOC is activated and ready for transfer. 8. Assures that appropriate action is taken to stabilize the situation or place the facility or operation in a safe state. Only the <u>absolutely necessary changes at the scene</u> should be taken to assure that evidence of the event is not contaminated or destroyed. |
| ESU Captain | <ul style="list-style-type: none"> 9. Determines whether scene of event/condition needs to be secured for further investigation (consults with ORPS FM and Head Site Protection as appropriate). If so, controls scene until it can be turned over to ORPS FM or investigation team. If not, returns area/hardware back to Responsible Line Manager. |
| ORPS Facility Manager | <ul style="list-style-type: none"> 10. Obtains relevant information from Communications Officer, Captain and cognizant individuals. 11. Evaluates the event/condition against the DOE criteria in Attachment 3 and determines if it is reportable to ORPS and its probable significance category. <ul style="list-style-type: none"> a. If not reportable, assigns responsibility for recovery per Section D of this procedure to the RLM. b. If reportable, determines what prompt notifications must be made based upon the evaluation of the criteria and timeline requirements in Attachment 4. 12. Contacts the DOE/PSO Facility Representative (or the alternate if the DOE/PSO Facility Representative does not respond within 15 minutes this link: https://sites.google.com/a/pppl.gov/ero-spd-contacts/home/emergency-response-organization-contacts) for ORPS reportable events. TCR-GEN-006,R11-001 13. Requests the ESCC to transmit an ESU response email to the Deputy Director for Operations, Associate Director for Engineering and Infrastructure, Head of Site Protection Division, Deputy Head of Site Protection Division, Head of ES&H, all ORPS FMs, all ESU Platoon Captains (including off-duty), Head of Human Resources, Director of Communications, and Head of Quality Assurance. |
| Deputy Director for Operations/designee | <ul style="list-style-type: none"> 14. Evaluates event/condition utilizing Section B of this procedure. |
| ORPS Facility Manager | <ul style="list-style-type: none"> 15. Notifies the DOE Headquarters Operations Center (DOE/HQ OC) if required (contact info found at this link: https://sites.google.com/a/pppl.gov/ero-spd-contacts/home/emergency-response-organization-contacts). Informs the DOE/PSO Facility Representative that e-mail and phone notifications to DOE/HQ OC have been made, if required. TCR-GEN-006,R11-001 16. Informs the PPPL Public Information Officer (PIO), as soon as reasonably possible, of an occurrence categorized as Operational Emergency or Significance Categories 1 or 2 in case media interest occurs. |

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| Public Information Officer (PIO) | 17. Determines, in conversations with the Director, Deputy Director for Operations (DDO), Associate Director for Engineering and Infrastructure, and/or Head Best Practices and Outreach, whether a news release is required. If it is determined that a news release is required, the prepared news release shall be approved by the PPPL Director (or DDO) and submitted to the DOE/PSO Facility Representative for review and approval. Upon approval by DOE, the PIO releases the news release. | | | | | | | | |
| ORPS Facility Manager | <p>18. Determines if other Laboratory Managers or individuals should be notified of the occurrence. Completes notifications.</p> <p>19. Completes the Notification Report contained in Attachment 5 focusing on the initial event information, and forwards it to the email address: ORPSFacilityManagers@pppl.gov. An on-scene report writing prompt may be found at: http://www-local.pppl.gov/qa/index.shtml. The initial scene size-up reference guide to report consistent information is outlined below and attached to the ORPS FM briefcase.</p> <table border="0" style="margin-left: 40px;"> <tr> <td>A. Date and Time of Incident</td> <td>E. Property Damage.</td> </tr> <tr> <td>B. Location of Incident</td> <td>F. Issues Delaying Resolution.</td> </tr> <tr> <td>C. Nature of Incident</td> <td>G. Root Cause Analysis Needed</td> </tr> <tr> <td>D. Injuries or Fatalities.</td> <td></td> </tr> </table> <p>The report shall be completed so that entry into the DOE "Occurrence Reporting and Processing System" (ORPS) can be completed within the timeframes specified in Attachment 4.</p> | A. Date and Time of Incident | E. Property Damage. | B. Location of Incident | F. Issues Delaying Resolution. | C. Nature of Incident | G. Root Cause Analysis Needed | D. Injuries or Fatalities. | |
| A. Date and Time of Incident | E. Property Damage. | | | | | | | | |
| B. Location of Incident | F. Issues Delaying Resolution. | | | | | | | | |
| C. Nature of Incident | G. Root Cause Analysis Needed | | | | | | | | |
| D. Injuries or Fatalities. | | | | | | | | | |
| Head Site Protection or Designee | 20. Reviews Notification Report for completeness, accuracy and consistency | | | | | | | | |
| Associate Director for Engineering and Infrastructure | 21. Reviews and concurs with notification report (in the event this individual is not available, the Deputy Director for Operations will perform this function) | | | | | | | | |
| Head Site Protection or Designee | 22. Submits notification report to the Head of QA for entry into the ORPS system per Section F of this procedure. | | | | | | | | |
| ORPS Facility Manager | <p>23. Determines if this is an injury or illness case. If so, assigns action to ES&H to evaluate, follow up and put into the DOE Computerized Accident/Incident Reporting System (CAIRs) tracking system, if required.</p> <p>24. Determines if Deputy Director for Operations has requested investigation team (per Section B of this procedure). If so, works with team and obtains results.</p> <p>25. Completes final report within timeframes specified in Attachment 4 and provides to the Head of Site Protection.</p> | | | | | | | | |
| Head Site Protection or Designee | 26. Reviews Final Occurrence Report for accuracy and consistency. | | | | | | | | |
| Associate Director for Engineering and Infrastructure | 27. Reviews and concurs with final report (in the event this individual is not available, the Deputy Director for Operations will perform this function). | | | | | | | | |

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| Head Site Protection or Designee | 28. Submits final report to the Head of QA for entry into the ORPS system per Section F of this procedure. |
| | 29. Evaluates ORPS reports for PAAA/NTS reportability per Section E of this procedure. |
| | 30. Evaluate ORPS reports for trends per Section G of this procedure. |
| Quality Assurance | 31. Enters report into the ORPS system per Section F of this procedure. |

B. Evaluation of Adverse Events and Conditions (Determination Severity; Investigation; Extent of Condition; Human Factors Review)

Responsibility

Action

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| Deputy Director for Operations (or designee); RLM for routine events | <ol style="list-style-type: none"> 1. Evaluates the event/condition and determines if a more formal approach is required. <ol style="list-style-type: none"> a. If a formal review is appropriate, go to step 2. b. If formal review is not required assures responsible line manager has the action to address event/condition per paragraph D. 2. Conducts formal review meeting of event/condition using Attachment 6 [nominal invited attendees are Associate Director for Engineering and Infrastructure; Head ES&H; Head Best Practices and Outreach; ORPS FM; and Responsible Line Manager (RLM). Others invited as appropriate.] 3. Determines whether a stop work order is appropriate. If so, orders stop work, or delegates the action to the RLM. 4. Determines if a formal investigation is required. <ol style="list-style-type: none"> a. If not, assigns follow-up and recovery actions to RLM per Section D. b. If formal investigation is required, proceed to step 5. 5. Determines who should conduct the investigation including external reviewers. Consults with Princeton University, if necessary, to recruit appropriate experts. Assigns team via formal letter to conduct investigation, extent of condition evaluation and human factors review in accordance with Section C of this procedure. 6. Determines whether communication plan is necessary due to event/condition. If so, works with the Director of Communications to develop plan. |
| Director, Deputy Director for Operations | <ol style="list-style-type: none"> 7. Assures DOE and Princeton University are informed on a regular basis regarding the status of the event/condition as well as any investigations and corrective actions. |
| Deputy Director for Operations | <ol style="list-style-type: none"> 8. Evaluates corrective action progress and open items during monthly assessment meeting. |

C. Conduct of Formal Investigation for Significant Adverse Event/ Condition**Responsibility****Action**

Assigned Team Leader

1. Assembles team, develops plan that minimizes interference with facility operation except as necessary to achieve investigation goals, makes assignments, and identifies resources (e.g. photographer). Assumes control of scene (from ORPS FM or ESU Captain or EOC).
2. Arranges for just in time root cause analysis training from QA (training has two parts: first concerns collecting and organizing the data from interviews, review of records, on site visits, etc.; second part involves analyzing the data to identify the root and contributory causes - given after data is collected).

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| Investigation Team | 3. Documents scene/condition. |
| | 4. Interviews relevant personnel and reviews appropriate documents, processes and procedures. |
| Assigned Team Leader | 5. Releases site/hardware to responsible line manager, including any restrictions, such as completing corrective actions before restarting operations. |
| Investigation Team | 6. Evaluates relevant processes and procedures. |
| | 7. Performs Root Cause Analysis using procedure QA-019. |
| Assigned Team Leader | 8. Arranges for just in time extent of condition training from QA. |
| Investigation Team | 9. Performs Extent of Condition evaluation using procedure QA-019 and human factors review as appropriate. |
| | 10. Establishes Judgments of Need (JONs) based on the root cause, extent of condition analysis and human factors review. |
| | 11. Documents investigation, JONs and other relevant information in an Investigation Report. Scope of the Investigation Report shall include positive aspects of the event. |
| Assigned Team Leader | 12. Transmits report to ORPS FM, Director, Deputy Director for Operations, Head ES&H, Responsible Line Manager, and Head, QA. |
| Deputy Director for Operations | 13. Determines further distribution of the Investigation Report, including consideration of posting on the PPPL internal web-site and transmitting notification to employees. |
| | 14. Assigns action to RLM to develop a corrective action plan in accordance with Section D of this procedure. |

D. Recovery from Adverse Event/ Condition

Responsibility

Action

Responsible Line Manager (RLM)

1. Reviews procedures in effect at the time of the adverse event/condition, determines corrective actions necessary to recover from adverse event or condition considering ORPS FM input; determines cause of system faults during shots, breaker trips, etc. Solves normal operational issues such as resolving causes of faults or breaker trips and resets breaker, when appropriate.
2. Documents formal corrective action plan, for major events or conditions, addressing a formal investigation committee report, identifying the actions being taken to address the Judgments of Need (JONs).

3. Obtains input and concurrence of any other PPPL department for corrective actions specified outside the control of the RLM's responsibility.

Note: When extensive corrective actions are necessary or the corrective action impacts multiple processes and/or departments, the responsible manager should consider conducting a peer review of the corrective action plan that includes responsible line managers as well as representation from appropriate safety committees (e.g., Safety Champions, etc.)

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| Director's Office
(usually the Deputy
Director for Operations) | 4. Provides corrective action report to the Director's Office for review and approval. |
| Director's Office | 5. Evaluates the corrective action plan and provides feedback to the RLM (for significant events/conditions, assures effectiveness review is included as part of the corrective action). Approves the corrective action plan once comments have been resolved. |
| Responsible Line
Manager (s) | 6. Forwards corrective action plan (CAP) to QA for entry into ORPS, if required, and PPPL tracking. |
| Director, ES&H Head,
Director of
Communications | 7. Determines additional distribution of CAP for significant events/conditions including posting on the internal web site and notification to PPPL employees. |
| Deputy Director for
Operations | 8. Implements corrective action plan. |
| | 9. Informs site personnel of overall schedule, key milestones ('what', 'why' and 'when') and expected outcomes periodically for significant corrective action plans. |
| | 10. Evaluates open items, including corrective actions associated with all ORPS reports during monthly assessment meeting. |

E. Evaluation of ORPS or Safety and Health Event or Condition Against Price Anderson Amendments Act

Responsibility

Action

Head Site Protection

1. Serves as the Price Anderson Amendments Act Coordinator.
2. Conducts a review of each event/condition to determine if PAAA or worker safety and health noncompliance using Attachment 7 - Initial Screening (in consultation with the Head ES&H, Associate Director for Engineering and Infrastructure, and Head QA, as appropriate). If the event or condition does not meet the criteria, documents screening process and closes out item. If criteria are met, proceed to step 3.
3. Arranges for a PAARC meeting.

PAARC

4. Evaluates the event/condition against the screening criteria in Attachment 7 to determine if the item needs to be reported in the National Tracking System.

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| Head Site Protection | <ul style="list-style-type: none"> 5. Records the results of the screening process. <ul style="list-style-type: none"> a.If not reportable, documents results in log book – process is complete. b.If reportable proceed to step 6. 6. Documents report information and provides to QA for entry into the NTS within 20 days of screening using form at:
http://www-local.pppl.gov/qa/index.shtml |
| Quality Assurance | <ul style="list-style-type: none"> 7. Enters data into DOE system using Section F of this procedure. |

F. Data Entry and Tracking of ORPS and NTS Reports In the DOE Database

Responsibility

Action

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| Quality Assurance | <ul style="list-style-type: none"> 1. Inputs information from the Notification Report into ORPS, after approval by Head, Site Protection Division, and Associate Director for Engineering and Infrastructure and generates a PDF version of the report with corrective action assignments highlighted. 2. Distributes the PDF version of the Notification Report to ORPSFacilityManagers@pppl.gov, including the Deputy Director for Operations, the Associate Director for Engineering and Infrastructure, Head of ES&H and the Head of Site Protection Division. 3. Maintains the official ORPS/NTS record in the DOE Database (typically, only corrective actions for root and contributory causes are entered into ORPS/NTS). 4. Assures that ORPS/NTS records that are not final are updated every 45 days as required by DOE. 5. Transmits a copy of the ORPS/NTS record, in PDF format, to the email group ORPSFacilityManagers@pppl.gov, the appropriate Department/Project Head, Deputy Director for Operations, and any individual to whom an open action is assigned with corrective action assignments highlighted. 6. Maintains all corrective actions, for root, contributory, and auxiliary issues, in the Audits Database, per QA-002 and QA-017. 7. Verifies that assignments for all corrective actions have been completed. 8. Requests, upon completion, the approval of the Head, Best Practices and Outreach for closure. |
| Head Best Practices and Outreach | <ul style="list-style-type: none"> 9. Determines whether information to close corrective actions is sufficient. If sufficient information has been submitted, concurs with closure and returns to QA. If not, returns to QA to obtain additional information. |
| Quality Assurance | <ul style="list-style-type: none"> 10. Informs the responsible individual that sufficient information was not available and requests additional information and new due date for closure. Updates Databases. 11. Provides updated information to the Head of Best Practices and Outreach when updated information is received. 12. Closes item in the Databases, for items that have concurrence. |

G. Performance Analysis and Lessons Learned

Responsibility

Action

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| Head Site Protection | 1. Provides Reports (investigations, ORPS, NTS, etc) to the Head ES&H for consideration in the Laboratory’s Lesson’s Learned Program. |
| Head ES&H | 2. Issues lessons learned as appropriate in accordance with Policy P-083. |
| Head Site Protection | 3. Conducts quarterly performance analysis during the calendar year and initiates a Significance Category R Occurrence Report if a negative trend of recurring concerns is identified per guidance provided in DOE O 232.2. |
| | 4. Documents and distributes results of the quarterly analysis to the Deputy Director for Operations, Associate Director for Engineering and Infrastructure, the Head of Best Practices and Outreach, and the DOE/PSO ORPS Facility Representative. |
| | 5. Processes Significance Category R Occurrence Reports per part B of this procedure if any trends are identified by this analysis. |

H. Training

Responsibility

Action

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| Head Site Protection
Division | 1. Identifies, jointly with Human Resources, the training requirements for the staff, managers and supervisors, and ORPS FMs involved in the ORPS program and assures that training is maintained current. |
| | 2. Assures the training includes: <ul style="list-style-type: none"> a. Information in the General Employee Training (GET) regarding the employee’s responsibility to report events and/or conditions. b. Information for Supervisors regarding their responsibility to report events/conditions and actions to address issue. c. Specific training for ORPS Facility Managers, including: <ul style="list-style-type: none"> • Identification of reportable occurrences and their categorization; notification; analysis, determination, and coding of causes; and identification of implications. • Training updates to incorporate into the ORPS Facility Manager meetings, which will also be attended by the Deputy Director for Operations, the Associate Director for Engineering and Infrastructure, and the Head of the Environment, Safety, Health and Security Department. |
| | 3. Provides training records to Human Resources Department (Note: Root Cause Analysis training is documented in QA-019). |

I. Equipment

Responsibility

Action

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| Head Site Protection
Division | 1. Ensures necessary investigative equipment contained in a designated ORPS FM briefcase is available and functional to include cell phone, relevant DOE and PPPL orders, manuals, procedures, and documents and miscellaneous stationery items. The ORPS FM Portable Radio is maintained in the SPD, ESCC. |
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Attachments

1. Examples of Adverse Events and Conditions
2. Contact Listing for ORPS Facility Managers
3. Guidelines for Categorizing Occurrences
4. ORPS Timelines for Categorization, Notification and Reports
5. Data Required for Initial ORPS Record Completion
6. Event/Condition Evaluation and Follow-up Form
7. Evaluation Criteria for Reviewing Potential PAAA or Worker Safety and Health Non-compliance
8. Flow Chart of Process

EVENT. Something significant and real-time that happens (e.g., pipe break, valve failure, loss of power, environmental spill, earthquake, tornado, flood, injury). [DOE Order O232.2]

Identified Event	Examples
Alarm, visual or audible, or Control System Fault	Alarm condition whether or not deemed an emergency, as a fire alarm or an overcurrent fault in a test shot.
Occupational injury or illness	Cut hand requiring stitches; broken bone; embedded particle in eye; vehicle accident; tick bite at work resulting in illness; repetitive motion injury
Electric shock	Shock of any type; Potential for shock – no barrier in place
Exposure - occupational	Noise; Asbestos; Chemicals; Unusual release to environment
Exposure - radiological	Activation; Contamination; Unusual release to environment
Hospitalization	Due to injury on site
Fatality	Person dies due to event at PPPL or at collaborator’s facility; Terrorist act
Equipment failure	Pressure failure of an operational system test; Failed lift fixture; Dropped lift
Fire/Explosion	Fire in lab space; Battery explosion; Car fire
Spill/ release to environment	Oil sheen from delivery truck; Oil leak from vehicle; Sheen on retention pond; Spill in Laboratory; Report filed with State of NJ
Compliance failure	Transportation violation; Radiological violation; ES&H system violation
Utility Outage	Power failure; Potable water failure; Canal water failure
Security Threat	PII Breach; Loss of government assets; Export control issue; Disgruntled employee; Cyber attack; Intruder; Terrorist Act
Near miss	Electric shock; Hydrostatic test failure; Vacuum window explosion

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; anomalies associated with design or performance; or items indicating a weakness in the management process are all conditions. [DOE Order O232.2]

Identified Condition	Examples
Maintenance failure	Broken connector, bolt failure on tightening, wear-related failure that is normally addressed as a maintenance action
Installed Suspect/ Counterfeit item	Bolts; Circuit breakers; semiconductor components
Complaint	Violation of CFR; Ethics violation
Audit/assessment	Failure to comply with CFR
Calculation/design error	Design error that would cause catastrophic failure of experiment
Export Control Issue	Export or deemed export without license or other authorization
Incorrect parts, materials	Incorrect step down transformer – 480V vs. 240V
Fraud, Waste, Abuse	Embezzlement
Research Misconduct	Falsified data

ORPS CONTACT NUMBERS:

1. ORPS Facility Managers:

(George Ascione)	609-731-6393 (cell)
(William R. Blanchard)	215-208-2322 (cell)
(Martin Donohue)	732-421-8959 (cell)
(Lawrence E. Dudek)	908-745-1948 (cell)
(Charles A. Gentile)	609-577-5026 (cell)
(Michael Kalish)	732-857-6681 (cell)
(John Lacenere)	609-947-0414 (cell)
(Erik Perry)	609-731-3103 (cell)
(Steve Raftopoulos)	551-242-6308 (cell)
(Rob Sheneman)	609-273-1527 (cell)
(Timothy N. Stevenson)	609-468-7857 (cell)
(Michael Viola)	609-306-6237 (cell)
(Alfred von Halle)	609-304-8519 (cell)
2. Head, Site Protection Division
(Francis J. White) 732-213-3931 (cell)
3. DOE Facility Representative
(Leif L. Dietrich) 609-751-8360 (cell) / 609-758-3416 (Home)
4. Alternate DOE Facility Rep
(Tracy Estes) 848-459-3857 (cell) / 732-897-1350 (Home)
5. DOE Headquarters Emergency Operations Center (email first followed by telephone call to assure email was received)
E-MAIL doehqeoc@oem.doe.gov
Operational Emergencies 1-202-586-8500
ORPS Notifications 1-202-586-8100
Content of email:
 - a) Occurrence Significance Category
 - b) Location and description of the event
 - c) Date and time of discovery
 - d) Damage and/or casualties
 - e) Impact of the event on other activities and operations
 - f) Protection actions taken or recommended
 - g) Weather conditions at the scene
 - h) Level of media interest at scene/facility/site
 - i) Other notifications made

OTHER KEY NUMBERS

Deputy Director for Operations (Acting John DeLooper)	609-651-5975 (cell)
Head, Engineering (Acting, Larry Dudek)	908-745-1948 (cell)
Head, Environment, & Health Department (Jerry D. Levine)	732-407-2804 (cell)
Head, Best Practices and External Affairs (John DeLooper)	609-651-5975 (cell)
Public Information Officer (Larry Bernard)	609-480-1030 (cell) 609-243-2755 (office)
SPD, ESU, Emergency Number	Extension 3333 (609-243-3333)
SPD, ESCC	609-243-2536 or 2537
SPD Platoon Captain's Cell	609-658-1309

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GROUP 1 – OPERATIONAL EMERGENCIES

#	Significance Category	Criterion
(1)	*OE (DOE/HQ EOC notification required w/in 30 minutes)	An Operational Emergency not requiring classification, as defined in DOE O 151.1C, Chapter V, Paragraph 2 (An Operational Emergency must be declared when events occur that represent a significant degradation in the level of safety at a site/facility and that require time-urgent response efforts from outside the site/facility. These events do not require classification, i.e., as Alert, Site Area Emergency, or General Emergency). Notify the DOE/PSO Facility Representative and Headquarters Operations Center within 30 minutes of the declaration of an Operational Emergency and notify local and State organizations within 30 minutes or as established in mutual agreements.
(2)	*OE	N/A – An Alert, as defined in DOE O 151.1C, Chapter V, Paragraph 3a.
(3)	*OE	N/A – A Site Area Emergency, as defined in DOE O 151.1C, Chapter V, Paragraph 3b.
(4)	*OE	N/A – A General Emergency, as defined in DOE O 151.1C, Chapter V, Paragraph 3c.

GROUP 2 – PERSONNEL SAFETY AND HEALTH

SUBGROUP A - OCCUPATIONAL INJURIES

#	Significance Category	Criterion
(1)	*1 (DOE/HQ OC notification required w/in 2 hours)	Any occurrence due to DOE operations resulting in a fatality or terminal injury/illness. Report fatalities or terminal illnesses caused by overexposures under Subgroup B, Occupational Exposures.
(2)	*1 (DOE/HQ OC notification required w/in 2 hours)	Any single occurrence requiring in-patient hospitalization of three or more personnel.
(3)	2	Any single occurrence resulting in an occupational injury that requires in-patient hospitalization for 5 days or more, commencing within 7 days from the date the injury was received. Note: similar to thresholds for initiating a Federal Accident Investigation Board. If such an investigation is begun, the event must be reported under Criterion 10(1), as well as under this criterion if the injury so warrants.
(4)	2	Any single occurrence resulting in three or more personnel having Days Away, Restricted or Transferred (DART) cases per 29CFR1904.7, <i>Recordkeeping Forms and Recording Criteria</i> .

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(5)	3	<p>Any single occurrence resulting in a serious occupational injury. A serious occupational injury is an occupational injury that:</p> <ul style="list-style-type: none"> a) Requires in-patient hospitalization > 48 hours, commencing within 7 days from the date the injury 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 five percent of the body surface.
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SUBGROUP B – OCCUPATIONAL EXPOSURE

[Note: Per Definitions in Order: 29CFR1904.7(b)(5)(i) and (ii) define "medical treatment" and "first aid"; for ionizing radiation exposure, see Group 6 Contamination/Radiation Control, Subgroup C]

#	Significance Category	Criterion
(1)	*1 (DOE/HQ OC notification required within 2 hours)	Any acute exposure from a chemical, biological, or physical hazard due to DOE operations resulting in a fatality or terminal injury/illness or requiring in-patient hospitalization of three or more personnel.
(2)	2	Any acute exposure resulting in an occupational injury that requires in-patient hospitalization for 5 days or more, commencing within 7 days from the date the exposure was received or any exposure event resulting in three or more personnel having Days Away, Restricted or Transferred (DART) cases per 29CFR1904.7, <i>Recordkeeping Forms and Recording Criteria</i> .
(3)	*2 (DOE/HQ OC notification required within 2 hours)	Personnel exposure to chemical, biological or physical hazards that exceeds 10 times the limits established in 10CFR851, <i>Worker Safety and Health Program</i> (see 10CFR851.23 <i>Safety and Health Standards</i>) or exceeds levels deemed immediately dangerous to life and health (IDLH).
(4)	3	Personnel exposure to chemical, biological or physical hazards (e.g., noise, laser, ultraviolet light, heat, etc.) above limits established in 10CFR851, <i>Worker Safety and Health Program</i> (see 10CFR851.23, <i>Safety and Health Standards</i>), but below levels deemed immediately dangerous to life and health (IDLH), and requires the administration of medical treatment beyond first aid on the same day as the exposure.
(5)	3	Any exposure, including chronic, resulting in a serious occupational injury. A serious occupational injury is an occupational injury that: <ul style="list-style-type: none"> a. Requires in-patient hospitalization for more than 48 hours, commencing within 7 days from the date the exposure was received; b. Damages any internal organ; c. Leads to diagnosis of a debilitating disease; or d. Causes second- or third-degree burns, affecting more than five percent of the body surface.
(6)	4	Personnel exposure to chemical, biological or physical hazards (e.g., noise, laser, ultraviolet light, heat, etc.) above limits established in 10CFR851, but below levels deemed immediately dangerous to life and health (IDLH).

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SUBGROUP C – FIRES

#	Significance Category	Criterion
(1)	*1	N/A - Concerns Nuclear Facilities, of which PPPL has none.
(2)	*2	N/A - Concerns Nuclear Facilities, of which PPPL has none.
(3)	*3 (DOE/HQ OC notification required w/in 2 hours)	Any fire emergency or fire incident in a non-nuclear facility that a) Activates a fixed automatic fire suppression system, or b) Takes longer than 10 minutes to extinguish following the arrival of the emergency response organization, or c) Disrupts normal operations in the facility for more than eight hours.
(4)	4	N/A - Concerns Nuclear Facilities, of which PPPL has none.
(5)	*4 (DOE/HQ OC notification required w/in 2 hours)	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 D – EXPLOSIONS:

#	Significance Category	Criterion
(1)	*1	N/A - Concerns Nuclear Facilities, of which PPPL has none.
(2)	*2	N/A - Concerns Nuclear Facilities, of which PPPL has none.
(3)	*3 (DOE/HQ OC notification required w/in 2 hours)	Any unplanned explosion in a non-nuclear facility that disrupts normal operations in the facility.

SUBGROUP (E) – HAZARDOUS ELECTRICAL ENERGY CONTROL

#	Significance Category	Criterion
(1)	2	Any unexpected or unintended personal contact (burn, injury, etc.) with an electrical hazardous energy source (e.g., live electrical power circuit, etc.).
(2)	3	Any unexpected discovery of an uncontrolled electrical hazardous energy source (e.g., live electrical power circuit, etc.). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
(3)	4	Any failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout, hazardous energy control program).

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SUBGROUP F – HAZARDOUS ENERGY CONTROL (Other than electrical)

#	Significance Category	Criterion
(1)	2	Any unexpected or unintended personal contact (burn, injury, etc.) with a hazardous energy source (e.g., powered mechanical hazards, steam, pressurized gas).
(2)	3	Any unexpected discovery of an uncontrolled hazardous energy source (e.g., powered mechanical hazards, steam, pressurized gas). This criterion does not include discoveries made by zero-energy checks and other precautionary investigations made before work is authorized to begin.
(3)	4	Any failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout, hazardous energy control program).

GROUP 3 – NUCLEAR SAFETY BASIS (Not Applicable)**GROUP 4 – FACILITY STATUS**

[Note: Criteria apply to both nuclear and non-nuclear facilities. However, criteria specific to Safety Class or Safety Significant Structures, Systems, or Components apply **only** to nuclear facilities.]

SUBGROUP A – SAFETY STRUCTURE/SYSTEM/COMPONENT DEGRADATION/NUCLEAR FACILITIES)

Not Applicable (PPPL has none.)

SUBGROUP B – OPERATIONS

#	Significance Category	Criterion
(1)	*2 (DOE/HQ OC notification required w/in 2 hours)	A formal change of operational mode or curtailment of work or processes directed by a DOE Field Element Manager or Contracting Officer for safety reasons (e.g., a Stop Work Order).
(2)	2	N/A - Concerns Safety Class Structure, System or Component (SSC), of which PPPL has none.
(3)	3	N/A - Concerns Safety Significant Structure, System or Component (SSC), of which PPPL has none.
(4)	3	A facility evacuation other than a precautionary evacuation or an evacuation due to false alarms or spurious alarms (e.g., due to electronic noise, radon/thoron decay). If the event fell under another reporting criterion, then evacuation should be reported as well by noting multiple reporting criteria for the single occurrence.

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(5)	4	A facility operational event which resulted in an adverse effect on safety, such as, but not limited to: a) an inadvertent facility or operations shutdown (i.e., a change of operational mode or curtailment of work or processes); b) a manual facility or operations shutdown due to alarm response procedures; c) an inadvertent process liquid transfer; or d) an inadvertent release of hazardous material from its engineered containment.
(6)	4	A facility or operations shutdown (i.e., a change of operational mode or curtailment of work or processes) directed by senior contractor or senior DOE management for safety reasons, and requiring a corrective action(s) prior to continuing operations.
(7)	4	Any event or condition that would prevent immediate facility or offsite emergency response capabilities.

SUBGROUP C - SUSPECT/COUNTERFEIT AND DEFECTIVE ITEMS OR MATERIAL

[Note: Include the detailed information identified in Attachment 3, Occurrence Report Preparation of DOE Order 232.2.]

#	Significance Category	Criterion
(1)	3	N/A - Concerns Safety Class or Safety Significant Structure, System or Component (SSC), of which PPPL has none.
(2)	4	Discovery of any other suspect or counterfeit item or material (i.e., not found in a Safety Class or Safety Significant Structure, System or Component) 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)	4	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.

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GROUP 5 - ENVIRONMENTAL**SUBGROUP A – RELEASES**

#	Significance Category	Criterion
(1)	*3 (DOE/HQ OC notification required w/in 2 hours)	Any release (onsite or offsite) 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 40CFR302, <i>Designation, Reportable Quantities, and Notification</i> , 40CFR355, <i>Emergency Planning and Notification</i> , and <i>CERCLA Section 101(10), Federally Permitted Releases.</i>) [Note: See Group 1, Criterion 1, for situations under which releases of hazardous or extremely hazardous substances would be reported under "Operational Emergencies".]
(2)	4	Any release (onsite or offsite) 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. [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."]
(3)	4	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 release of oil would be reported under "Operational Emergencies."]
(4)	4	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 CO ₂ e according to 40CFR98, Subpart A, Table A-1, <i>Global Warming Potentials</i>) 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.]

SUBGROUP B – ECOLOGICAL AND CULTURAL RESOURCES

#	Significance Category	Criterion
(1)	2	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: <ul style="list-style-type: none"> 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)	*2 (DOE/HQ OC notification required w/in 2 hours)	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."]

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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.]

#	Significance Category	Criterion
(1)	*2 (DOE/HQ OC notification required w/in 2 hours)	Identification of radioactive material offsite due to DOE operations/activities that exceeds applicable DOE limits (pursuant to DOE O 458.1 Chg 2, <i>Radiation Protection of the Public and the Environment</i> , dated 6-6-11).
(2)	2	Loss or unexpected discovery of radioactive material that exceeds 100 times the values in 10CFR835, <i>Occupational Radiation Protection</i> , 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.
(3)	3	Loss or unexpected discovery of radioactive material which exceeds 1 times and no greater than 100 times the values in 10CFR835, 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 10CFR835 may be summarized in a single short form 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.]

SUBGROUP B – SPREAD OF RADIOACTIVE CONTAMINATION

#	Significance Category	Criterion
(1)	*2 (DOE/HQ OC notification required w/in 2 hours)	Identification of offsite radioactive contamination due to DOE operations/activities that exceeds applicable DOE-approved authorized limits (pursuant to DOE O 458.1 Chg 2, <i>Radiation Protection of the Public and the Environment</i> , dated 6-6-11) or, if there are none, the total contamination values in 10CFR835, Appendix D. [Notes: a) Release or clearance of property containing or potentially containing residual radioactive material is subject to requirements in DOE O 458.1. Compliance with 10CFR835, Appendix D values does not necessarily satisfy the requirements in DOE O 458.1. b) The discovery of radioactive contamination from past DOE/NNSA operations that may have caused, is causing or may reasonably be expected to cause exposures exceeding protective action criteria may be reportable as an Operational Emergency under Group 1, Criterion 1.]

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#	Significance Category	Criterion
(2)	2	<p>Identification of onsite radioactive contamination greater than 100 times the total contamination values in 10CFR835 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 10CFR835.1102(c), and, per 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 10CFR835, Appendix D. [Notes:</p> <ul style="list-style-type: none"> a) This does not apply to surface contamination from residual radioactive material meeting applicable DOE-approved authorized limits. b) This does not apply to legacy radioactive contamination, which is to be reported under a separate criterion below. c) 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. d) The discovery of radioactive contamination from past DOE/NNSA operations that may have caused, is causing, or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria may be reportable as an Operational Emergency under Group 1, Criterion 1.]
(3)	3	<p>Identification of onsite radioactive contamination greater than 10 times and no greater than 100 times the total contamination values in 10CFR835, 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 10CFR835.1102(c), and, per 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 10CFR835, Appendix D. [Notes:</p> <ul style="list-style-type: none"> a) This does not apply to contamination from residual radioactive material meeting applicable DOE-approved, authorized limits. b) This does not apply to legacy radioactive contamination, which is to be reported under a separate criterion below. c) 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. d) This reporting criterion does not apply to packages monitored in accordance with 10CFR835.405 that meet DOT contamination limits specified in 49CFR173.443(a).]

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(4)	4	<p>Identification of onsite legacy radioactive contamination greater than 10 times the total contamination values in 10CFR835 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 10CFR835.1102(c), and, per 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 10CFR835, Appendix D. [Notes:</p> <ul style="list-style-type: none"> a) Legacy radioactive contamination is radioactive contamination resulting from historical operations unrelated to current activities. b) This does not apply to contamination from residual radioactive material meeting applicable DOE-approved authorized limits. c) 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. d) Legacy contamination identified through a routine radiological monitoring program, compliant with 10 CFR 835 may be summarized in a single short form 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.]
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SUBGROUP C – RADIATION EXPOSURE

[Note: For 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 the site’s established dosimetry, dose assessment, and modeling processes. Resulting confirmed dose estimates may overturn initial reportability determinations.]

#	Significance Category	Criterion
(1)	*1 (DOE/HQ OC notification required w/in 2 hours)	Determination of a dose that exceeds the limits specified in 10CFR835, Subpart C, "Occupational Radiation Protection" or in DOE O 458.1 Chg 2, <i>Radiation Protection of the Public and the Environment</i> , dated 6-6-11, paragraph 4.b(1)(a) [paragraph 2.b(1)(a) of the CRD], "Public Dose Limit."
(2)	2	Failure to provide the required monitoring for an exposure estimated to exceed the values for providing personnel dosimeters and bioassays as stated in 10CFR835.402(a) or 10CFR835.402(c).
(3)	3	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) the greater of 10 percent or 100-mrem effective dose due to external exposure.
(4)	3	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) of DOE O 458.1 Chg 2, <i>Radiation Protection of the Public and the Environment</i> , dated 6-6-11 or exceeds the 40CFR61.92 requirements.

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SUBGROUP D – PERSONNEL CONTAMINATION

#	Significance Category	Criterion
(1)	*2 (DOE/HQ OC notification required w/in 2 hours)	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 10CFR835, Appendix D to an offsite medical facility or bringing offsite medical personnel onsite to perform treatment or decontamination.
(2)	2	Identification of offsite personnel or clothing contamination due to DOE operations/activities that exceeds 1 times the total contamination values in 10CFR835, Appendix D. For tritium, the reporting threshold is 1 times the removable contamination value found in 10CFR835, Appendix D.
(3)	4	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 10CFR835, 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.

GROUP 7 – NUCLEAR EXPLOSIVE SAFETY (Not Applicable to PPPL)**GROUP 8 – PACKAGING AND TRANSPORTATION**

#	Significance Category	Criterion
(1)	*2 (DOE/HQ OC notification required w/in 2 hours)	Any offsite transportation incident involving hazardous materials that would require immediate notice pursuant to 49CFR171.15(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, Criterion 1; Group 8 will be a secondary reporting criterion.]
(2)	3	Any deviation that would require a written report to the Nuclear Regulatory Commission (per 10CFR71.95) or to DOE HCO/NNSA CO (per DOE O 460.1C or DOE O 461.1B), namely: <ul style="list-style-type: none"> a) N/A - Concerns approved fissile or Type B packaging and therefore not applicable to PPPL. b) N/A - Concerns approved fissile or Type B packaging and therefore not applicable to PPPL. c) Instance in which the conditions of approval in the Certificate of Compliance (or equivalent) were not performed in making a shipment.
(3)	*3 (DOE/HQ OC notification required w/in 2 hours)	Any offsite "accident" (per 49CFR390.5) involving a motor vehicle carrying DOE hazardous materials operating on a highway in interstate or intrastate commerce. [Note: Prompt notification is not required if the accident does not involve personnel injuries.]
(4)	3	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 49CFR171.16.

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(5)	3	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).
(6)	3	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 40CFR302 or 40CFR355. [Note: a) This occurrence may be reportable under Group 1, Criteria 2, 3, or 4. b) Any release of a quantity of hazardous materials greater than five (5) times the Reportable Quantity (RQ) specified for such material in 40CFR302; of greater than 1,000 gallons (24 barrels) of oil to inland waters; or greater than 10,000 gallons (238 barrels) of oil to coastal waters should also be reported as an Operational Emergency under Group 1, Criterion 1; Group 8 will be a secondary reporting criteria.]
(7)	4	Violation of applicable Hazardous Materials Regulations requirements for activities listed in 49CFR171.1(b) performed during the preparation of offsite hazardous materials shipments and discovered during shipment in commerce or at the receiving site.
(8)	4	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).
(9)	4	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

#	Significance Category	Criterion
(1)	4	Any written notification from an outside regulatory agency that a site/facility is considered to be in noncompliance with a schedule or requirement (e.g., Notice of Violation, Notice of Intent to Sue, Notice of Noncompliance, Warning Letter, Finding of Violation, Finding of Alleged Violation, Administrative Order, or equivalent notification or enforcement action). [Note: This criterion is not applicable to DOE Office of Enforcement actions.]
(2)	4	Any packaging or transportation violation of regulations discovered by DOT during onsite inspections or Compliance Reviews results in fines greater than \$5,000 or Unsatisfactory/Conditional Satisfactory ratings. [Note: Noncompliance occurrence reports are to be updated to reflect fines or penalties levied or corrective actions imposed by the outside regulatory agency upon final settlement of any enforcement action undertaken.]

PRINCETON PLASMA PHYSICS LABORATORY	PROCEDURE	No. GEN-006 Rev 11 Attachment 3
Guidelines for Categorizing Occurrences (<i>List reflects only those DOE O 232.2 Criteria applicable to PPPL</i>)		Page 12 of 12

GROUP 10 – MANAGEMENT CONCERNS AND ISSUES

#	Significance Category	Criterion
(1)	2	Any event resulting in the initiation of a Federal Accident Investigation Board, as categorized by DOE O 225.1B, <i>Accident Investigation</i> . [Note: This reporting criterion may raise the significance category of an occurrence already reported under separate criteria. Multiple reporting criteria should be assigned, when appropriate.]
(2)	1-4 [†]	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. The significance category assigned to the management concern should be based on an evaluation of the potential risks and impact on safe operations. [[†] Note: Follow the Prompt Notification requirements identified in the Occurrence Reporting Model (Attachment 4).]
(3)	1-3 [†]	A near miss to an otherwise ORPS reportable event, where something physically happened that was unexpected or unintended, or where no or only one barrier prevented an event from having a reportable consequence. The significance category assigned to the near miss must be based on an evaluation of the potential risks and extent of personnel exposure to the hazard. [[†] Note: Follow the Prompt Notification requirements identified in the Occurrence Reporting Model (Attachment 4).]
(4)	*4 (DOE/HQ OC notification required w/in 2 hours)	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.
(5)	*4 (DOE/HQ OC notification required w/in 2 hours)	Any occurrence of such significant immediate interest to offsite personnel and organizations that it warrants prompt notification to the DOE HQ OC, and which is not already designated elsewhere in this set of reporting criteria to have prompt notification [denoted by having an asterisk (*) next to the significance category].

Significance Category	Timelines *	Prompt Notification	Final Report Approval	Causal Analysis
Operational Emergencies (defined by DOE O 151.1C) ⁺	Categorize: ASAP Prompt Notification: 30 min (15 min if further classified) Written Notification: COB next business day not to exceed 90 hrs Final Report: 45 calendar days	To Facility Representative (FR) and DOE Headquarters Operations (HQ) Center	By Facility Representative and Program Manager	Root Cause or Locally Approved Procedure
Significance Category 1	Categorize: 2 hrs Prompt Notification: 2 hrs Written Notification: COB next business day not to exceed 90 hrs Final Report: 45 calendar days	To FR and DOE HQ Center	By Facility Representative and Program Manager	Root Cause or Locally Approved Procedure
Significance Category R ^{††}	Categorize: Time of SC R determination Written Notification: COB 2 business days Final Report: 45 calendar days	N/A	By Facility Representative	Root Cause or Locally Approved Procedure
Significance Category 2	Categorize: 2 hrs Prompt Notification: 2 hrs Written Notification: COB next business day Final Report: 45 calendar days	To FR (When required, DOE HQ Center) [†]	By Facility Representative	Apparent Cause or Locally Approved Procedure
Significance Category 3	Categorize: 2 hrs Prompt Notification: 2 hrs Written Notification: COB 2 business days Final Report: 45 calendar days	To FR (When required, DOE HQ Center) [†]	By Facility Manager (local/program option for Facility Representative)	Apparent Cause or Locally Approved Procedure
Significance Category 4	Categorize: 2 hrs Prompt Notification: 2 hrs (as Required) Short Form Report (per Attach 5): COB 2 business days	When required, to FR and DOE HQ Center [†]	Per this procedure	Locally Approved Procedure

⁺ Categorization and Prompt Notification requirements per DOE O 151.1C, Emergency Management.

^{*} Categorization Time is from Discovery Date and Time. Prompt Notification is from Categorization Date and Time. Written Notification is from Categorization Date and Time.

[†] Specific Significance Category 2, 3, and 4 occurrences (identified with an asterisk in Attachment 3, Reporting Criteria) also require Prompt Notification to the DOE HQ EOC.

^{††} See Section G of this procedure.

The Facility Manager completes the right column as indicated in the instructions. The numbers preceding the Field Name in the first column reference the ORPS form fields. Missing fields are either generated automatically by the ORPS system or determined by the Site Protection Division. Consult Site Protection for further assistance. Enter what is known to be true – the facts. Do not enter speculation. (The official version of the ORPS Record form may be found at: <http://www-local.pppl.gov/qa/index.shtml>. This form is supplied here for information only or in case the electronic version is not available.)

The minimal information required for a notification report is indicated by an "*" in front of the number. (This is the only information required for the "Short Form Report" mentioned in Attachment 4. For other reports, more information will be required after further investigation of the event.)

Field Name	Instructions	Facility Manager Input
Facility/Personnel Information		
* 3. Facility Function Code	Select the Facility Function code from the drop-down menu which best describes the activity/function performed at the facility selected.	Always select 17B – Laboratory – Research & Development
*5 Manager/Designee	Typically is the Head of Site Protection, but may also be the Associate Director for Engineering and Infrastructure. Fields 6 and 7 will automatically be filled in.	
*11. Division/Project	Identify the Project or Division responsible for the area in which the occurrence took place. (e.g. NSTX, all projects using xyz hoists, Facilities)	
*13. System/Building/ Equipment	Identify all systems, equipment, or structural items involved in the occurrence, as applicable. In addition, in the case of component failures or defective parts or materials, provide such information as the manufacturer, model number, and size. The most significant item(s) should be listed here. Additional information can be provided in the Description of Occurrence.	
14-16 Not applicable to PPPL		
*17. Plant Area	Indicate the name of the site-specific plant area (e.g., D-Site Mock-Up, lower parking lot) where the occurrence took place. Limited to 20 characters.	

Important Date and Time Information		
*18. Discovered Date/Time	Enter the date and time when the PPPL staff discovered the event or condition being reported.	Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)
*19. Categorized Date/Time	Enter the date and time when the Facility Manager determined that the event or condition constituted a Reportable Occurrence and determined its reporting criteria.	Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)
Occurrence Description		
* 20. Subject/Title of Occurrence	Enter a few words (140 characters or less) that best details the nature, cause, and result of the occurrence. It should provide adequate information so that someone scanning the list of ORPS reports can easily decide if this report is relevant to them.	
* 21. Reporting Criteria	<p>Select one or more Reporting Criterion/Criteria for the ORPS system. All of the specific reporting criteria applicable for an occurrence should be identified. NOTE: The Significance Category field will be the highest significance category associated with the selected criteria. For example, if criteria with significance categories 4, 3, and 1 were selected, then the significance category would be 1.</p> <p>The format for the reporting criteria is group, subgroup if applicable,(#), followed by significance category. If significance category is OE, then DOE/HQ SO must be informed within 15 minutes. If the significance category is preceded with an “*”, then DOE/HQ SO must be notified of the occurrence no later than two hours after classification. In all cases, the DOE/PSO Facility Representative must be notified.</p> <p>See Attachment 3 of GEN-006, available at http://www.pppl.gov/eshis/procedures/gen006.pdf.</p>	Any additional words on choice of reporting criteria:

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* 22. Significance Category	This is the highest significance category of the reporting criteria determined in row 21.	
23 Recurring Event	If a recurring event, the ORPS database system will change the significance category to "R" automatically regardless of what significance category is derived from the selected reportable criteria.	Recurring event?
* 24. Subcontractor Involved	If a subcontractor is involved in this occurrence, indicate so and enter the name of the subcontractor(s).	Subcontractor involved? If yes, company name of subcontractor:

Instructions for Description of Occurrence: The description should be crafted so that the various readers of the report will understand (1) the critical facts of the occurrence, (2) the scope and cause as known, not speculated, and (3) what is being done to mitigate the consequences of the occurrence. The following instructions should be followed when entering the description of the occurrence:

- a. The first paragraph should state the occurrence or noncompliance as succinctly as possible, e.g., "Failure to follow the Laboratory LO/TO process resulted in an individual receiving a shock."
- b. The next paragraph of the Occurrence Description should relay the essential nature of the event (i.e., a summary of the occurrence in newspaper style).
- c. All information should be clear and succinct. Avoid redundant and unnecessary text, and lengthy "log book" accounts, unless a discussion of the event in chronological order is considered essential to understanding the event.
- d. Complex and more significant occurrences should warrant a greater level of detail. Significance Category 4 occurrences would likely need only a short second paragraph. However, all reports should present enough information so that the general reader understands why the event needs to be reported and what the effect is.
- e. Include any safety (or other) actions that were taken by staff or management prior to or during the event that prevented or limited an adverse impact. For example, "During dry wall penetration, workers utilized hand tools (instead of power tools) and made exploratory penetrations to mitigate electrical hazards during the work."
- f. Avoid jargon and uncommon or site/facility-specific abbreviations and acronyms, If used, acronyms should be initially spelled out.
- g. Unless necessary to record and explain the event (e.g., suspect/counterfeit items or material), use general descriptions of equipment, procedures, etc., rather than presenting lengthy detailed titles and the numbers and letters assigned to those items.
- h. Quantify the level of contamination, dose, release, and damage (e.g., estimate the acres of wild land burned) when possible, instead of merely stating a reportable limit was exceeded.
- i. Use active rather than passive voice whenever possible. For example, "The electrician severed the conduit" instead of "The conduit was severed."

The type of information to be provided in the description includes, but is not limited to, the following:

- The method of discovery
- Any component failures and the failure mode
- Any personnel errors involved, including the type and result of the error
- Any procedural problem encountered
- The response of any automatic or manual safety systems and the signals which initiated and terminated their operation
- The duration of any failures
- Operator actions that affected the course of events
- The loss of any safety equipment and
- The impact of the event e.g., "No injuries or work hazards occurred", "There were no injuries, no personnel contamination, and no loss of control of radioactive materials"

When appropriate, include photos, sketches, or drawings to the email transmitting the ORPS information.

This field is required for all reports.

<p>*25. Description of Occurrence</p>		
<p>Notifications Made</p>		
<p>26. DOE HQ OC Notification</p>	<p>Enter the date and time when the DOE HQ Operations Center was notified and the name and organization of the person notified. This notification is required for all reports with a significance category (SC) of OR or 1. Also required for SC2, as directed by DOE/PSO and for specific Significance Category 2, 3, and 4 occurrences identified with an asterisk in the reporting criterion. DOE/PSO Notification is indicated in Box 27, Other Notifications.</p>	<p>Individual contacted: Organization: Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)</p>
<p>* 27. Other Notifications</p>	<p>Enter the dates(s) and time(s) of notification of state and local officials or other agencies and the name(s) and organization(s) of the individual(s) notified. Date format is MM/DD/YYYY. Time format is 24 hours and hh:mm. DOE/PSO Facility Representative Notification is indicated here.</p>	<p>Individual contacted: Organization: Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)</p> <p>Individual contacted: Organization: Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)</p> <p>Individual contacted: Organization: Date: format is mm/dd/yyyy Time: format is hh:mm (24 hour clock)</p>

Facility Information at Time of Occurrence

<p>* 28. Operating Conditions</p>	<p>Describe the operational status of the facility or equipment at the time of the occurrence including, for example, pertinent temperatures, pressures, or other parameters necessary for evaluation of the occurrence and its consequences. If information is not applicable, enter "Does not apply". Limited to 150 characters.</p>	
<p>* 29. Activity Category</p>	<p>Select the activity that best describes the ongoing activity at the time of the occurrence.</p> <ul style="list-style-type: none"> 01 - Construction 02 - Maintenance 03 - Normal Operations (other than Activities specifically listed in this Category) 04 - Start-up 05 - Shutdown 06 - Facility/System/Equipment Testing 07 - Training 08 - Transportation (For search only) 08A - Transportation Onsite 08B - Transportation Offsite 09 - Emergency Response 10 - Inspection/Monitoring 11 - Facility Decontamination/Decommissioning 12 - Research 	

<p>32. Description of Cause (optional if highest SC is 4)</p>	<p>Discuss the causes of the occurrence to include all causes and the corrective actions identified, including causal analysis contributing to a recurring event. Do not repeat a description of the occurrence, but discuss the results of the causal analysis. The analysis methodology used shall be identified. A detailed description of the corrective actions is required to demonstrate that the identified actions will adequately address the cause(s) of the problem. This field is required for all Final reports, except Significance Category 4 (Short Form) Reports.</p>	
<p>33. Evaluation by Facility Manager (optional if highest SC is 4)</p>	<p>With the information available, the Facility Manager should provide his or her evaluation of the occurrence and its effect or possible effect on the plant, system, program, etc. The Facility Manager may later supplement this evaluation with additional entries in Update reports or in the Update/Final report. This field is required for all Notification reports where "Further Evaluation Required" is "Yes" and "Before Further Operation" is "Yes". It is also required for all Update and Final reports, but it is optional for Significance Category 4 (Short Form) reports.</p>	
<p>* 34. Further Evaluation Required (consider "NO" if SC is 4)</p>	<p>Since the ORPS notification must be submitted in a short time frame, this will most likely be checked unless the Facility Manager, ES&H, and the Head, Site Protection Division, believe that all the relevant information is available at the time of ORPS notification.</p>	<p>Is further evaluation is required? Is yes, is this further evaluation is required prior to operations? The name of the responsible individual The due date for this evaluation</p>

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<p>* 35. Integrated Safety Management (always needed)</p>	<p>Select one or more ISM codes from the following list:</p> <ol style="list-style-type: none"> 1. Define scope of work. 2. Analyze hazards 3. Develop and Implement hazard controls 4. Perform work within controls 5. Provide feedback and continuous improvement 6. N/A <p>This is required for all reports.</p>	
<p>36. Lessons Learned (optional if the highest SC is 3 or 4)</p>	<p>Describe what lessons can be learned from this occurrence, in order to help prevent similar events from happening.</p>	
<p>37. Similar Occurrence Reports (optional if the highest SC is 4)</p>	<p>Indicate by their report numbers any similar occurrence(s) of which you are aware for this facility or other facilities, including similar occurrences contributing to a recurring event. A discussion describing the analysis of similar occurrence reports should be included in Field 30 or Field 31, as appropriate. Also, identify any known commercial reactor Licensee Event Reports (LER) or other related documents that describe similar occurrences. The purpose of this item is to identify, if recognized, occurrences that might suggest a generic problem. It also serves to identify generic problems that may result in single or common lessons learned.</p>	
<p>38. User Defined Fields</p>	<p>The first is always used by QA to record the audit record number since ORPS records and CAs are tracked via the Audit Database. The second is available for general use.</p>	<p>User Defined Field 1 ← Reserved for use by QA</p> <p>User Defined Field 2</p>

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39 Corrective Actions to be Taken (Required for SC1,2 or 3)	Corrective actions to be taken	Enter in next row
CA#1 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#2 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#3 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#4 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#5 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#6 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#7 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	
CA#8 – Description - Assigned individual -	Due date - format is mm/dd/yyyy	

Name of individual who completed this form: _____ Date and time: _____ format is mm/dd/yyyy h:mm am/pm

Prior to entering into ORPS, the completed form must be approved by the Head of the Site Protection Division and the Associate Director for Engineering and Infrastructure. In the absence of the Associate Director for Engineering and Infrastructure, the Deputy Director for Operations must approve.

Event/condition Description/ date of occurrence: _____

Evaluation Meeting:

Date/time: _____

Attendees: _____

ORPS FM Evaluation:

ORPS Facility Manager: _____

ORPS Categorization of Event/condition: _____ Reportable Not reportable

Group: _____ Subgroup: _____ Significance Category _____

Date/time categorized: _____

Notifications:

DOE: HQ, SC, OFES, PSO, DOE Emergency Operations Center, DOE Inspector General

Princeton University: President, Vice President for PPPL, Legal, Communications, Advisory Board

Other: State of NJ, Plainsboro, Middlesex County

Laboratory: Director, Deputy Director Operations, Deputy Director Research, Head ES&H, Head Site Protection, Associate Director E&I, Head Human Resources, Head Best Practices and Outreach, Head Business Operations, Director of Communications, LMM, Princeton Advisory Board, other:

Event/Condition Scene Secured:

By (owner): _____ Date/time: _____

Date/Time scene released: _____ By: _____

Note: ORPS FM and Site Protection will determine necessary actions to stabilize scene. Then ORPS FM is owner of site and controls site until turned over to the investigation team. Site will be controlled until the "owner" officially releases the site.Stop work / Stand down required (to evaluate immediate areas of concern):

No Yes – Scope: _____

Issued by: _____ Date/time: _____

Recovery plan for Stop work? No Yes – assigned to: _____

Notify sister laboratories immediately due to urgency of issue? No Yes – assigned to: _____

Categorization of Event/condition:

Is independent investigation required? No – follow-up assigned to: _____

Yes – assign investigation team – see below

Appointment of investigation team:

Identified team Members:

Chair: _____ Root Cause Trained Individual: _____

PPPL members: _____

DOE/ external members: _____

Team and charge approved by (Director's Office): _____ Issued Date/time: _____

Scope: _____

[A formal Root Cause Analysis (RCA) is required for all ORPS reports of significance category OE, R, or 1, unless deemed unnecessary by the PPPL Director or the Deputy Director for Operations; should include extent of condition and consideration of a human factors review or other cultural aspects.]

Communication Plan Required?

No

Yes – Assigned to: _____ date/time: _____

Immediate notice to staff?

Prepare press release/ talking points?

Follow-up/ status reports to staff or DOE?

Initial Meeting Actions:

Appointment of Responsible Line Manager for Corrective Action Plan

Name: _____

Date Appointed: _____

Due Date for CAP: _____

Approval level of CAP: _____

Lessons Learned:

No

Yes -- Assigned to: _____ date/time: _____

Immediate notice to staff? Yes No Due Date: _____

Immediate notice to sister labs? Yes No Due Date: _____

Follow-up/ formal report to DOE? Yes No Due Date: _____

POTENTIAL PAAA OR WORKER SAFETY AND HEALTH NONCOMPLIANCE

This review guidance is provided for deciding if events or conditions deviate from nuclear safety, radiological requirements or worker safety and health issues for which PPPL has committed and may, therefore, constitute a potential PAAA or worker safety & health noncompliance.

Initial Screening Review by Head, Site Protection

- A. An incident reportable to ORPS and associated with one or more of the following:
1. Fires/Explosions
 2. Safety Status Degradation
 3. Unreviewed Safety Questions/Unreviewed Safety Question Determinations
 4. Safety Authorization Reports/Basis for Interim Operations
 5. Loss of Control of Radioactive Material/Spread of Contamination
 6. Violation/Inadequate Nuclear or Rad Safety Related Procedures
 7. Unsatisfactory Nuclear or Rad Safety Related Surveillance/Inspections
 8. Radionuclide Releases
 9. A Criterion from Group 1, Operational Emergencies
 10. A Criterion from Group 2 Personnel Safety and Health, Significance Categories 1, 2 or 3
 11. A Criterion from Group 4 Facility Status, Significance Category 2
 12. A Criterion from Group 10, Management Concerns, Significance Categories 1, 2 or 3
- B. Does the deficiency /Noncompliance involve or relate to:
1. Personnel Radiological Contamination?
 2. External or Internal Radiation Exposure?
 3. Deficiencies, nonconformances, inadequacies, etc. related to safety related hardware, i.e., defined Safety Class or Safety Significant Structures, Systems and Components, or structures/ systems/ components required for worker safety and/or health, including problems related to design, procurement and inspection, and acceptance testing?
 4. Any missed commitment made in a DOE approved Radiation Protection or Quality Assurance Plan including milestones? (Note that this covers orders, requirements and any additional commitments adopted by PPPL.)
 5. An inadequate or deficient operator training (including employees and support subcontractors) which potentially impacts worker safety and/or health, nuclear safety or has radiological implications?
 6. Overdue or inadequate corrective actions associated with known deficiencies having nuclear safety, radiological or worker safety and/or health implications, or reported potential PAAA/worker safety & health non-compliance both minor and significant?
 7. Records management/document control deficiencies, including falsification of records, associated with identified DOE approved nuclear facility, radiological, or worker safety and/or health training records, procedures, test records, etc.?
 8. Inadequate nuclear safety, radiological or worker safety and/or health instructions/procedures or failure to follow nuclear safety, radiological or worker safety and/or health instructions/procedures including intentional violations?
 9. Failures or deficiencies in management or independent assessment programs regarding compliance with applicable nuclear safety, radiological or worker safety and/or health requirements?

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10. An incident related to ionizing radiation, including failure to abide by the Radiological Work Permit, contamination events or exposure events? Focus on the spread of contamination beyond posted areas. Threshold for dose limits, including doses resulting from skin/clothing contamination, is specified in 10CFR835.202.
11. A negative trend? Trends shall be evaluated for possible programmatic deficiencies such as numbers of skin/clothing contamination, number and type of RWP violations, worker safety and/or health violations, etc.
12. A discrimination complaint raised to DOE under the "whistle-blower" rule, 10CFR708 that potentially raises a nuclear safety or worker safety and/or health issue or interference with someone attempting to voice nuclear, radiological or worker safety and/or health safety concerns?.
13. An identified condition meeting the criteria for a Severity Level 1 (serious) violation in 10CFR851, Appendix B (i.e., potential for death or serious physical harm).

NOTE: IF ONE OR MORE OF THE ABOVE IS MET, THE EVENT OR CONDITION MAY BE A PAAA VIOLATION REPORTABLE VIA NTS. THE PAARC SHALL BE CONVENED TO DETERMINE REPORTABILITY.

Evaluation Reportability Decision by PAARC

This guidance provides information for use by PAARC in determining if the potential noncompliance is reportable to NTS or minor and shall be recorded in PPPL PAAA record.

SIGNIFICANCE:

Does the deficiency being screened for noncompliance involve:

1. Failure to activate the site emergency plan as a result of the non-compliance?
2. Failure to complete a significant action as identified in the DOE approved Radiological Protection Plan or Quality Assurance Plan?
3. Events or conditions that have significant impact on nuclear or radiological safety?
4. An event meeting a criterion from Group 1, Group 2 or Group 10, Significance Category 1, 2 or 3, or Group 4, Significance Category 2 that is associated with a 10CFR851 noncompliance?
5. The same or similar potential PAAA Noncompliance continued to occur, indicating the corrective action (including root cause determination) has been ineffective?
6. Several minor and related but not identical noncompliances occurred indicating a common breakdown in a program?
7. A program required to be operational per the Radiological or Quality Plans?
8. Multiple control failures occurred indicating a common breakdown in a system, program, or area of a program?
9. A significant breakdown in management processes or actions? A programmatic problem generally involving weakness in administrative or management controls, or their implementation and requires broad corrective actions.
10. An identified condition meeting the criteria for a Severity Level 1 (serious) violation in 10CFR851, Appendix B that is judged to have high relative risk (see DOE G440.1-8 for guidance on risk assessment)?
11. Intentional misrepresentation or concealing of facts to avoid identification of occurrence as a nuclear safety or worker safety & health noncompliance?

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12. Falsification of records or reports to avoid identification of the occurrence as a nuclear safety or worker safety & health noncompliance or intentional reporting of inaccurate or incomplete information?
13. Substantiated management reprisals against workers for raising safety issues regarding 10CFR830 or 10CFR835 as defined in 10CFR708 or associated with 10CFR851.20(a)(6) or (9)?

NOTE: ISSUE SHOULD BE REPORTED AS INTERNAL NONCOMPLIANCE IF ANSWERS TO ALL THE QUESTIONS ARE "NO". IF ANY OF THE QUESTIONS ARE DETERMINED TO BE A "YES" ISSUE IS TO BE REPORTED AS AN NTS NONCOMPLIANCE.

Additional Notes:

1. The simple occurrence of an event or discovery of a condition in any of the listed categories is not by itself sufficient to warrant NTS reporting. NTS reporting requires the identification of a 10CFR Part 830 or 835 (or any other nuclear safety rule) noncompliance or 10CFR851 noncompliance in conjunction with the event or discovery. Contractors identifying a significant nuclear safety or worker safety or health noncompliance (i.e., one with the potential to cause radiological harm, or associated with a Level 1 noncompliance) in association with an event/discovery type or category not listed on the table should evaluate the event for NTS reportability.
2. Report noncompliances associated with an offsite spread of contamination event where a contamination level exceeds 100 times the applicable value identified in 10CFR835, Appendix D.
3. Report noncompliances associated with a personnel/personal clothing contamination where a contamination level exceeds 100 times the applicable total contamination value identified in 10CFR835, Appendix D.
4. Refer to the Enforcement Process Overview, Chapter IV, for more information about these types of noncompliance
http://energy.gov/sites/prod/files/hss/Enforcement%20and%20Oversight/Enforcement/docs/overview/Enforcement_Process_Overview.pdf.

Flow Chart of Process

7/23/12

