

GUIDELINE	PERFORMANCE	EXCEPTIONS & DEVIATIONS
<p>1. Events Requiring Investigation</p> <ul style="list-style-type: none"> • Establish criteria for when to perform an investigation. • List specific events requiring investigation. • Establish criteria for a "near miss" situation. • The following events require investigation: <ul style="list-style-type: none"> • Violation of design limits • Unusual, abnormal, or unexplained performance or safety conditions • Improper positioning of safety system features • Unexplained shutdown • Violation of a procedure or human error which could have serious implications • Failure of equipment with safety implications • Exceeding radiological or toxic substance limits • Actual or attempted sabotage • Review committee deems an investigation is necessary • Loss of Special Nuclear Material • Occurrence of repetitive problem 	<p>1. Events Requiring Investigation</p> <ul style="list-style-type: none"> • Criteria for when to perform an investigation are given in OPM 10.1, "Reporting Off-Normal, Unusual or Emergency Occurrences." • Events requiring investigation at the CAD, in accordance with DOE Orders, are given in OPM 10.1. • Criteria for a near miss are given in OPM 10.1. • OPM 10.1 establishes the following as events requiring investigation: <ul style="list-style-type: none"> • Violation of design limits, • Abnormal or unexplained performance or safety conditions, • Improper positioning of safety system features, • Unexplained shutdown, • Violation of a procedure or human error which could have serious implications, • Failure of equipment with safety implications, • Exceeding radiological or toxic substance limits, • Actual or attempted sabotage, • Whenever a review committee deems an investigation is necessary, • Loss of Special Nuclear Material, and • Occurrence of repetitive problem 	<p>1. Events Requiring Investigation</p> <ul style="list-style-type: none"> • None.
<p>2. Investigation Responsibility</p> <ul style="list-style-type: none"> • Manager has ultimate responsibility for consistency and thoroughness of event investigation. 	<p>2. Investigation Responsibility</p> <ul style="list-style-type: none"> • The CAD Department Chairman is named the CAD Facility Manager and he has the ultimate responsibility to conduct a consistent and thorough investigation, see OPM 10.1, "Procedure for Reporting an Emergency, Unusual or Off-Normal Occurrence." 	<p>2. Investigation Responsibility</p> <ul style="list-style-type: none"> • None.

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<p>3. Investigator Qualification</p> <ul style="list-style-type: none"> • Investigators should be knowledgeable with no vested interest or bias. • Investigators should be trained. 	<p>3. Investigator Qualification</p> <ul style="list-style-type: none"> • BNL staff members from the ESH and Q Directorate are available to assist the CAD subject matter experts in investigations. This team approach helps ensure an unbiased investigation. • Trained investigators are appointed to investigation committees. 	<p>3. Investigator Qualification</p> <ul style="list-style-type: none"> • None.
<p>4. Information to be Gathered</p> <ul style="list-style-type: none"> • Collect the following information as soon as possible: <ul style="list-style-type: none"> • Initial condition of facility • Statements of operators and other personnel • Logs and computer printouts • Other pertinent documents 	<p>4. Information to be Gathered</p> <ul style="list-style-type: none"> • The initial actions by the Operations Coordinator or Supervisor are to take any actions necessary to make the area safe without endangering the health and safety of themselves or other personnel. <ul style="list-style-type: none"> • They are trained in CAD Course 18.15.43 to not disturb the scene if practicable. • They are to record date and time of the event, record date and time of all notifications and record step by step sequence of events leading to the incident if known. • Logs and computer printouts are retrievable after an event. • Pertinent documents are preserved in logbooks or binders for future reference. 	<p>4. Information to be Gathered</p> <ul style="list-style-type: none"> • None.
<p>5. Event Investigation</p> <p>Depending on their significance the format should include :</p> <p>a. Event Reconstruction</p> <ul style="list-style-type: none"> • Develop a chronological list of events. • Include a list of personnel involved. <p>b. Event Analysis and Evaluation</p> <ul style="list-style-type: none"> • Determine the response of equipment and personnel. • Compare the actual and expected responses. • Determine the adequacy of procedures and factors 	<p>5. Event Investigation</p> <ul style="list-style-type: none"> • The standard methods in "The Principles of Accident Investigation" are used to develop a chronological list of events and personnel involved, analyze and evaluate events, and to determine root causes and corrective actions. This Handbook was developed for DOE by the Safety Systems Development Center, Pocatello, Idaho. • Event Analysis And Evaluation Event investigations focus on: <ul style="list-style-type: none"> • factors causing or contributing to the event, • analysis of any procedure that was violated, • actions taken to mitigate the incident, 	<p>5. Event Investigation</p> <ul style="list-style-type: none"> • None.

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<p>effecting performance.</p> <ul style="list-style-type: none"> • Compare the event with previous events. • Perform analysis to determine any detrimental effects that have occurred. <p>c. Root-Cause Determination Defined as casual factors that, if corrected, would preclude a recurrence of the event.</p> <p>d. Corrective Action Determination</p> <ul style="list-style-type: none"> • Determine actions. • Assign responsibility to implement the corrective actions. • Obtain final approval by Facility Manager. • Can Include: <ul style="list-style-type: none"> • Changes in procedures • Training • Design Modifications • Changes in administrative controls 	<ul style="list-style-type: none"> • identification and analysis of the root cause, • role of management in the incident, • corrective actions taken immediately, • plans and schedules for completing any future actions, • training required as a result of the incident, and • evaluation of the incident for implications to similar systems. <ul style="list-style-type: none"> • Root cause determination is part of the investigation format. <ul style="list-style-type: none"> • Corrective Action determination is part of the investigation. Responsibilities to implement the corrective actions are formally assigned and approved by the Facility Manager, who is the CAD Chair. Corrective actions may include: <ul style="list-style-type: none"> • Changes in procedures • Training • Design Modifications • Changes in administrative controls 	
<p>6. Investigative Report</p> <ul style="list-style-type: none"> • Report should include: <ul style="list-style-type: none"> • Description of the event • Impact of the event • Root causes of the event • Lessons learned from the event • Proposed corrective actions • Any positive aspects of the event (correct actions taken or planned) • The report should have the appropriate reviews and approvals. 	<p>6. Investigative Report</p> <ul style="list-style-type: none"> • The CAD uses the DOE ORPS reporting system. The ORPs format includes: <ul style="list-style-type: none"> • Description of the event • Impact of the event • Root causes of the event • Lessons learned from the event • Proposed corrective actions • Any positive aspects of the event (correct actions taken or planned) • ORPs reports require appropriate reviews and sign-offs. 	<p>6. Investigative Report</p>

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<p>7. Event Training</p> <ul style="list-style-type: none"> • Provide a mechanism to train personnel on aspects of the event in a timely fashion. 	<p>7. Event Training</p> <ul style="list-style-type: none"> • Corrective actions requiring training are tracked by the CAD Safety Division and are closed out during the first available training evolution for a specific job code, if practical. For corrective actions requiring immediate implementation, changes to procedures and appropriate training are performed prior to restart. Generic event training is covered in facility specific training, and selected CAD reportable occurrences are reviewed. Relevant "lessons Learned" information is provided to CAD personnel via the CAD Lessons Learned Coordinator. Relevant "Lessons Learned" information provided to the TVDG ES&H Coordinator is discussed at monthly Operations Group safety meetings or related by the Operations Supervisor at shift change. 	<p>7. Event Training</p> <ul style="list-style-type: none"> • None.
<p>8. Event Trending</p> <ul style="list-style-type: none"> • Track patterns of deficiencies, such as operator errors and inadequate procedures. • Keep a summary of all events for review. 	<p>8. Event Trending</p> <ul style="list-style-type: none"> • The CAD trends events as part of its Performance Indicator Program. • ORPS reports and summaries are available for review at http://www.tis.eh.doe.gov/oeaf/. 	<p>8. Event Trending</p> <ul style="list-style-type: none"> • None.
<p>9. Sabotage</p> <p>There should be an immediate investigation to:</p> <ul style="list-style-type: none"> • Ensure operability of safety systems • Decide if facility should be shutdown • Minimize any impact of discovered sabotage and determine future actions 	<p>9. Sabotage</p> <ul style="list-style-type: none"> • OPM 10.1 "Procedure for Reporting an Emergency, Unusual or Off-Normal Occurrence," requires an investigation in the event of a credible sabotage threat. 	<p>9. Sabotage</p> <ul style="list-style-type: none"> • None.