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PHYSICS DIVISION POLICY  
ABNORMAL EVENT RESPONSE

March 18, 2003

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ORIGINATED/REVISED	3/18/03	SB Kennedy
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Rev 1

**PHYSICS DIVISION POLICY**  
**ABNORMAL EVENT RESPONSE**

**March 8, 2004**

Reference ORNL Program Description: Abnormal Event Response

### **Expectations**

The expectation of ORNL management is a bias toward identifying and reporting all abnormal events, even small, seemingly insignificant or low-level events or conditions. Fixing lower level events can identify potential precursors or break a chain of small events that might lead to serious occurrences or accidents. Identifying and evaluating all events allows us to learn from our experiences.

The expectation of Physics Division management is a bias toward voluntary disclosure to minimize the number of self-disclosing events. Voluntary disclosure refers to events that we find and report through proactive performance assessments and implies that we have systems in place to anticipate and prevent self-disclosing events. A self-disclosing event is one that happens and is discovered when it is reported via an occurrence report, RER, or similar mandatory report. The distinction is slight, but has been used to mitigate fines and penalties for regulatory violations of environmental law and the Price-Anderson Amendments Act (P-AAA).

### **Definitions**

#### Abnormal Event Types

- DOE-reportable occurrences
- Non-routine events (events that do not meet occurrence reporting requirements)
- Incidents, accidents, and injuries
- Radiological events (RERs)
- Nonconforming items, materials, or services
- Abnormal environmental events
- Incidents of security concern
- P-AAA non-compliances

DOE-reportable occurrences: (ORNL Occurrence and Non-Routine Event Response and Reporting Subject Area) DOE-reportable occurrences are real-time incidents or conditions that meet the criteria set forth in the ORNL Occurrence Reporting Categorization Guide, which is based on DOE M 232.1-1A, Occurrence Reporting and Processing of Operations Information.

Non-routine events: (ORNL Occurrence and Non-Routine Event Response and Reporting Subject Area) A non-routine event is a real-time incident or condition that adversely affects, or may adversely affect, ORNL staff, visitors, or the public, property, the environment, or mission, but does not meet the criteria to be categorized as a DOE-reportable occurrence.

Incidents, accidents, and injuries: (ORNL Incidents, Accidents, and Injuries Subject Area) Incidents, accidents, and injuries include all occupational (work-related) injuries and illnesses.

Radiological events: (RSS SOP 02-130-02, "Radiological Event Reporting") Radiological deficiencies and incidents which involve operations dealing with ionizing radiation or radioactive material including

skin or clothing contamination or uptakes of radioactive materials and less than adequate radiological practices or radiological procedures adherence.

Nonconforming items, materials, or services (ORNL Nonconformance Control Subject Area) A nonconforming item, material, or service includes any item, material, or service that does not meet the commercial standard or procurement requirements as defined in catalogues, proposals, procurement specifications, design specifications, testing requirements, contracts, or the like. It includes those items or services found during supplier evaluation, acceptance testing, preoperational testing, operations, inspections, or audit, not to meet the quality or reliability requirements appropriate to the use or specificity of the item procured.

Abnormal Environmental Events (ORNL Program Description Identifying Significant Environmental Aspects and Impacts) Abnormal environmental events include a wide variety of events associated with air and water permits, releases of hazardous and toxic substances, and underground storage tanks.

Incidents of Security Concern (ORNL Safeguards and Security Management System) Incidents which are of concern to the DOE Safeguards and Security program because they involve inadvertent or deliberate failures to follow DOE safeguards and security regulations and directives and/or alleged or suspected violations of U.S. laws or their implementing regulations. Examples of Incidents of Security Concern include: the loss, potential compromise, or unauthorized disclosure of classified information; substance abuse; criminal racketeering or other organized criminal activity; waste, fraud, or abuse; theft, loss, or damage of Government property or information; the discovery or possession of contraband articles; civil disorder; sabotage, terrorism, or vandalism affecting facilities or properties owned by or contracted to the DOE.

P-AAA noncompliances (ORNL Price-Anderson Amendments Act (P-AAA) Subject Area) P-AAA noncompliances include nuclear or radiological safety concerns, events, and/or findings that deviate from nuclear safety or radiological requirements.

### **Abnormal Event Response Process**

Each of the different abnormal event types follows a common process involving steps to **identify, respond, notify, evaluate, report, and track** them. Consider each of the following elements for all abnormal events:

#### **Person Discovering Event**

- IF imminent danger, THEN stop work and leave the area.
- IF emergency, THEN dial 911 or pull fire alarm.
- IF clearly necessary, THEN shut down equipment, if you can do so safely.
- Ensure appropriate warnings or barriers to prevent inadvertent access to hazards.
- Mitigate problem, as appropriate, if you can do so safely.
- Notify your supervisor or line manager as soon as possible.

#### **Supervisor or Line Manager**

- IF there are significant consequences (ESH, equipment, or operations) or significant uncertainty, THEN consider stand down.
- Notify the Facility Operations Manager (FOM) (Gerald Mills). If the FOM cannot be reached, notify the Division ESH&Q Operations Manager (DOM) (Sandra Kennedy).
- Assimilate details of the event.
- Initiate a critique of the event, as appropriate.
- Notify Physics Division staff, support personnel, and affected personnel of the event and critique results, as appropriate.

#### **Division ESH&Q Operations Manager**

- Make additional notifications as necessary.
- Evaluate for occurrence reporting and screen for P-AAA non-compliances.
- File occurrence reports and P-AAA internal and/or external reporting.
- Ensure assessments and corrective actions are entered in ATS.
- Collect feedback on abnormal events and corrective actions.
- Analyze abnormal events for trends periodically.

**ABNORMAL EVENT RESPONSE****DISTRIBUTION LIST**

The Facility Operations Manager and/or Division ESH&Q Operations Manager should determine who needs to be notified when there is an abnormal event. The following list is provided to aid in that decision process:

Laboratory Shift Superintendent  
Associate Laboratory Director for Physical Sciences and Secretary  
Division Director and Secretary  
Group Leader(s)  
Task Leader(s)  
Supervisor(s)  
Accelerator Operations Manager(s)  
Building Operations Manager(s)  
Lab Space Managers  
Equipment Mentor(s)  
East Complex Leader  
6000 Shop Craft Project Leader  
Division Quality Assurance Coordinator  
Division Performance Assessment Coordinator  
Division Radiological Control Officer  
Division P-AAA Program Officer  
Division Source Custodians  
Division Material Balance Area Representatives  
Radiological Support Services Complex Leader  
Radiological Control Technicians  
Division Electrical Safety Officer  
Division Emergency Response Supervisors  
Division Training Manager  
Division Laser Safety Officer  
Division ESH Officer  
Division Training Officer  
Division Computer Security Officer  
Division Procurement Coordinator