

# INCIDENT REPORTING AND INVESTIGATION

NIST S 7101.24

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## 1. PURPOSE

This suborder establishes the requirements and roles and responsibilities for the reporting and investigation of work-related safety incidents and near misses to determine why these events occurred and what actions must be taken to prevent their recurrence, and for the dissemination throughout the organization of the related incident information and lessons identified. In addition, this suborder provides administrative requirements for complying with Federal Occupational Safety and Health Administration (OSHA) Injury and Illness Recordkeeping and Reporting Requirements.

## 2. BACKGROUND

NIST management is committed to the safety of everyone who works for, works at, or visits NIST. As part of this commitment, NIST strives to prevent safety incidents by effectively managing risk in all its activities. Essential to effectively managing risk is to learn as much as possible from incidents that have occurred and to take actions to prevent their recurrence. Success in this depends, in turn, on the prompt reporting of incidents and on the timely completion and use of the results of comprehensive incident investigations. Therefore, NIST shall report and investigate incidents in a thorough and timely manner, and share incident reports and lessons identified effectively throughout the organization. This incident data will be analyzed to identify systemic weaknesses in the NIST occupational safety and health (OSH) management system, leading to corrective actions to address those weaknesses.

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<sup>1</sup> For revision history, see Appendix A.

### 3. APPLICABILITY

a. The provisions of this suborder apply to NIST employees and covered associates<sup>2</sup> engaged in **work-related** activities (see Section 7, DEFINITIONS).

b. The requirements of this Suborder apply to the following types of events, as defined in Section 7:

(1) Incidents:

(a) Injury;

(b) Illness;

(c) Exposure;

(d) Contamination by radioactive material;

(e) Spill / release;

(f) Property damage; and

(g) Other events with actual safety or environmental impacts; and

(2) Near misses.

c. The requirements of this suborder do not apply to unsafe conditions or practices, unless they result in an incident or near miss event.<sup>3</sup>

d. This suborder does not address the following topics:

(1) Emergency communications from staff members and first responders, other than communications for reporting of Immediate Notification Incidents as outlined in Section 6d of this suborder, through Organizational Unit (OU) management and emergency

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<sup>2</sup> As per [NIST O 7101.00: Occupational Safety and Health Management System](#), a NIST associate permitted to perform work at a NIST workplace and subject to NIST policies and procedures to the extent allowed by law and the terms of the associate's agreement. Covered associates include Foreign and Domestic Guest Researchers (including contractors who perform NIST R&D/technical work); Research Associates; Intergovernmental Agency Personnel Act assignees; Facility Users; Volunteer Students; and other federal employees who perform work at NIST workplaces.

<sup>3</sup> Unsafe conditions and practices should be reported through appropriate channels in accordance with procedures established in NIST S 7101.02: *Employee Reporting of Unsafe or Unhealthful Working Conditions*.

communication channels, to the NIST Director and Associate Directors, the Department of Commerce, and others pursuant to an emergency or potentially serious incident. Employees should refer to the Office of Facilities and Property Management web page for guidance: <https://inet.nist.gov/ofpm>;

(2) Specific steps that employees and covered associates should take pursuant to sustaining work-related occupational injuries or illnesses. Employees should refer to the Office of Human Resources Management Workers Compensation Program at <https://inet.nist.gov/ohrm/services/owcp>; and

(3) Requirements associated with consequence management, *i.e.*, policies, procedures, and forms related to workers' compensation, automobile accidents, and personal property claims.

#### 4. EXTERNAL REFERENCES

- a. 29 Code of Federal Regulations (CFR) Part 1904, [Recording and Reporting Occupational Injuries and Illnesses](#)
- b. 29 CFR Part 1960, [Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters](#)

#### 5. APPLICABLE NIST OCCUPATIONAL SAFETY AND HEALTH DIRECTIVES

- a. NIST O 7101.00: Occupational Safety and Health Management System
- b. NIST Suborder (S) 7101.23: Safety Education and Training
- c. NIST S 7101.02: Employee Reporting of Unsafe or Unhealthful Working Conditions
- d. NIST S 7101.55: Hearing Protection

#### 6. REQUIREMENTS

- a. General Requirements

(1) All **incidents** and near misses shall be reported by employees and covered associates to their OU line management using OU implementation procedures established per the requirements of Section 6f.

(2) Each such incident or near miss (“event”) shall be documented and investigated to identify why it occurred and what actions are needed to prevent recurrence.

(3) The NIST web-based application titled ***Incident Reporting and Investigation System (IRIS)*** shall be used to document events subject to this Suborder, including the relevant investigations. The following general requirements shall apply:

(a) Report Format - Events will be documented using one of two formats, based generally on the complexity and seriousness of the event (see Section 7, Definitions):

i. Streamlined Format (Streamlined Report only); or

ii. Standard Format (Initial Report followed by Investigation Report).

(b) Reporting Timeframes

i. Streamlined and Initial Reports shall be submitted into the ***IRIS*** application within two (2) business days of line management being notified<sup>4</sup>, if possible.

ii. Investigation Reports shall be recorded in ***IRIS*** within 20 (twenty) business days of line management being notified, if possible.

b. Initial Evaluation and Information Gathering

As per OU implementation procedures, OU Line Management shall evaluate each event reported to:

(1) Verify the applicability of this Suborder;

(2) Classify each event as an incident or near miss, based on the definitions in Section 7.

(3) Evaluate each incident to determine if it meets the definition of an **Immediate Notification Incident** (see Section 7, Definitions).

(a) When an Immediate Notification Incident is identified, the reporting procedure outlined in Section 6c below shall be followed immediately and OSHE shall assume responsibility for subsequent reporting and investigation requirements.

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<sup>4</sup> Cases involving OSHA Recordable Standard Threshold Shift hearing losses shall be entered into IRIS within two (2) business days of line management being notified by letter that the case has either been confirmed by retest, or that a retest will not be taken. Please see NIST S 7101.55: *Hearing Protection* for additional information regarding these types of incidents.

(4) Determine which IRIS report format (Streamlined or Standard) will be used and collect information needed to submit a Streamlined or Initial Report, as appropriate.

(a) OU management shall consider the significance of the circumstances of the event to determine which format is required to be used.

(b) The Standard Format shall be used for the following:

i. Immediate Notification Incidents;

ii. Incidents known by the OU to be **OSHA Recordable cases** (see Section 7, Definitions) unless the OU has received prior approval from the Incident Reporting and Investigation (IRI) Program Manager (PM) to use the Streamlined Format; and

iii. Incidents that result in contamination with or exposure to radioactive material.

(c) The **OU IRIS Administrator** and the **Incident Reporting and Investigation (IRI) Program Manager (PM)** (see Section 7, Definitions) have the authority to require the use of the Standard Format for an event.

(5) Identify OUs involved in the event, specifically:

(a) Identify all OUs with employees involved;

(b) Identify the OU with responsibility for the space where the event occurred; and

(c) Identify the OU with responsibility for the equipment involved.

c. Immediate Notification Incident Procedure

(1) Immediate Notification Incidents shall be reported to OSHE as soon as possible as per the following procedure:

(a) During normal business hours:

i. Call OSHE at x5375, Option 3.

ii. If no one picks up, send an email to [serious.injury@nist.gov](mailto:serious.injury@nist.gov).

(b) Outside of normal business hours, send an email to [serious.injury@nist.gov](mailto:serious.injury@nist.gov).

(2) For each Immediate Notification Incident, the following information shall be provided to OSHE:

(a) A brief description of the incident;

(b) The location of the incident;

(c) The time of the incident;

(d) The category of incident, as follows:

i. Fatality;

ii. In-patient hospitalization;

iii. Amputation; or

iv. Loss of an eye;

(e) The number of employees and/or covered associates who suffered the incident;

(f) The names of the employee(s) and/or covered associate(s) who suffered the incident;

(g) An OU point of contact with phone number; and

(h) Periodic updates of the status of the employees(s) or covered associate(s) involved and/or changes to previously provided information.

(3) The NIST CSO shall confirm the reported incident meets the definition of an Immediate Notification Incident.

(4) The NIST CSO shall report confirmed Immediate Notification Incidents to the 24-Hour OSHA hotline at (800) 321-OSHA, within the following timeframes:

(a) Work-related fatality – within 8 hours of finding out; and

(b) Work-related amputation, loss of an eye, or in-patient hospitalization of one or more employees or covered associates – within 24 hours of finding out.

(5) The NIST CSO shall report the following information to OSHA, for each Immediate Notification Incident:

(a) The establishment name (e.g. NIST Gaithersburg, NIST Boulder, etc.)

(b) The NIST contact person and phone number

(c) The information in items 6c(2)(a)-(f) above.

(6) After notifying OSHA of an Immediate Notification Incident, the NIST CSO shall submit the following reports into IRIS:

(a) An Initial Report per the requirements of Sections 6a(3)(b)i and 6d; and

(b) An Investigation Report per the requirements of Sections 6a(3)(b)ii and 6e.

d. Submittal of Streamlined and Initial Reports

A Streamlined or Initial Report shall be submitted for each event, based upon the format selected in Section 6b above, and subject to the following requirements:

(1) OU Responsibility for Streamlined or Initial Report Submittal

(a) For an Immediate Notification Incident, OSHE, with participation from the OU(s) involved, shall develop and submit the required report.

(b) For an event that involves individuals, space, and equipment from only one OU, that OU shall submit the required report.

(c) For an event involving multiple individuals and/or space and/or equipment from different OUs, the OU IRIS Administrators from all OUs involved shall coordinate with each other to identify the OU to develop and submit the required report, with appropriate support from the other OU(s).

(d) For an event where no individuals are involved (*e.g.*, a fire that occurred in a building after hours or a chemical spill in a laboratory when no one was present), the OU responsible for the space in which the event occurred shall submit the required report.

266 (2) IRIS Submitter Requirements

267  
268 (a) Streamlined and Initial Reports shall be entered into IRIS only by employees  
269 designated and trained as OU IRIS Report Submitters.

270  
271 (b) Streamlined and Initial Reports should not be submitted by employees directly  
272 involved in the event.

273  
274 (3) Streamlined Report Content

275 Streamlined Reports shall include the following information:

276  
277 (a) General Information:

278  
279 i. Name, OU, Division, and Group of the individual submitting the report;

280  
281 ii. Type of event (*e.g.*, Injury, Near Miss, Property Damage, *etc.*);

282  
283 iii. Date and time of event, if known;

284  
285 iv. Location of the event and type of space (*e.g.*, laboratory, office, hallway); and

286  
287 v. When OU line management was first notified of the event;

288  
289 (a) Individuals Involved - For each person involved in an event, the following  
290 information shall be included:

291  
292 i. Name;

293  
294 ii. Position;

295  
296 iii. Employment Status:

297  
298 (i) Employee;

299  
300 (ii) Associate; or

301  
302 (iii) Visitor;



iv. Status of the individual as a result of the event:

(i) Injured;

(ii) Became Ill;

(iii) Exposed; or

(iv) Combination of i-iii above; or

(v) None of the above;

v. If injured, ill, or exposed:

(i) A description of the injury, illness, or exposure;

(ii) A description of the immediate care given;

(iii) If the individual will miss any days of work, if known; and

(iv) If the individual will be restricted or transferred to another job because of the event, if known.

(c) Event Description

i. A brief description of the activity leading up to or taking place at the time of the event;

ii. A description of what happened, or for a near miss, what could have happened;

iii. A description of any immediate measures taken to respond to the event, including any actions taken to prevent workers from exposure to hazards;

iv. A description of why the event occurred, including identification of any hazard(s) that directly caused or almost caused the event;

v. A description of the measures taken to prevent recurrence, including the abatement actions taken or planned to address any hazard(s) identified in Step iv above;

- (i) For abatement actions that will take 30 calendar days or longer to implement, an abatement plan must be uploaded, including the planned completion date and the name of the individual(s) responsible for implementing the plan.

(d) Property Damage

- i. A brief description of any damage to government property, other than motorized vehicles;
- ii. A brief description of any damage to personal property, other than motorized vehicles; and
- iii. A brief description of any damage to motorized vehicles.

(4) Initial Report Content for Standard Format shall include the following information:

(a) General Information:

- i. Name, OU, Division, and Group of the individual submitting the report;
- ii. Type of event (*e.g.*, Injury, Near Miss, Property Damage, etc.);
- iii. Date and time of event, if known;
  - (i) For cases involving OSHA Recordable Standard Threshold Shift (STS) hearing losses, the date the STS is confirmed by letter shall be entered.
- iv. Location of the event and type of space (*e.g.*, hallway);
- v. When OU line management was first notified of the event;
- vi. The OU responsible for the space where the event occurred;
- vii. The OU responsible for any equipment involved in the event, if applicable; and
- viii. The OU responsible for leading the investigation, based on the guidelines contained in Section 6(e)(1).

- 386 (i) If an OU other than the OU submitting the Initial Report is designated  
387 to lead the investigation, the name of the individual in Line  
388 Management from the designated OU who accepted responsibility for  
389 the investigation must be documented.  
390

391 (b) Individuals Involved - For each person involved in an event, the following  
392 information shall be included:  
393

394 i. Name;  
395

396 ii. Position;  
397

398 iii. Employment Status:  
399

400 (i) Employee;  
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402 (ii) Associate; or  
403

404 (iii) Visitor;  
405

406 iv. Status of the individual as a result of the event:  
407

408 (i) Injured;  
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410 (ii) Became Ill;  
411

412 (iii) Exposed;  
413

414 (iv) Contaminated by radioactive material;  
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416 (v) Combination of i-iv above; or  
417

418 (vi) None of the above;  
419

420 v. If injured, ill, or exposed:  
421

422 (i) A description of the injury, illness, or exposure;  
423

424 (ii) A description of the immediate care given;  
425

426 (iii) If the individual will miss any days of work, if known; and

427  
428 (iv) If the individual will be restricted or transferred to another job because  
429 of the event, if known.

430  
431 (c) Event Description

432  
433 i. A brief description of the activity leading up to or taking place at the time of  
434 the event;

435  
436 ii. A description of what happened, or for a near miss, what could have  
437 happened;

438  
439 iii. A description of any immediate measures taken to respond to the event,  
440 including any actions taken to protect workers from exposure to hazards;

441  
442 (d) Property Damage

443  
444 i. A brief description of any damage to government property, other than  
445 motorized vehicles;

446  
447 ii. A brief description of any damage to personal property, other than motorized  
448 vehicles; and

449  
450 iii. A brief description of any damage to motorized vehicles;

451  
452 (5) OU Review of Streamlined and Initial Reports

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454 (a) Prior to submittal to IRIS, the OU IRIS Administrator shall review the Streamlined  
455 and Initial Reports submitted from within their OU for:

456  
457 i. Appropriate selection of format;

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459 ii. Appropriate selection of event type;

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461 iii. Completeness of report; and

462  
463 iv. Quality of report.  
464

(b) If the Submitter of an Initial Report has designated a different OU to lead the investigation, that designated OU shall have the opportunity to review and comment on the Initial Report during the OU Review step.

(c) During the OU Review step, the OU IRIS Administrator shall designate one of the following two notification options for how the report will be communicated:

i. Post Only

(i) Streamlined Reports, Initial Reports and Investigation Reports designated as “Post Only” shall be posted to **IRIS** where they will be viewable by the NIST staff.

(ii) An email containing a summary of the Streamlined Report, Initial Report, or Investigation Report shall be sent only to the OU IRIS Report Submitter, the OU IRIS Administrator, all investigators (for an Investigation Report), and the IRI PM.

ii. Post with Notification

(i) Streamlined Reports, Initial Reports, and Investigation Reports designated as “Post with Notification” shall be posted to **IRIS** where they will be viewable by the NIST staff.

(ii) An email containing a summary of the Streamlined Report, Initial Report, or Investigation Report shall be sent to the OU IRIS Report Submitter, the OU IRIS Administrator, all investigators (for an Investigation Report), the IRI PM, and notification subscribers as per their subscription service preferences.

e. Conduct and Documentation of Incident Investigations

For each event utilizing the Standard Report Format, an investigation shall be conducted and an Investigation Report submitted, per the following requirements.

(1) OU Responsibility for Leading Investigations

(a) For Immediate Notification Incidents, OSHE, with participation from the OU(s) involved, shall lead the investigation.

- (b) For events that involve individuals and space from only one OU, that OU shall lead the investigation. Please note Section 6e(1)(e) for additional clarification.
- (c) For events involving multiple individuals and/or space(s) and/or equipment from different OUs, the OU IRIS Administrators from all OUs involved shall identify the OU that will lead the investigation, with appropriate participation from the other OU(s). The OU leading the investigation shall provide the Lead Investigator.
- i. If an agreement cannot be reached, the IRI PM shall designate the OU responsible for leading the investigation. Please note Section 6e(1)(e) for additional clarification.
  - ii. If multiple OUs are involved in the investigation, each OU shall have the opportunity to review and comment on the Investigation Report prior to its submission by the lead OU.
- (d) For events where no individuals are involved (*e.g.*, flooding that occurred in a laboratory after hours or collapse of a bookshelf in an office when no one was present in the room), the OU responsible for the space in which the incident or near miss occurred shall lead the investigation. Please note Section 6e(1)(e) for additional clarification.
- (e) If at any time it is determined that another OU is responsible for the activity in which the event occurred, or for the apparent cause of the event, or will be assigned a corrective action, that OU will participate in or lead the investigation, or, if the investigation is already underway, participate for the remainder of the investigation, as necessary and appropriate.

## (2) Investigator Requirements

- (a) Investigations shall be led and documented in IRIS by an OU Lead Investigator designated by the OU leading the investigation, and trained per the requirements of Section 6g.
- (b) An individual should not serve as an OU Lead Investigator for an event where there is a conflict of interest (*e.g.* for an event that directly involved them or for an event involving their direct supervisor.).

544 (3) OSHE Participation in Investigations  
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546 (a) Based on the nature of an incident or near miss, OSHE may require the inclusion of  
547 OSHE subject matter experts on the investigation team. This requirement will apply,  
548 at a minimum, to incidents related to the following NIST Safety Programs:

- 549 i. Biosafety;
- 550
- 551 ii. Electrical Safety;
- 552
- 553 iii. Ergonomics;
- 554
- 555 iv. Fire and Life Safety suborders;
- 556
- 557 v. Hazardous Waste Accumulation;
- 558
- 559 vi. Hearing Protection;
- 560
- 561 vii. Ionizing Radiation Safety;
- 562
- 563 viii. Laser Safety; and
- 564
- 565 ix. Other programs on a case-by-case basis.
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567 (b) OSHE shall aid in conducting investigations upon request.  
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569 (4) Investigation Reports shall include the following information:  
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- 571 (a) Name and OU of the Lead Investigator;
- 572
- 573 (b) Name and OU of other members of the investigation team;
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- 575 (c) A brief description of the investigative process;
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- 577 (d) The essential findings of the investigation and supporting information, including;
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- 579 i. A general (narrative) description of what happened and why;
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- 581 ii. Any updates to information provided in the Initial Report;
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- 583

- 584           iii.   Pictures, sketches, videos, etc. (as needed);
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- 586           iv.   The causal factor(s); and
- 587
- 588           v.   The root cause(s).
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- 590       (e) At least one corrective action per root cause, including:
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- 592           i.   A description of each specific corrective action, including interim steps as
- 593               needed;
- 594
- 595           ii.   Identification of persons responsible for implementation of corrective actions;
- 596
- 597           iii.   Identification of the expected time to complete corrective actions;
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- 599               (i)   For corrective actions expected to require more than 30 calendar days
- 600               to complete, a corrective action plan must be uploaded and approval
- 601               from line management documented;
- 602
- 603           iv.   Identification of individuals in line management responsible for verifying that
- 604               corrective actions are complete; and
- 605
- 606       (f) Any lessons identified, as defined in Section 7, for sharing with the broader NIST
- 607       community, including recommendations for follow-up by OSHE.
- 608
- 609       (5) OU Review of Investigation Reports
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- 611           (a) Prior to submittal to IRIS for posting, the responsible OU IRIS Administrator shall
- 612               review Investigation Reports for completeness and quality.
- 613
- 614           (b) Each OU represented on the investigation team shall have the opportunity to review
- 615               and comment on the Investigation Report during the OU Review step.
- 616
- 617           (c) The OU IRIS Administrator shall designate a notification method for the
- 618               Investigation Report per Section 6d(5)(c).
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- 620       f.   OU Implementation Procedures
- 621           Each OU shall establish implementation procedures and responsibilities for carrying out the
- 622           requirements of this suborder including, but not limited to, the following:
- 623



- (1) Reporting of incidents and near misses to OU management by employees and covered associates, *e.g.*, whom they must contact and by what means;
- (2) Evaluating and classifying reported events per Section 6b above;
- (3) Reporting of Immediate Notification Incidents to the NIST CSO;
- (4) Determining the recording format for the event (*i.e.*, Streamlined or Standard format), per Section 6b(4) and the notification method per Section 6d(5)(c);
- (5) Designating staff members with the following roles:
- (a) OU IRIS Submitter(s);
  - (b) Lead Investigator(s); and
  - (c) OU IRIS Administrator(s).
- (6) Training of OU staff members to meet the OU Implementation Procedures and the requirements of a Lead Investigator per Section 6g;
- (7) Drafting and vetting of Streamlined Reports and Initial Reports;
- (8) Drafting and vetting of Investigation Reports, including determination that corrective actions are appropriate to prevent recurrence of the incident or near miss while not inadvertently introducing other hazards;
- (9) Ensuring corrective actions are:
- (a) Implemented in a timely fashion;
  - (b) Implemented in such a manner as to prevent recurrence of the incident or near miss while not inadvertently introducing other hazards; and
  - (c) Tracked to closure;
- (10) Sharing lessons identified, as appropriate, within the OU and identifying lessons to OSHE that should be shared to a wider audience;

(11) Ensuring information required for regulatory documentation of injuries and illnesses (e.g., OSHA 301 Forms for each OSHA Recordable injury or illness) is provided to OSHE within seven calendar days of it being requested by the IRI PM; and

(12) For each OSHA Recordable case resulting in days away from work, restricted work, and/or transfer to another job (**OSHA Recordable DART case**, as defined in Section 7), ensuring work duty status information (e.g., full duty, restricted, unable to work) is maintained and provided to the IRI PM as requested.

g. Training and Information

(1) All training shall be conducted and recorded in accordance with the requirements of the NIST S 7101.23: Safety Education and Training.

(2) OU IRIS Report Submitters and OU IRIS Administrators shall complete training provided by OSHE on the use of the IRIS application.

(3) Lead investigators shall complete training regarding incident investigation principles and methods from either OSHE or equivalent training provided by an outside source approved by the OSHE IRI PM<sup>5</sup>.

(4) OU staff shall be informed by the OU of those aspects of the OU Implementation Procedures (see Section 6f) applicable to their roles in incident reporting and investigation.

h. OSHE Management of IRI

(1) Processing of Streamlined and Initial Reports

(a) The IRI PM shall ensure that Streamlined and Initial Reports to be posted publicly to **IRIS** do not contain information that can be used to identify specific individuals or that can be used with other sources to identify such individuals;

(b) The IRI PM shall review submitted Streamlined and Initial Reports for appropriate selection of the reporting format selected (Streamlined or Standard) per Section 6b(4) and notification method selected per Section 6d(5)(c).

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<sup>5</sup> OSHE shall maintain a list of currently approved equivalent incident investigation courses provided by outside sources.

- (c) The IRI PM shall post Streamlined and Initial Reports to **IRIS** within 2 business days of submission, if possible.

## (2) Processing of Investigation Reports

- (a) The IRI PM shall ensure that Investigation Reports to be posted publicly to **IRIS** do not contain information that can be used to identify specific individuals or that can be used with other sources to identify such individuals;
- (b) The IRI PM shall review submitted Investigation Reports for appropriate selection of notification method per Section 6d(5)(c).
- (c) The IRI PM shall post Investigation Reports to **IRIS** within 2-3 business days of submission; if possible.

## (3) IRI Notifications

- (a) Notifications of Streamlined Reports, Initial Reports, and related Investigation Reports shall be communicated to the NIST staff using the **IRIS** application.
- i. NIST employees in a supervisory role shall receive notifications when Streamlined Reports, Initial Reports, and Investigation Reports are posted.
  - ii. NIST staff shall be afforded the opportunity to receive email notifications when Streamlined Reports, Initial Reports, and Investigation Reports are posted, utilizing the **IRIS** application subscription service.
- (b) For each NIST establishment identified in Section 6h(6)(b)(i) below, the CSO shall sign and post the OSHA Form 300A – *Summary of Work-related Injuries and Illnesses* (“annual summary”) from the previous calendar year on the NIST Safety Web Page and in at least one conspicuous physical location at the establishment. The annual summary shall be posted from February 1 to April 30.
- (c) The IRI PM shall provide a weekly summary of IRI Program activity to the NIST Director, Associate Directors, and OU Directors.
- (d) The NIST CSO shall provide a monthly summary of IRI Program activity to the NIST Leadership Board.

740 (4) Monitoring and Measurement

- 741
- 742 (a) The IRI PM shall collect data and compile metrics necessary to evaluate the
- 743 effectiveness of this program, including, but not limited to:
- 744
- 745 i. Number and types of events reported;
  - 746
  - 747 ii. Length of time for staff to report to line management;
  - 748
  - 749 iii. Time taken to submit Streamlined and Initial Reports into *IRIS*;
  - 750
  - 751 iv. Percentage of Streamlined and Initial Reports submitted within 2 business
  - 752 days;
  - 753
  - 754 v. Time taken to submit Investigation Reports into IRIS;
  - 755
  - 756 vi. Percentage of Investigation Reports submitted within 20 business days;
  - 757
  - 758 vii. Backlog of investigations open longer than 20 business days; and
  - 759
  - 760 viii. Total number of OSHA Recordable cases and OSHA Recordable DART
  - 761 cases.
  - 762

763 (5) IRI Compliance Evaluation

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- 765 (a) The IRI PM shall conduct an internal compliance evaluation of the regulatory
  - 766 recordkeeping requirements outlined in Section 6h(6)(b) of this program on at least an
  - 767 annual basis. A standard checklist shall be developed and used.
  - 768
  - 769 (b) Results of internal compliance evaluations shall be documented and maintained as a
  - 770 record per Section 6h(6)(a).
  - 771
  - 772 (c) Corrective actions shall be implemented as soon as practical to address findings of
  - 773 non-compliance.
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  - 775
  - 776
  - 777
  - 778
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780 (6) IRI Recordkeeping

781  
782 (a) NIST-Required Recordkeeping

- 783
- 784 i. Personal information that is collected in reports and investigations shall be  
785 maintained securely in the **IRIS** application.
- 786
- 787 ii. Personal information that is collected in reports and investigations shall be  
788 accessible to the IRI Program Manager, OSHE IRIS Administrator, OU IRIS  
789 Administrator(s), the OU Submitter, members of the Investigation Team, the  
790 relevant supervisor(s), and the employee(s) directly involved.
- 791
- 792 iii. For each injury and illness incident, the IRI PM shall classify the event using  
793 the U.S. Department of Labor Bureau of Labor Statistics (BLS) Occupational  
794 Injury and Illness Classification System. This will include classification of:
- 795
- 796 (i) Nature of Event or Exposure;
- 797
- 798 (ii) Nature of Injury or Illness;
- 799
- 800 (iii) Part of Body Affected; and
- 801
- 802 (iv) Source of Injury or Illness.
- 803
- 804 iv. The IRI PM shall retain training records as identified in Section 6g using the  
805 IT application supporting the NIST Safety Education and Training Program.
- 806
- 807 v. The IRI PM shall retain results of annual internal compliance evaluations as  
808 described in Section 6h(5).
- 809

810 (b) OSHA Required Recordkeeping

- 811
- 812 i. The IRI PM shall maintain a list of NIST establishments for which separate  
813 OSHA records will be maintained, pursuant to [29 CFR 1904.30](#).
- 814
- 815 ii. For injuries and illnesses resulting from an incident, the IRI PM shall  
816 document case details, including medical treatment, sufficient to make and  
817 record a determination of the OSHA status of each case as one of the  
818 following:
- 819

- (i) OSHA Recordable;
- (ii) OSHA Recordable DART; and
- (iii) Not an OSHA Recordable.
- iii. For each injury or illness determined to be an OSHA Recordable, the IRI PM shall send a request for a completed OSHA 301 Form – *Injury and Illness Incident Report* to the OU IRIS Administrator of the employee. Completed OSHA 301 Forms shall be retained by the IRI PM for each OSHA Recordable case.
- iv. For each OSHA Recordable DART case, the IRI PM shall utilize the **IRIS** application to obtain (from the supervisor of the employee), update, and document DART information.
- v. For the establishments identified in Section 6h(6)(b)(i), the IRI PM shall maintain the OSHA Form 300 – *Log of Work-Related Injuries and Illnesses*.
- vi. For the establishments identified in Section 6h(6)(b)(i), the IRI PM shall maintain the OSHA Form 300A – *Summary of Work-related Injuries and Illnesses*.
- vii. The IRI PM shall maintain a record of all information initially provided to OSHA for each Immediate Notification Incident, and all subsequent correspondence related to the incident.
- viii. The IRI PM shall provide any information described in this section to external entities (*e.g.*, DOC, BLS) as requested.
- (c) The retention period for the records identified in this section shall be not less than five years from the end of the calendar year that these records cover.

## 7. DEFINITIONS

- a. Abatement – Action taken to eliminate a recognized safety hazard or deficiency.
- b. Abatement Plan – A set of planned actions to abate a recognized hazard and their estimated completion dates.

- c. Causal Factor – An action or condition, or lack thereof, related to equipment, people, management, or the environment that an event occurred in, that caused or contributed to the severity or likelihood of an event.
- d. Condition – Any state, as found, whether or not it resulted from an event, that may have adverse safety, health, environmental, or operational implications.
- e. Contamination by Radioactive Material – The unintended/unexpected presence of radioactive material on, or in, an individual.
- f. Corrective Action – Action to eliminate the cause of a detected nonconformity or other undesirable situation.
- g. Corrective Action Plan – A set of planned actions to eliminate the cause of a detected nonconformity or other undesirable situation such as the root cause of an incident.
- h. Event – For the purposes of this suborder, a real-time occurrence.
- i. Exposure – Contact by an individual through touching, breathing, or consuming a harmful chemical or biological substance; or unintended / unexpected dose to an individual from an ionizing radiation field. Any exposure that results in an injury or illness shall be classified as an injury or illness.
- j. Hazard – Source, situation, or act with a potential for harm in terms of human injury or ill health, adverse impact on the environment, damage or loss of equipment or property, or a combination of these.
- k. Illness – Any abnormal condition or disorder, other than one resulting from a work-related injury, caused by one-time, continued, or repeated exposure to environmental factors associated with employment, including acute and chronic illnesses or diseases that may be caused by inhalation, absorption, ingestion, or direct contact. OSHA Recordable STS hearing loss cases are included in this definition.
- l. Immediate Notification Incident – A work-related incident that results in any of the following to one or more employees or covered associates (reference [29 CFR 1904.39](#)):
- (1) Death, within 30 (thirty) calendar days of the incident;
  - (2) In-patient hospitalization within 24 hours of the incident; or

(3) An amputation or loss of an eye within 24 hours of the incident.

- m. Incident – A work-related event in which any of the following, individually or in combination, occurred: an injury or illness; an unauthorized spill or release of hazardous or regulated material to the environment; property damage; exposure; or contamination by radioactive material.
- n. Initial Report – A report that contains the items listed in Section 6d(4).
- o. Injury – Any wound or condition of the body caused by external force, including physical stress or strain that results from a work accident or from exposure in the work environment, *e.g.*, amputation, bruise, burn, contusion, cut, fracture. The injury is identifiable as to time and place of occurrence and member or function of body affected, and is caused by a specific event or incident, or series of events or incidents, within a single day or work shift.
- p. Investigation – The systematic process of analyzing the events leading up to an event, gaining an understanding of what caused it, identifying actions to prevent recurrence, and documenting the results in a written Investigation Report.
- q. Investigation Report – A report that contains the items listed in Section 6e(4).
- r. Lessons Identified – Information (such as Extent of Condition Reviews) resulting from an investigation that, if acted upon by an organization and the individuals therein, will reduce the probability of recurrence of that and similar events.
- s. Near Miss – Also known as a “near hit,” “near-accident,” or “close call,” a work-related event that did not result in any of the following, either individually or in combination, but had a plausible likelihood of doing so: an injury or illness; a spill or release of hazardous or regulated material to the environment; property damage; exposure; or contamination by radioactive material.
- t. OSHA Recordable case – Any injury or illness that meets the general recording criteria established by OSHA at [29 CFR 1904.7](#). In general, this includes any work-related injury or illness that results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. Work-related cases involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum are always OSHA Recordable.



- u. OSHA Recordable DART case – Any OSHA Recordable case that results in death, days away from work, restricted work or transfer to another job, as established by OSHA at [29 CFR 1904.7](#).
- v. OU Responsible for the Space – OU to which the space has been assigned by the Office of Facilities and Property Management.
- w. Property Damage – Incident resulting in loss or harm to property.
- x. Root Cause – A causal factor of an event that, if corrected, would prevent the recurrence of that and similar events.
- y. Spill / Release – An unauthorized spill or release of hazardous or regulated material to the environment.
- z. Streamlined Format – Format used for relatively simple and generally minor events that can be resolved without significant corrective actions. (*Abatement actions* may be necessary.) These cases will be documented in a single Streamlined Report containing information on what happened, why it occurred, and how it can be prevented from happening again. A separate Investigation Report is not required.
- aa. Streamlined Report - A report containing the items listed in Section 6d(3).
- bb. Standard Format – Format used to document more significant and/or more complex events that require a higher level of investigation and significant corrective actions. This can include near misses. These cases will be documented in an Initial Report, followed by an Investigation Report that establishes the root cause(s) of the incident or near miss, and the corrective actions.
- cc. Work-Related – A condition wherein an injury, illness, or fatality was caused, contributed to, or significantly aggravated, or could have been, by an event or exposure at work or on official business away from work (reference [29 CFR 1904.5](#)).

## **8. ACRONYMS**

- a. BLS – United States Bureau of Labor Statistics
- b. CFR – Code of Federal Regulations

- c. DART – Days away from work, restricted work, or transfer to another job
- d. DOC – Department of Commerce
- e. EOC – Extent of Condition
- f. IRI PM – Incident Reporting and Investigation Program Manager
- g. IRIS – Incident Reporting and Investigation System
- h. OSH – Occupational Safety and Health
- i. OSHA – Occupational Safety and Health Administration
- j. OU – Organizational Unit
- k. STS – Standard Threshold Shift

## **9. RESPONSIBILITIES**

### **a. OU Directors are responsible for:**

- (1) Ensuring the establishment of OU procedures, the implementation of which will result in the requirements of Section 6 applicable to the OU being met
- (2) Ensuring the OU procedures are implemented;
- (3) Ensuring the quality and timeliness of Streamlined, Initial, and Investigation Reports;
- (4) Ensuring that applicable lessons identified are shared within their OU, as appropriate; and
- (5) Ensuring that all-required follow-up actions are completed and effective.

### **b. OU IRIS Administrators are responsible for:**

- (1) Coordinating efforts with other OUs when multiple OUs are involved in an incident through personnel, space, or equipment, to ensure that the reporting and investigation requirements of this program are met;

(2) Reviewing incident reports and incident investigations for completeness, quality, accuracy, and appropriateness of the selected format (Streamlined or Standard);

(3) Designating the notification method that will be used for each incident; and

(4) Designating OU Submitters and OU Lead Investigators for their respective OUs.

c. Lead Investigators are responsible for organizing, conducting and documenting incident investigations, including EOC reviews as assigned, to effectively identify causal factors and root cause(s) of incidents and near misses, and appropriate corrective actions necessary to prevent recurrence.

d. Supervisors are responsible for:

(1) Reporting all incidents as soon as practically possible to their management in accordance with OU policies and procedures;

(2) Ensuring that equipment and facilities involved in incidents are shut down if necessary and restored to use only after hazards have been mitigated;

(3) Preserving the scenes of incidents intact to the extent possible to facilitate incident investigations;

(4) Supporting incident investigations as prescribed by their OU-level policies;

(5) Reviewing IRIS incidents, evaluating and communicating lessons learned applicable to activities under their span of control, and taking appropriate actions to prevent similar incidents;

(6) Completing required documentation for OSHA Recordable injury and illness cases, including OSHA 301 Forms and other relevant information as requested by the OSHE IRI PM; and

(7) Providing the OSHE IRI PM with updated case information (*e.g.*, current duty status, days away, *etc.*) for employees that incur OSHA Recordable injuries.

e. NIST Employees and Covered Associates are responsible for:

(1) Reporting (or having someone else report) incidents and near misses immediately to their supervisor or sponsor; and

(2) Providing complete and accurate information in support of incident investigations and recordkeeping, as necessary and as prescribed by the OU-level policies.

f. IRI PM is responsible for:

a. Maintaining this suborder and providing guidance as requested by NIST personnel;

b. Reviewing IRIS cases and data to identify trends indicative of systemic issues, facilitating identification of tactics to address them.

c. Facilitating the communication of lessons learned across the NIST community.

d. Ensuring NIST-level training as required by this suborder is available;

e. Maintaining a list of incident investigation courses provided by external sources that meet the equivalent training requirement established at 6g(3); and

f. Carrying out duties as established within this suborder to maintain compliance with OSHA Injury and Illness Recordkeeping regulations.

## **10. AUTHORITIES**

There are no authorities specific to this suborder alone.

## **11. DIRECTIVE OWNER**

Chief Safety Officer

## **12. APPENDICES**

None

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## Appendix A. Revision History

Revision No.	Approval Date	Responsible Person	Brief Description of Change; Rationale
0			<ul style="list-style-type: none"><li>• None – Initial document</li></ul>
1	07/26/17	07/26/17	<ul style="list-style-type: none"><li>• Revised order of document for clarity and flow.</li><li>• Added regulatory injury and illness recordkeeping requirements.</li><li>• Added incident types for radiation events</li><li>• Incorporated changes designed to differentiate near miss events from incidents.</li><li>• Added a streamlined process for less complex events.</li><li>• Added options for how notifications for events are made, based on relevance of events to NIST staff.</li><li>• Added ownership of equipment involved in an event as a criterion for determining OU responsibility.</li><li>• Added process for review of reports at the OU level prior to submittal to OSHE for posting.</li><li>• Added requirements for abating direct hazards.</li><li>• Added requirements for IRIS Submitters and Lead Investigators to be designated and trained.</li><li>• Updated and clarified the process for submitting Immediate Notification Incidents.</li><li>• Added requirement for OSHE to conduct an annual compliance evaluation.</li></ul>
2	1/4/2021	April Camenisch	<ul style="list-style-type: none"><li>• Updated links to suborders.</li></ul>

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