

## **REPORTING AND INVESTIGATION OF INCIDENTS, ACCIDENTS, AND OCCURRENCES (DOE O 232.1A REPORTING)**

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### **1.0 SCOPE**

This Performance Assessment Guide for Reporting and Investigation of Incidents, Accidents, and Occurrences (DOE O 232.1A) will be used to carry out the oversight responsibility of the U.S. Department of Energy (DOE) Brookhaven Group. It was prepared to assist in conducting performance-based assessments of both DOE contractor and subcontractors to ensure that management is kept fully aware of events that could adversely affect the health and safety of the public, seriously impact DOE operations, adversely impact the environment, or endanger the health and safety of workers.

This performance assessment will be directed at laboratory implementation of DOE O 232.1A reporting requirements. DOE line management must ensure that contractors comply with the requirements of the DOE Order. Information developed from this assessment will determine the degree to which this is being done, as well as the effectiveness of the laboratory's program for reporting incidents, accidents, and occurrences.

**1.1** The objective of the DOE incident, accident, and occurrence reporting system is to ensure that occurrences are consistently reported so that both DOE and laboratory line management, including the Office of the BHG Group Manager, are kept fully and currently informed of all events that could (1) affect the health and safety of the public, (2) seriously impact the intended purpose of DOE facilities, (3) have a noticeable, adverse effect on the environment, and/or (4) endanger the health and safety of workers. In addition, the reporting system has an objective that there be a system for determining appropriate corrective action and for ensuring that such action is effectively taken. Reporting systems and programs should:

- Proactively and in a timely manner identify, categorize, and prioritize events and ensure that notification and reporting to DOE laboratory management is performed for all reportable occurrences;
- Assess the significance, root causes, and generic implications of occurrences, and the need for corrective action;
- Provide for timely evaluation and implementation of appropriate corrective actions;

- Provide for dissemination of occurrence reports to DOE operations and facilities to prevent similar occurrences;
- Monitor the occurrence evaluation process to ensure acceptability of root cause determinations and generic implications, and validate corrective action implementation and closeout.

## **2.0 ATTRIBUTES AND LINES OF INQUIRY**

**2.1** DOE has established a policy/guidance for reporting and investigation of incidents, events, and occurrences.

- Has DOE formally transmitted this policy/guidance to all applicable DOE offices/contractors?

**2.2** Agreements between the Head of Field Organizations and the responsible Cognizant Secretarial Offices (CSOs) are established regarding the working relationship between the CSO and the Field Organization with regard to DOE O 232.1A reporting.

- Do the agreements clearly define or establish the line management chain for implementing the requirements of DOE O 232.1A?
- Do the agreements clearly define or establish oversight responsibility and authority to ensure that the contractor's capability and performance in carrying out the requirements for DOE O 232.1A reporting are appraised and audited?

**2.3** The laboratory has approved procedures to implement its responsibilities for reporting and investigating incidents, accidents, and occurrences.

- Do the procedures establish line management and staff responsibility and accountability for incident, accident, and occurrence reporting and investigations?
- Do the procedures include facility-specific categorization, notification, and reporting requirements for each facility?
- Are there provisions in the procedures for audits to evaluate the accuracy and completeness of reporting?
- Do the procedures include provisions to ensure that suborganizations are aware of DOE O 232.1A reporting requirements and properly interface with the affected

organization to report abnormal events that involve the suborganization? (Examples include serious near-miss situations in personnel safety where no injury occurred but the potential for serious worker injury existed).

- Do local reporting requirements accurately reflect the DOE Order requirements and the procedural requirements generated by the CSOs?

**2.4** Laboratory personnel who have responsibilities regarding DOE O 232.1A reporting have been trained in the requirements of DOE O 232.1A.

- Does the training include the philosophy of occurrence reporting?
- Does the training include the identification of Reportable Occurrences; their categorization, notification, and associated reporting requirements; analysis, determination of root causes and generic implications; and implementation, tracking, and closeout of corrective actions?
- Does the training include utilization of the DOE Occurrence Reporting and Processing System (ORPS), including input of occurrence reports and obtaining information from the data base?
- Is the training appropriate for the level of responsibility of the individual?
  - When training has not yet been received, how is assurance provided that the correct and necessary actions will be carried out by the assigned individual.
  - When the level of responsibility changes, is additional training required and provided?
- Are laboratory and contractor personnel who are in a position to detect events that may be reportable appropriately trained and instructed so that events that are potentially reportable under DOE O 232.1A are reported to facility staff/management for evaluation?
  - To what working level and how is this training provided and by whom?
  - Are supervisors and foremen or others who perform work independently (such as I&C technicians or roving watches) sufficiently knowledgeable of what events may be reportable so that such events are brought to the attention of personnel with direct responsibility for DOE O 232.1A reporting?

**2.5** Abnormal events that occur at a facility are properly evaluated and categorized for reportability.

- How are abnormal events entered into the system for evaluation as potentially reportable? Who may start the process?
  - Are records maintained of abnormal events, such as logs or event reports, even when the single event is considered not reportable?
  - Is there an established minimum threshold level below which the evaluation is always "not reportable"? If so, who established the threshold and on what basis? Is there a provision for review of below-threshold-level events to assess trends or potential for more significant events?
- Do facility staff and operators identify and promptly notify the facility manager of abnormal events and conditions and record and archive all information pertaining to them?
  - Are appropriate immediate responses taken by operations personnel to stabilize or return the facility/operation to a safe condition?
  - How and by whom is event identification time determined and recorded? (This starts the clock for categorization, which must be completed within 2 hours of identification of the reportable event.) Is event identification time properly determined and not manipulated to avoid missing categorization deadlines?
  - Is screening of abnormal events performed by operations or staff personnel or supervisors to determine if the event should be brought to the attention of the facility manager? How is this done and to what criteria? Is the screening information retained and reviewed by the facility manager periodically?
- Is the facility manager or designee always available to carry out the responsibilities assigned for categorization and reporting of events?
  - Is the organizational structure for reporting responsibilities set up so that the time limits of reporting can be met?
- Is the categorization of events consistent with the guidance provided in DOE O 232.1A and by the CSO?
  - Is categorization conducted within the 2-hour time limit following identification of the reportable event?

- Are events properly categorized and reported based on consequences and significance? (Near misses, with few actual consequences but potential significance, must be reported under the cross category items.)

**2.6** Notification is made by the facility manager in the manner specified in DOE O 232.1A and in the required time frame following identification of the event.

- How and by whom is the event categorization time determined and recorded? (This starts the time clock for notification, which varies based on the event category.)
- Who is authorized to provide prompt notification?
- For prompt notification, does the facility manager contact both the DOE Facility Representative and the DOE Headquarter's Emergency Operations Center (EOC) within the required time frame?
- Have the time frames for notification been met following categorization of the event, including the submittal of a written Notification Report as soon as practical but, in all cases, before the close of the next business day from the time of categorization (not to exceed 80 hours), to the DOEFR(s) and the DOE Program Manager?
  - For every reportable occurrence, the facility manager determines and documents in the Final Report as soon as is practical (a) the significance, nature, and extent of the event or condition; (b) the cause(s) of the event or condition, including the root cause(s); and (c) the corrective actions to be taken to correct the condition and prevent recurrence.
- Are Update Reports prepared and submitted when significant and new information is available or upon the request of the DOE?
- Are changes in categorization documented in Update Reports and submitted before the close of the next business day from the time of recategorization (not to exceed 80 hours)?
- Is the Final Report submitted no later than 45 calendar days of initial categorization of the event and distributed, as required by the DOE Order?
- If the required analysis cannot be completed within 45 calendar days, is an Update Report submitted within the 45 days which includes a detailed explanation of the delay and an estimated date for submittal or the Final Report?

- How does the facility manager determine the significance, nature, and extent of the event or condition?
  - Is the evaluation by the facility manager meaningful and does the documentation of significance, nature, and extent reflect the actual conditions surrounding the event?
- Are adequate investigations and analysis performed and documented to determine the contributing and root cause(s) of the event?
  - Are the personnel who perform the analysis trained or otherwise experienced in root cause determination?
- Do the assigned corrective actions address the contributing and, more importantly, the root cause(s) of the event, and can they be reasonably expected to prevent recurrence?

**2.7** A Final Report is prepared by the facility manager and submitted when analysis of the occurrence has been completed, root cause(s) determined and contributing cause(s) finalized, corrective actions determined and scheduled, and lessons learned identified.

- Are Final Reports being prepared and submitted within the time frames specified in DOE O 232.1A?
- Does the Final Report accurately portray the significance and conditions surrounding the event, including the causes, corrective actions, and lessons learned?

**2.8** Corrective actions in Update Reports are completed or those that are not yet completed prior to the submittal of the Final Report are tracked by the organization and completed within the specified time frames.

- Is implementation of corrective actions timely and effectively carried out? How and by whom is verification of corrective action completion performed?
- Are the completed corrective actions in Update and Final Reports treated as commitments to DOE that cannot be changed without DOE approval?
- How are extensions controlled to completion dates for corrective actions following submission of the Final Report if the corrective action cannot be completed as specified in the Final Report?
  - Is DOE informed of the delay and approval gained for not meeting the stated commitment?

- Are corrective actions from Final Reports entered into the organization's tracking program to ensure that they are tracked to closure and verified?

**2.9** Operations information and lessons learned from the organization's facilities and other DOE organizations are used to improve facility operations.

- Does the laboratory for each facility or group of facilities collect and disseminate to their personnel the operations information obtained from their facilities and the lessons learned from this information.
  - How and by whom are operations information and lessons learned obtained?
  - How, by whom, and to whom is this operations information and lessons learned disseminated?
- Does the facility manager use trending and analysis of operations information and lessons learned for early indication of deteriorating conditions and take corrective actions accordingly?
  - How is this trending and analysis formed and used?
- Does the facility manager review the ORPS data base to identify potential problems, good practices, and lessons learned from other facilities to improve operations in the facility?
- Does the facility manager use information provided by the DOE Facility Representative regarding Occurrence Reports from other DOE organizations and lessons learned to improve operations in the facility?

**3.0** **STANDARDS AND REQUIREMENTS**

**3.1** Specific DOE Orders and Standards.

- DOE O 232.1A, "Occurrence Reporting and Processing of Operations Information."

**4.0** **GUIDANCE TO ASSESSOR**

This assessment guide is intended to assist in conducting a performance assessment of DOE O 232.1A reporting. It is not to be considered as all-inclusive, inflexible, or limiting reasonable assessment concentration when line of inquiry responses dictate that an area must be more thoroughly probed.

It is recognized that some of the questions related to CSO actions cannot be adequately assessed at the site level, but they are included in the lines of inquiry for continuity's sake to ensure that the broader picture of how requirements related to reporting are established and who shares in the assigned responsibilities. DOE O 232.1A requires the CSO to establish reporting guidance and requirements for facilities and programs under their cognizance and where such guidance exists, it should be used as reference for the requirements for reporting at the affected facilities.

There are generally three broad questions related to reporting:

- (1) Are events reported and acted on properly (by both DOE and the laboratory)?
- (2) Are events reported that should be reported?
- (3) How does DOE line management ensure the above?

This assessment will include evaluation of reported events against records or other supporting information to establish if the event was properly categorized and factually reported. Does the event description, cause, and corrective action accurately portray the event that occurred? In this regard, the issue is not one of exact details as much as one of proper perspective. In particular, are there known facts (or facts that should be known) that, if included in the Update or Final Report would change the reader's perspective on the severity or nature of the event? Errors can be by omission or commission.

For example, a procedural error or violation that resulted in a reported event has much different and more severe implications if the supervisor or a manager ordered the procedure to be violated or took no action to prevent a violation or error. If an Update or Final Report merely stated that a procedural violation was made by workers, but the facts support that a manager or supervisor was involved in the violation, then the nature and significance of the event is different and the reader's perspective on the Final Report would be changed.

The assessor should attempt to determine if, how, and by whom root cause analysis is being performed and whether identified corrective actions address the root causes. Once root causes are determined, the assessor should determine who (1) assigns corrective actions, (2) carries out those corrective actions, and (3) determines when the corrective action has been accomplished.

In determining if under-reporting is occurring, a review of information sources, which provide indication of events that have occurred is necessary. cursory review of these records is not effective. Detailed review along with specific followup when warranted is necessary to determine if an event that occurred was or should have been reported.