U.S. NUCLEAR REGULATORY COMMISSION MANAGEMENT DIRECTIVE (MD)

MD 8.3	NRC INCIDENT INVESTIGATION PROGRAM	DT-17-158
Volume 8:	Licensee Oversight Programs	
Approved By:	Mark A. Satorius Executive Director for Operations	
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Issuing Office:	Office of Nuclear Security and Incident Response Division of Preparedness and Response	
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EXECUTIVE SUMMARY

Directive and Handbook 8.3 are being revised to reflect organizational changes that have occurred since the last revision. These organizational updates reflect changes that occurred when the Office of Nuclear Security and Incident Response was first established. In addition, this revision will also reflect those organizational changes made when the Office of Nuclear Material Safety and Safeguards divided and the Office of Federal and State Materials and Environmental Management Programs was established.

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I. POLICY

It is the policy of the U.S. Nuclear Regulatory Commission to ensure that significant events involving reactor and materials facilities licensed by the NRC are investigated in a timely, objective, systematic, and technically sound manner; that the factual information pertaining to each event is documented; and that the cause or causes of each event are ascertained. The events may involve responses by an incident investigation team (IIT) or less formal responses by an augmented inspection team (AIT) or a special inspection team (SIT), depending upon the level of response required.

II. OBJECTIVES

- Promote public health and safety, instill public confidence, and provide for the common defense and security by reducing the frequency of incidents and preventing accidents.
- Increase the efficiency and effectiveness of NRC regulatory programs and licensee operations by the prompt dissemination of the facts, conditions, circumstances, and causes of significant events and the identification of appropriate followup actions.
- Improve regulatory oversight of licensee activities by uncovering facts that may indicate a need to reevaluate whether a particular aspect of the regulatory process before the event contributed directly to the cause or course of the event.
- Ensure that IIT, AIT, and SIT findings are properly dispositioned.

III. ORGANIZATIONAL RESPONSIBILITIES AND DELEGATIONS OF AUTHORITY

A. Commission

Approves the followup actions assigned as a result of IIT investigations.

B. Executive Director for Operations (EDO)

1. Approves an IIT investigation of a significant event and ensures that followup actions are taken, as defined in Sections II and III of the directive handbook.
2. Determines whether a potentially significant event is to be investigated by an IIT.
3. Selects the IIT leader and members, provides policy and technical direction, and ensures the independence of the IIT.
4. Concurs with the decision, made by the appropriate regional administrator and office director following an event that involves an IIT response, that facility operations may resume.
5. Resolves conflicts between a regional office and/or one or more program offices regarding such matters as the need to initiate an AIT or an IIT, the office or region assigned the responsibility for AIT implementation, and office representation on an AIT.

C. Office of the General Counsel (OGC)

1. Provides legal assistance in implementing the NRC incident investigation program.
2. Identifies and provides legal staff to support IITs.

D. Office of the Inspector General (OIG)

Participates as an observer during IITs and AITs in coordination with the Director of the Office of Nuclear Security and incident Response (NSIR).

E. Atomic Safety and Licensing Board Panel (ASLBP)

Provides professional stenographers to transcribe formal interviews conducted by the IIT.

F. Director, Office of Congressional Affairs (OCA)

Makes congressional notifications and arranges congressional briefings, as appropriate, to ensure Congress is informed of NRC responses to events.

G. Director, Office of Public Affairs (OPA)

1. Follows established NRC public affairs policies for keeping the media and the public informed of information related to NRC investigatory responses to events (see Sections II and III of the directive handbook).
2. Supports IITs.
3. Issues press releases announcing the formation of all AITs and IITs, and of SITs on a case-by-case basis, as deemed appropriate; arranges for press briefings. Informs the public of all AIT exit meetings, IIT status briefings, and meetings on the final investigation results.

H. Director, Office of Federal and State Materials and Environmental Management Programs (FSME)

1. Ensures that procedures governing AITs for materials events are defined, developed, coordinated, approved, distributed, and maintained.
2. Identifies and provides staff as members and leaders of IITs and AITs.
3. Provides assistance in implementing the NRC incident investigation program.
4. Coordinates with the appropriate regional administrator, and the Director of NSIR on events that warrant consideration of an AIT or an IIT as defined in this directive.
5. For materials events warranting consideration of an AIT or an IIT, consults with the appropriate regional administrator and the Director of NSIR to decide if an AIT or an IIT is appropriate. Identifies the potential nuclear material safety, health, or safeguards issues and provides recommendations to the EDO on events warranting consideration of an IIT, including the composition of the IIT.
6. Discusses with the appropriate regional administrator and obtains the EDO's concurrence on the acceptability of the decision by the affected licensee to resume operations following an event that involves an IIT response where the facility has been shut down.

I. Director, Office of Nuclear Material Safety and Safeguards (NMSS)

1. Ensures that procedures governing AITs for fuel facility events are defined, developed, coordinated, approved, distributed, and maintained.
2. Identifies and provides staff as members and leaders of IITs and AITs.
3. Provides assistance in implementing the NRC incident investigation program.
4. Coordinates with the appropriate regional administrator and the Director of NSIR on events that warrant consideration of an AIT or an IIT as defined in this directive.

5. For fuel cycle events warranting consideration of an AIT or an IIT, consults with the regional administrator, Region II, and the Director of NSIR to decide if an AIT or an IIT is appropriate. Identifies the potential safety, health security, or safeguards issues and provides recommendations to the EDO on events warranting consideration of an IIT, including the composition of the IIT.
6. Discusses with the appropriate regional administrator, the acceptability of the decision by the affected licensee to resume facility operations following an event that involves an IIT response where the facility has been shut down and obtains the EDO's concurrence.

J. Director, Office of Nuclear Reactor Regulation (NRR)

1. Ensures that procedures governing SITs and AITs for reactor events are defined, developed, coordinated, approved, distributed, and maintained.
2. Identifies and provides staff to be members and leaders of IITs and AITs.
3. Provides assistance in implementing the incident investigation program.
4. Coordinates with the appropriate regional administrator and the Director of NSIR on events that warrant consideration of an AIT or an IIT as defined in this directive.
5. For reactor events warranting consideration of an AIT or an IIT, consults with the appropriate regional administrator and the Director of NSIR to decide if an AIT or an IIT is the proper response. Identifies the potential reactor safety or reactor safeguards issues and provides recommendations to the EDO on events warranting consideration of an IIT and on the composition of the IIT.
6. Provides and coordinates risk analysis support to the regions for reactor events that warrant at least an AIT. NRR risk analysis for reactor events where only an SIT may be warranted must be provided if requested by the regional administrator.
7. Discusses with the appropriate regional administrator the acceptability of the decision by the affected licensee to resume facility operations following an event that involves an IIT response where the facility has been shut down and obtains the EDO's concurrence.

K. Director, Office of Nuclear Regulatory Research (RES)

1. Identifies and provides staff as members and leaders of IITs and AITs.
2. Provides assistance in implementing the NRC incident investigation program.
3. Provides risk analysis support (coordinated by NRR) to the regions for power reactor events that warrant consideration of at least an AIT. Risk analysis support for power

reactor events where only an SIT may be warranted will be provided if requested by the appropriate regional administrator.

4. Assists in identifying the potential nuclear material safety, health, or safeguards issues.

L. Director, Office of Investigations (OI)

1. Provides assistance in implementing the incident investigation program.
2. Identifies and provides staff as members of IITs and AITs.
3. For IIT and AITs, promptly coordinates with the appropriate region and headquarters offices information obtained in connection with any parallel OI investigation that indicated significant increases in the health, safety, or security significance of the event.

M. Director, Office of Nuclear Security and Incident Response (NSIR)

1. Administers the incident investigation program with the assistance of other NRC offices. In addition, establishes and maintains an NRC investigatory capability and identifies and coordinates training requirements for IIT candidates, as defined in Section I of this handbook.
2. Administers the incident investigation program to meet the objectives set forth in this directive, with the assistance of other NRC offices.
3. Ensures that procedures governing IITs are developed, coordinated, approved, distributed, and maintained.
4. Provides administrative support staff to IITs (and as requested for AITs) as necessary to achieve objectives defined in Section II of this handbook, with assistance from other NRC offices.
5. For events warranting consideration of an AIT or an IIT response, consults with the appropriate regional administrator and the Director of NRR (reactor events), the Director of NMSS (fuel facility events), or the Director of FSME (materials events) to decide if an AIT or an IIT is the proper response. Identifies the potential safety or safeguards issues and provides recommendations to the EDO on events warranting consideration of an IIT and on the composition of the IIT.
6. Establishes and maintains rosters of potential team leaders and team members who are certified through formal training in incident investigation.
7. Identifies needed training and coordinates training requirements for IIT candidates through the Technical Training Center.
8. Assesses the effectiveness of incident investigation program activities and recommends action, as appropriate, to improve the program.

9. Provides advice and assistance on the protection of classified or sensitive unclassified information related to the incident.

N. Chief Human Capital Officer (CHCO)

1. Assists with IIT training on an as-needed basis.
2. Coordinates and assists with IIT training development and delivery following established agency training policies and procedures.

O. Regional Administrators

1. In coordination with the Directors of NSIR and NRR, NMSS, or FSME, as appropriate, determine those events warranting consideration of investigation by an AIT or an IIT. As soon as it becomes clear that at least an AIT is warranted (preferably before an AIT is actually established), and when information identified in connection with an established AIT indicates significantly increased event significance, consult with the Directors of NSIR and NRR, NMSS, or FSME, as appropriate, to consider whether an upgrade to an IIT response is appropriate. Identify the potential health and safety issues and provide recommendations to the EDO on events warranting consideration of an IIT.
2. For reactor events or events that do not warrant consideration of an AIT, determine if an SIT is the appropriate NRC response.
3. Select the SIT and the AIT leader and members and direct, coordinate, and approve the performance of SITs and AITs.
4. Provide assistance in implementing the NRC incident investigation program.
5. Identify and provide staff as members and leaders of IITs, AITs, and SITs.
6. Make appropriate State notifications of NRC responses to events.
7. For all IITs and some AITs, issue a confirmatory action letter, as appropriate, to the affected licensee confirming the licensee's agreement that, within the constraints of ensuring health and safety, relevant failed equipment and areas are quarantined and subject to agreed-upon controls for troubleshooting; that information and data related to the event are protected; that the facility is maintained in a safe condition; and that if the facility, or any part, had been shut down as a result of the event, it shall not resume operation until concurrence is received from the NRC.
8. Discuss with the appropriate office director(s) the acceptability of the decision by the affected licensee to resume facility operations following an event that involves an IIT response where the facility has been shut down and obtains the EDO’s concurrence.

P. Office Directors

Participate in the incident investigation program as defined in this directive and handbook.

IV. APPLICABILITY

The policy and guidance of this directive and handbook apply to all NRC employees.

V. DIRECTIVE HANDBOOK

The handbook discusses the major components of the NRC's response to significant events (i.e., Incident Investigation, Augmented Inspection, and Special Inspection).

VI. REFERENCES

Code of Federal Regulations

10 CFR Part 20, Appendix B, Table 2, “Effluent Concentrations.”

10 CFR 71.87, “Routine Determinations.”

U.S. Nuclear Regulatory Commission Documents

Incident Response Manual Chapter 300, “Incident Investigation” (ML14113A013).

Inspection Manual Chapters

0609, “Significance Determination Process.”

1301, “Response to Radioactive Material Incidents That Do Not Require Activation of the NRC Incident Response Plan.”

1302, “Follow-up Actions and Action Levels for Radiation Exposures Associated with Materials Incidents Involving Members of the Public.”

Inspection Procedures

71153, “Followup of Events and Notices of Enforcement Discretion.”

93800, “Augmented Inspection Team.”

93812, “Special Inspection.”

Management Directives

8.2, “NRC Incident Response Program.”

8.10, “NRC Assessment Program for a Medical Event or an Incident Occurring at a Medical Facility.”

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I. MAJOR COMPONENTS AND RESPONSIBILITIES OF THE PROGRAM

A. Coverage

"Incident investigation" is a formal process conducted for the purpose of accident prevention. The process includes gathering and analyzing information; determining findings and conclusions, including the cause(s) of a significant event; and disseminating the investigation results for the U.S. Nuclear Regulatory Commission, industry, and public review. The components of the process follow.

B. Incident Investigation Team (IIT)

An Incident Investigation Team (IIT) consists of technical experts who, to the extent possible, do not have, and have not had, previous significant involvement with licensing and inspection activities at the affected facility and who perform the single NRC investigation of a significant event as described in Section II of this handbook. An NRC senior manager leads the IIT. Each IIT reports directly to the Executive Director for Operations (EDO) and is independent of regional and headquarters office management. Incident Response Manual Chapter (IRMC) 300, "Incident Investigation" (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14113A013), provides implementing guidelines for IITs.

C. Augmented Inspection Team (AIT)

An Augmented Inspection Team (AIT) consists of technical experts from the region in which the incident took place, augmented by personnel from headquarters or other regions, or by contractors as needed. An AIT performs an inspection of a significant

event as described in Section III of this handbook. AIT members may have had prior involvement with licensing and inspection activities at the affected facility. The AIT reports directly to the appropriate regional administrator. Inspection Procedure 93800, “Augmented Inspection Team,” provides implementing procedures for AITs.

D. Special Inspection Team (SIT)

A Special Inspection Team (SIT) consists of technical experts from the region in which the event took place and is generally not augmented by personnel from headquarters or other regions or by contractors. The SIT reports directly to the appropriate regional administrator. Inspection Procedure 93812, “Special Inspection,” provides implementing procedures for SITs.

E. Significant Event Process

1. General

(a) A significant event is any radiological, safeguards, security or other event at an NRC-licensed facility that poses an actual or potential hazard to public health and safety, common defense and security, property, or the environment. A significant operational event also may be referred to as “an incident” (see Management Directive (MD) 8.2, “NRC Incident Response Program,” for more information).

(b) The decision regarding an “investigatory response” for a significant event is defined by its risk significance, complexity, and generic safety or security implications. Significant events at power reactor facilities are evaluated on the basis of both deterministic criteria and risk significance (e.g., conditional core damage probability (CCDP)) in order to define the level of investigatory response. Other significant events (e.g., fuel facility, material, non-power reactor, safeguards, and security events) are evaluated on the basis of deterministic criteria in order to define the level of investigatory response.

(c) Significant events may involve responses by an IIT or less formal responses by an AIT or an SIT, depending upon the level of response deemed appropriate. The level of investigatory response for significant power reactor events is based on both the deterministic criteria and the risk criteria included in this section. (See Section I.E.2(a) of this handbook for the criteria for significant power reactor events and Section I.E.2(b) of this handbook for the criteria for significant reactor-non-power, fuel cycle, or materials events.) Consult MD 8.10, “NRC Assessment Program for a Medical Event or an Incident Occurring at a Medical Facility,” for further detailed criteria for medical events.

(d) Upon notification of a significant power reactor event, the regional administrator and staff should perform an initial review to assess the safety or security significance of the event in order to determine the level of response required.

(coordinated by the Office of Nuclear Reactor Regulation (NRR)) to the regions for power reactor events that warrant at least consideration of an AIT. If requested by the regional administrator, NSIR will provide risk analysis support for events for which only consideration of the need for an SIT may be warranted.

(e) If the initial review indicates that the event warrants at least consideration of an AIT response, the regional administrator shall consult with the Director of the Office of Nuclear Security and Incident Response (NSIR) and the Director of NRR (power reactor and non-power reactor events), the Director of the Office of Nuclear Material Safety and Safeguards (NMSS) (fuel facility events), or the Director of the Office of Federal and State Materials and Environmental Management Programs (FSME) (materials events) to decide if an AIT or an IIT response is appropriate on the basis of their collective judgment.

(f) Upon notification of a significant event at a non-power reactor, the Director of NRR and staff should perform the initial review to assess the safety or security significance of the event to determine the level of response required.

(g) If the results of the initial review of a significant event at a non-power reactor conclude that the event warrants at least consideration of an AIT response, the Director of NRR shall consult with the Director of NSIR and the appropriate regional administrator to decide if an AIT or an IIT is the proper response.

(h) If an IIT is agreed upon, the initiating office makes that recommendation to the EDO. The EDO resolves differences among offices concerning whether an AIT or an IIT is the proper response.

2. Criteria to Evaluate Level of Response for a Significant Event

(a) Significant Event at a Power Reactor

(i) A power reactor event meeting the following deterministic criteria should be evaluated for risk to aid in determining the level of response, if any. The event may include significant unplanned degraded conditions as identified by the licensee or the NRC.

- Operation that exceeded, or was not included in, the design bases of the facility.
- Major deficiency in design, construction, or operation having a potential generic safety implication.
- Significant loss of integrity of the fuel, the primary coolant pressure boundary, or the primary containment boundary.
- Loss of a safety function or multiple failures in systems used to mitigate an actual event.

- Possible adverse generic implication.
- Significant unexpected system interaction.
- Repetitive failures or events involving safety-related equipment or deficiencies in operations.
- Question or concern pertaining to licensee performance.
- Circumstance sufficiently complex, unique, or not well enough understood, or involving safeguards concerns, or involving characteristics the investigation of which would best serve the needs and interests of the Commission.
- Failure of licensee safety-related equipment or adverse impact on licensee operations as a result of a safeguards initiated event (e.g., tampering).
- Actual intrusion into the protected area.
- Significant loss of safeguards information that could compromise common defense and security.

(ii) A significant power reactor event meeting the above deterministic criteria should be evaluated for risk as follows:

- CCDP best reflects loss of defense in depth due to the event, regardless of whether the cause is deficient licensee performance or otherwise.
- CCDP accounts for actual plant configuration, including equipment unavailable because of maintenance and testing.

(iii) Inspection Manual Chapter 0609, “Significance Determination Process,” addresses CCDP determination. Although CCDP represents a fundamentally different concept for events than for degraded conditions that do not initiate an event, the same guidelines may be applied to each in assisting management in its risk-informed decisionmaking.

(iv) The lack of complete event information at the time of the NRC response decision focuses attention on the uncertainty of influential assumptions and their effect on the risk significance. Inspection Procedure 71153, “Followup of Events and Notices of Enforcement Discretion,” discusses inspector input to risk analyses that is needed to understand the risk significance. In determining the risk significance of an event, NRC should assess the potential influence on risk of the following:

- Dominant core damage sequence(s).
- Level of confidence in failure/unavailability values assumed for the sequence(s).

- Influence on the CCDP estimate of contributing factors where the confidence level is low.

(v) The following table lists appropriate power reactor event response options as a function of CCDP. The overlap of options relative to CCDP levels provides the opportunity to select different inspection or investigation options on the basis of factors like uncertainty of the risk estimate coupled with the deterministic insights. Risk insights should also be used in considering the number of inspectors, their expertise, and the areas of focus. In addition to risk, NRC should assess whether degraded conditions could increase the likelihood of a large early release resulting from containment failure.

Estimated CCDP				
CCDP < 1E-6	**1E-6 –> 1E-5**	**1E-5 –> 1E-4**	**1E-4 –> 1E-3**	**CCDP > 1E-3**
No Additional Inspection				
	SI			
		AIT		
			IIT	

(b) Significant Non-power Reactor, Fuel Facility, or Materials Event

In addition to the above guidance for power reactor events (and guidance found in Inspection Manual Chapter (MC) 1301, “Response to Radioactive Material Incidents That Do Not Require Activation of the NRC Incident Response Plan,” and MC 1302, “Follow-up Actions and Action Levels for Radiation Exposures Associated with Materials Incidents Involving Members of the Public”), the following guidance should be considered for any significant reactor, fuel cycle, or materials event:

(i) An IIT should be considered for a significant event with one or more of the following characteristics:

- Led to a significant radiological release (levels of radiation or concentrations of radioactive material in excess of 10 times any applicable limit in the license or 10 times the concentrations specified in 10 CFR Part 20, Appendix B, Table 2, “Effluent Concentrations,” when averaged over a year) of byproduct, source, or special nuclear material to unrestricted areas.
- Led to a significant occupational exposure or significant exposure to a member of the public. In both cases, “significant” is defined as five times the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles).

- Led to a site area emergency.
- Exceeded a safety limit of the licensee's technical specifications.
- Involved the medical use of byproduct, source, or special nuclear material and may have resulted in deterministic effects to a significant number of patients or individuals over a long period (months or years).
- Involved the medical, academic, or commercial use of byproduct, source, or special nuclear material and resulted in the potential exposure of a significant number of individuals above occupational or public dose limits.
- Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use, which resulted in the exposure of a significant number of individuals.
- Involved byproduct, source, or special nuclear material, which may have resulted in a fatality.
- Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission.
- Actual intrusion into the protected area or controlled access area or the established first-line physical barrier for controlling personnel access to the facility.
- Involved a willful disclosure of classified information with potential damage to national security.

(ii) For an event of lesser health and safety or safeguards significance an AIT should be formed. The characteristics of this event may include one or more of the following:

- Led to a radiological release of byproduct, source, or special nuclear material to unrestricted areas that resulted in occupational exposure or exposure to a member of the public in excess of the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles).
- Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use and had the potential to cause an exposure of greater than 5 rem to an individual or 500 mrem to an embryo or fetus.

- Involved a significant infraction or repeated instances of safeguards infractions that demonstrate the ineffectiveness of facility security provisions.
- Involved repeated instances of inadequate nuclear material control and accounting provisions to protect against theft or diversions of nuclear material.
- Involved the failure of the dam for mill tailings with substantial release of tailings material and solution offsite.
- Involved the failure of radioactive material packaging that resulted in external radiation levels exceeding 10 rads/hr or contamination of the packaging exceeding 1000 times the applicable limits specified in 10 CFR 71.87, “Routine Determinations.”
- Involved a loss of classified or safeguards information with potential disclosure to unauthorized individuals affecting national security or the common defense and security.

II. INCIDENT INVESTIGATION TEAM

The investigatory initiative involving a response by an incident investigation team (IIT) is described in this part.

A. Objectives of an Incident Investigation Team

The objectives of an IIT are to—

1. Conduct a timely, thorough, systematic, formal, and independent investigation of certain safety-significant or security events occurring at facilities licensed by the NRC.
2. Collect, analyze, and document factual information and evidence sufficient to determine the probable cause(s), conditions, and circumstances pertaining to the event.

B. Scope of an Incident Investigation

1. An IIT investigation should emphasize factfinding and determination of probable cause for a significant event (as defined in Section I of this handbook). The scope of the investigation must be sufficient to ensure that the event is clearly understood, the relevant facts and circumstances are identified and collected, and the probable cause(s) and contributing cause(s) are identified and substantiated by the evidence associated with the event. The investigation must consider whether licensee and NRC activities preceding and during the event were timely and adequate.

2. The scope of an IIT investigation must include conditions preceding the event, event chronology, systems response, human factors considerations, equipment performance, precursors to the event, emergency response, safety significance, radiological considerations, security significance, and findings and conclusions. The scope of the IIT investigation will be established by a charter attached to the initiating memorandum from the appropriate office director to the Executive Director for Operations (EDO).

3. The scope of the investigation shall exclude—

   (a) Specific assessment of violations of NRC rules and requirements;

   (b) Review of the design and licensing bases for the facility, except as necessary to assess the cause for the event under investigation;

   (c) Assessment of reasonable assurance of offsite emergency response capabilities of State and local agencies; and

   (d) Determination for resumption of licensed operation.

4. The NRC will consider information collected as part of the IIT process when a decision is made by the affected licensee to resume facility operations before issuance of the IIT report. These instances require close coordination between the IIT leader, the regional administrator, and the appropriate program office director.

C. Schedule

1. The IIT must be activated as soon as practicable after the health and safety significance of the event is determined and will begin its investigation as soon as practicable after the facility has been placed in a safe, secure, and stable condition. If there is an NRC incident response, the IIT investigation will begin after the incident response is deactivated. Please refer to IRMC 300 for detailed activation and scheduling guidance.

2. The IIT must issue interim reports at appropriate intervals outlining the status, plans, and relevant new information related to its investigation.

3. The IIT must prepare and transmit its final report to the Commission and the EDO within 45 days of activation of the team, unless relief is granted by the EDO. The EDO will normally schedule a meeting for the IIT to brief the Commission on its investigation approximately 1 week after receipt of the final report.

4. Information contained in the report is not to be released to the public until a copy of the final report is placed in the Agencywide Documents Access and Management System (ADAMS), which normally occurs during the day of the Commission briefing, if one is conducted. If deemed necessary, the EDO may forward a copy of the final report to the affected licensee before the Commission briefing and simultaneously

forward a copy of the final report to ADAMS. Following the Commission briefing, the EDO will transmit a copy of the final report to the licensee and the NRC staff for review and comment before the EDO defines the followup actions and assigns them to NRC offices.

D. Team Composition and Qualifications

1. The IIT will be composed of technical experts selected on the basis of expertise relevant to the event under investigation and their freedom from significant involvement in the licensing and inspection of the facility involved or other activities associated with issues that had a direct effect on the course or consequences of the event. The number of members and areas of technical expertise required for each IIT will be determined on the basis of the type of facility and characteristics of the event.
2. The special procedures for clearing non-Government individuals, which are outlined in IRMC 300, apply whenever these individuals are used to support an IIT.
3. The team leader and expert members should, to the extent practicable, be selected from rosters of candidates who have been certified through formal training in incident investigation. An NRC senior manager from the Senior Executive Service shall be the team leader.

E. Additional IIT Duties

1. The IIT carries out the single NRC fact finding investigation of the event and is authorized to pursue and is responsible for pursuing all aspects of an event that are within its scope as defined above. NRC response personnel on site shall provide support as needed to ensure the efficient and effective transition to investigation of the event in a manner that does not interfere with facility safety.
2. The following duties are in addition to the duties defined elsewhere in this directive and handbook.

   (a) EDO

   (i) Approves the formation of an IIT, selects the team leader and members, provides policy and technical direction to the IIT, and ensures the independence of the IIT.

   (ii) Concurs in the decision made by the appropriate regional administrator and office director following an event that involves an IIT response that the affected licensee may resume regulated activities or facility operations.

   (iii) Determines that the investigation was conducted effectively and was consistent with the goals of the incident investigation program.

   (iv) Assigns followup actions associated with the IIT report.

(v) Monitors the closure of IIT findings (i.e., staff actions) of the assigned NRC office (using the EDO's System of Tracking and Reporting (STARS)) and evaluates the staff's actions to confirm that pertinent aspects of each IIT finding are addressed in the implemented resolution.

(vi) Resolves conflicts between a regional office and/or one or more program offices regarding matters like the need to initiate an AIT and the office assigned the responsibility for an AIT versus an IIT.

(b) Director, NSIR

(i) Provides administrative support staff to the IIT to help the team meet its objectives and schedule. This may include security experts in the case of security issues.

(ii) Provides advice and consultation to the IIT leader on procedural matters and suggestions regarding completeness of the IIT report.

(iii) Coordinates with the Office of Administration to provide support necessary to publish an IIT report as a NUREG document.

(c) Regional Administrators

(i) Provide assistance in briefing and supplying background information to the IIT when it arrives on site.

(ii) Provide onsite support for the IIT during its investigation.

(iii) Identify and provide staff to monitor licensee troubleshooting activities to assess equipment performance.

(iv) Consult with the Director of NRR (or, as appropriate, the Director of NMSS, FSME, or NSIR) to ensure that a decision is reached that the affected licensee may resume facility operations following an event that involves an IIT response.

(d) The IIT Leader

(i) Directs and manages the IIT in its investigation and ensures that the objectives and schedules are met for the investigation as defined in this handbook.

(ii) Identifies, adds, and removes equipment and areas from the quarantined list to ensure facility safety. In addition, ensures that the licensee is able to perform appropriate maintenance and testing of equipment and determine causes for equipment anomalies.

(iii) Works with OPA in providing the news media with information on IIT activities.

(iv) Serves as principal spokesperson for IIT activities when interacting with the licensee, NRC offices, the Advisory Committee on Reactor Safeguards (ACRS), news media, and other organizations on matters involving the investigation.

(v) Prepares frequent status reports documenting IIT activities, plans, significant findings, and health and safety concerns that may require timely remedial actions or issuance of information notices, bulletins, or orders.

(vi) Receives direction from and supervision by the EDO.

(vii) Identifies and requests that the EDO provide additional IIT resources (e.g., additional members, consultants, contractor assistance), as needed.

(viii) Identifies and recommends to the EDO further studies and investigations, for example, as those involving staff performance in regulatory activities before the event, when significant concerns could not be thoroughly evaluated because of time or resource limitations.

(ix) Ensures, in cooperation with the IIT members and the technical writer/editor, preparation of the final report by the due date established by the EDO.

(x) Briefs the Director of NRR (or, as appropriate, the Director of NMSS, FSME, or NSIR) and the regional administrator on the facts surrounding the event in support of decisionmaking concerning resumption of facility operations by the affected licensee.

(xi) Promptly documents and conveys significant ancillary findings or information outside the scope of the IIT charter to regional management for followup action.

(xii) Ensures that a lessons-learned evaluation is conducted and documented on the IIT efforts and results.

F. Conduct of an Investigation

1. The investigation process is based on the principles of incident investigation provided in IIT training programs and described in IRMC 300.

2. The composition of the IIT must be structured and the procedures developed to maintain independence and objectivity. Personnel possessing a high degree of independence, ingenuity, and resourcefulness should be selected to ensure that the investigation is conducted in a timely, professional, thorough, and coordinated manner.

3. Implementing procedures to guide and control the establishment and investigatory activities of an IIT are included in IRMC 300. This procedure provides guidance for—

(a) Activating an IIT, including responsibilities, coordination, communication, team composition, and guidance;

(b) Outlining an IIT investigation of an event, including responsibilities, work plan, communication, interfaces, scope, and schedule;

(c) Interviewing personnel;

(d) Collecting and maintaining records, documents, data, and other information;

(e) Treating quarantined equipment and areas; and

(f) Preparing the IIT report, reviewing the IIT report for classified or sensitive unclassified information, and distributing the IIT report and related documents.

4. For an IIT involving a medical event, additional guidance is provided in MD 8.10.

G. Followup

1. Following NRC staff and licensee review and comment on the IIT report, the EDO identifies generic and facility-specific staff actions that must be taken as a result of the findings of the investigation. Following Commission approval, the EDO shall assign an NRC office responsibility for each action. Office directors shall provide a written status report on the disposition of each assigned action as directed by the EDO.

2. The memorandum assigning followup actions (i.e., staff actions) should address all IIT findings, including those that are judged to require no followup action, in order to document the consideration of all findings. The resolution of each staff action will be documented by the assigned NRC lead office in a single safety evaluation report, and each staff action will be individually tracked by the EDO's STARS.

III. AUGMENTED INSPECTION TEAM

The inspection initiative involving a response by an augmented inspection team (AIT) is described in this part.

A. Objectives of an Augmented Inspection Team

The objectives of an AIT are to—

1. Conduct a timely, thorough, and systematic inspection related to significant events at facilities licensed by the NRC.

2. Assess the health and safety significance of the event and communicate to regional and headquarters management the facts and safety or security concerns related to the event so that appropriate followup actions can be taken (e.g., study a generic concern, issue an information notice, bulletin, or issue a generic communication).

3. Collect, analyze, and document factual information and evidence sufficient to determine the cause(s), conditions, and circumstances pertaining to the event.

B. Scope of an Augmented Inspection

1. An AIT response should emphasize factfinding and determination of probable cause(s), as well as the conditions and circumstances relevant to issues directly related to the event.
2. The AIT response should be sufficiently broad and detailed to ensure that the event and related issues are well defined, the relevant facts and circumstances are identified and collected, and the findings and conclusions are identified and substantiated by the information and evidence associated with the event. The inspection should consider the adequacy of the licensee's actions during the event.
3. The regional administrator directing the AIT inspection shall define and revise the scope of the inspection, as appropriate.
4. It is not the responsibility of an AIT to—
   (a) Examine the regulatory process (to determine whether that process contributed directly to the cause or course of the event).
   (b) Determine whether NRC rules or requirements were violated, or recommend enforcement actions.
   (c) Address licensee actions related to plant restart.
   (d) Address the applicability of generic safety or security concerns to other facilities.

C. Schedule

An AIT must be activated as soon as practicable after the health and safety significance of the event is determined and should begin its inspection as soon as practicable after the facility has been placed in a safe, secure, and stable condition. Please refer to Inspection Procedure (IP) 93800, “Augmented Inspection Team,” for detailed activation and scheduling guidance.

D. Team Composition and Qualifications

1. An AIT is composed of technical experts from the responsible regional office, augmented by personnel from headquarters or other regions or by outside contractors with special technical qualifications to complement the technical expertise of the regional response. The size of an AIT and the areas of expertise will be determined by the regional administrator and coordinated with other NRC offices on the basis of the event and its implications. Please refer to IP 93800 for detailed team composition and qualification guidance.

2. Special procedures for clearing non-Government individuals, which are outlined in IRMC 300, apply whenever they are used to support an AIT.
3. An AIT leader will normally be selected from the responsible regional office unless the lead is transferred to another NRC office by mutual consent.

E. Additional AIT Duties

An AIT is responsible for pursuing all pertinent aspects of an event. The following duties of NRC offices are in addition to those defined elsewhere in this directive and handbook.

1. EDO

   Resolves conflicts between a regional office and/or one or more program offices regarding matters like the need to initiate an AIT, the office assigned the responsibility for AIT implementation, and office representation on an AIT.

2. Director, NRR

   (a) For reactor events, monitors and evaluates the AIT process and products and ensures that AIT procedures are properly maintained.

   (b) Defines, develops, coordinates, approves, and maintains the necessary procedures for reactor events to guide and control AIT activities at a reactor facility. Reviews the draft AIT charter.

   (c) For reactor events, reviews the AIT report for generic safety implications and initiates followup action, as appropriate.

3. Director, NMSS

   (a) For fuel cycle events, monitors and evaluates the AIT process and products and ensures that AIT procedures are properly maintained.

   (b) Defines, develops, coordinates, approves, and maintains the necessary procedures that guide and control AIT activities at fuel cycle facilities and reviews the draft AIT charter.

   (c) For fuel cycle events, reviews the AIT report for generic safety and security implications and initiates followup action, as appropriate.

4. Director, FSME

   (a) For materials events, monitors and evaluates the AIT process and products and ensures that AIT procedures are properly maintained.

   (b) Defines, develops, coordinates, approves, and maintains the necessary procedures that guide and control AIT activities involving material licensees and reviews the draft AIT charter.

(c) For materials events, reviews the AIT report for generic safety and security implications and initiates follow-up action, as appropriate.

5. Regional Administrators

(a) Select the AIT leader and members in coordination with the appropriate headquarters office.

(b) Staff, direct, supervise, coordinate, and approve the performance of AITs.

(c) Prepare, in coordination with NRR, NMSS, or FSME, a written charter for the AIT. The charter shall include the basis for the formation of the AIT.

(d) Ensure that the AIT response is initiated, defined, and conducted in a manner that achieves the objectives of the AIT.

(e) Evaluate if and when the AIT inspection should be upgraded to an incident investigation team (IIT) investigation and, in consultation with the directors of NRR and/or NMSS, FSME and NSIR, recommend to the EDO that an IIT response is warranted.

(f) Provide administrative support and resources to assist the AIT in meeting its objectives and schedule.

(g) Issue a periodic EDO Daily Note and Preliminary Notification, if warranted, to the EDO and coordinate with OPA the development of a press release when an AIT response is implemented; provide updates, as appropriate.

(h) Identify and request additional expertise for AIT response from other NRC offices.

(i) Identify followup actions needed based on the AIT findings and forward to the appropriate headquarters office for action.

(j) Coordinate with OPA and appropriate headquarters offices to ensure that the AIT exit meeting is open to the public for observation, as appropriate.

6. AIT Leader

(a) Manages the AIT in its inspection and ensures that the objectives and schedules are met for the inspection as defined in this handbook.

(b) With the approval of the appropriate regional administrator, adds and removes equipment and areas from a quarantined list (if applicable) to ensure facility safety. In addition, ensures that the licensee is able to perform appropriate maintenance and testing of equipment and determine causes for equipment anomalies.

(c) Serves as principal spokesperson for the AIT activities in interacting with the licensee, NRC offices, ACRS, news media, and other organizations on matters involving the inspection.

(d) Prepares interim status reports documenting AIT activities, plans, and new information. Communicates to NRC offices any significant findings or health or safety concerns that may require timely remedial actions or issuance of information notices, bulletins, or orders. Identifies where new information indicates a significant increase or decrease in event significance, which should be considered in any recommendation to upgrade the AIT response to an IIT investigation or downgrade the AIT response to an SIT.

(e) Receives direction and supervision from the appropriate regional administrator.

(f) Coordinates with OPA in providing the news media with information on AIT activities.

(g) Identifies and requests that the appropriate regional administrator provides additional AIT resources (e.g., additional members, consultants, contractor assistance), as needed.

(h) Ensures the issuance of the AIT final report within 30 calendar days of inspection completion (i.e., the day of the exit meeting). The AIT report distribution list shall include the EDO, the ACRS, the Commissioners, the appropriate headquarters project manager, the Division of Information Management of the Office of Information Services, and for power reactor events, the branch responsible for event assessments. A copy of the report should be placed in the Agencywide Documents Access and Management System immediately after it is provided to the affected licensee.

(i) Ensures that a lessons-learned evaluation is conducted and documented on the AIT effort and results.

F. Conduct of an Augmented Inspection

1. The AIT process is based on the in-house principles of incident investigation provided in NRC's incident investigation training courses and the general principles described in IRMC 300.

2. The composition of the AIT must be structured and the procedures developed to maintain objectivity. Personnel selected shall possess a high degree of technical capability and should be able to ensure that the inspection is conducted in a timely, professional, thorough, and coordinated manner.

3. The procedures that guide and control the establishment and inspection activities of an AIT are included in IP 93800, and IRMC 300. These documents provide guidance for—

   (a) Activating an AIT, including responsibilities, coordination, communication, team composition, and guidance;

   (b) Outlining the work plan for conducting an AIT inspection in response to an event, including responsibilities, communication, interfaces, scope, and schedule;

   (c) Interviewing personnel;

   (d) Collecting and maintaining records, documents, data, and other information;

   (e) Controlling quarantined equipment and areas;

   (f) Providing support, as necessary, for an AIT;

   (g) Upgrading an AIT to an IIT investigation or downgrading it to an SIT; and

   (h) Interfacing with other parallel investigations (e.g., those conducted by OI, the Federal Bureau of Investigation, or State authorities).

4. For an AIT involving a medical event, additional guidance is provided in MD 8.10.

G. Followup

1. Identification, review, and approval of licensee corrective actions, licensee actions before resumption of facility operations, and NRC enforcement actions must be accomplished through the normal organizational structure and procedures.

2. The appropriate regional administrator will initiate followup actions needed on the basis of AIT findings. Generally, staff will handle followup actions through normal office procedures. For example, the regional office might initiate a task interface agreement with NRR to examine a particular technical issue and track it. Specific guidance on resolution and closeout of followup actions are provided in the NRC Inspection Manual and inspection procedures.