

Chapter 28

Incident Investigation

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1 Overview

An *incident* is any event that requires investigation, either due to the harm it has caused to people, the environment, or property, or due to the potential that it could have caused such harm. When an incident occurs at SLAC, it must be dealt with in a timely and effective manner, with any injured persons promptly and effectively assisted, principles of scene management, incident investigation, and causal analysis scrupulously followed, and all recording and reporting requirements met.

This chapter describes how incident investigations are handled at SLAC, from initial response through recording and reporting requirements.

1.1 Hazards / Impacts

The incident investigation process seeks to identify the root cause of incidents, close calls, and near hits to eliminate conditions that could present a hazard to people, property, and the environment.

2 Scope

Requirements of this program apply to everyone at SLAC: employees, visitors, users, and subcontractors.

This chapter describes responsibilities for incident investigation and reporting for all work-related incidents at SLAC. The focus is on SLAC staff with responsibilities for investigation and reporting.

Note Incidents include events that could have caused injury or damage. Any close call or near hit should be reported to the incident investigation program manager for further analysis.

Chapter 3, “Medical” includes additional information on the SLAC Medical Department.¹ For response procedures for any incident that involves spills see Chapter 16, “Spills”.² Emergency response is covered in Chapter 37, “Emergency Management”.³

3 Standards

SLAC complies with the following federal regulations:

- Title 10, *Code of Federal Regulations*, “Energy”⁴

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 3, “Medical”, <http://www-group.slac.stanford.edu/esh/medical/chapter/policies.htm>

2 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 16, “Spills”, <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>

3 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 37, “Emergency Management”, <http://www-group.slac.stanford.edu/esh/emergency/chapter/policies.htm>

- Part 851, “Worker Safety and Health Program” (10 CFR 851)⁵
- Title 29, *Code of Federal Regulations*, “Labor”
 - Part 1904, “Recording and Reporting Occupational Injuries and Illness” (29 CFR 1904)⁶

As a national laboratory funded by the United States Department of Energy, SLAC is also required to comply with

- DOE Order 210.2, “DOE Corporate Operating Experience Program” (DOE O 210.2)⁷
- DOE Order 225.1A, “Accident Investigations” (DOE O 225.1A)⁸
- DOE Order 231.1A, “Environment, Safety, and Health Reporting” (DOE O 231.1A)⁹

4 Definitions

Basic Incident Information (BII) database. A SLAC database containing details of SLAC incidents dating back to calendar year 2000

Causal analysis process. An investigative methodology to identify causal factors, define apparent causes, and determine appropriate corrective actions so that the problem that led to an incident can be addressed and fixed. The causal analysis process applies to all ORPS incidents, incidents resulting in recordable injuries, injuries resulting in days away from work or restricted work day (TRCs and DARTs) and incidents where the results may have high loss potential.

Chain of custody. A method to control and track the transfer of evidence from one party to another and document that transfer in writing

Chargeable. An incident involving a vehicle is considered *chargeable* to the affected/involved individual if safety procedures are found to have not been followed or the cause of the incident remains unknown.

Computerized Accident/Incident Reporting System (CAIRS). A database used to collect and analyze DOE and DOE contractor reports of injuries, illnesses, and other accidents that occur during DOE operations in accordance with DOE Order 231.1A

4 “Code of Federal Regulations: Main Page”, <http://www.gpoaccess.gov/cfr/>

5 Additional information on 10 CFR 851 and its implementation is available from the following site: “Worker Safety and Health Program Final Rule - 10 CFR 851”, <http://www.hss.energy.gov/healthsafety/WSHP/rule851/851final.html>

6 http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1904

7 <http://www.directives.doe.gov/pdfs/doe/doetext/neword/210/o2102.html>

8 <http://www.directives.doe.gov/pdfs/doe/doetext/neword/221/o2211a.html>

9 <http://www.directives.doe.gov/pdfs/doe/doetext/neword/231/o2311a.html>

CompWatch. SLAC Workers' Compensation management system, administered by the Human Resources Department, that tracks all workers' compensation claims

Corrective Action Tracking System (CATS). System used to track corrective actions that result from any event, incident, inspection, or audit requiring corrective actions¹⁰

Days away from work (DAFW). Days away from work due to work-related injury or illness, excluding date of occupational injury or onset of illness

Days away, restricted or transferred (DART). Days after the date of an occupational injury or onset of an illness when the employee works reduced hours, has restricted duties, or is temporarily assigned to another job by the employer or on the advice of the treating physician. (See also *Total Recordable Case*)

Employee first report of injury. (See SU-17A)

Incident. Any event that requires investigation, either due to the harm it has caused to people, the environment, or property, or due to the potential that it could have caused such harm

Incident investigation. The systematic collection and analysis of information pertaining to factors suspected of contributing to, or having caused, an incident

Incident investigation form. (See SU-17B)

Incident investigator. A person who by virtue of being trained in incident investigation is qualified to investigate incidents at SLAC

Incident investigator, ORPS. A qualified person who is able to take over the preservation of any incident scene (including ORPS related incidents), take initial witness statements, and collect evidence, and conduct an investigation

Incident Review and Assistance Team (IRAT). Reviews all incident investigation forms (SU-17A and SU-17B) for completeness, accuracy, causal factors, and appropriate corrective actions. The IRAT carries final approval authority for injury investigations.

Injury, occupational. The result of any work-related incident that requires medical treatment

Injury and incident hierarchy. The severity of the consequences of an incident determines how the incident is categorized, investigated, and reported. Incidents can fall into more than one of the main categories, which include DOE classification Type A, B, or C, ORPS reportable, and DOE recordable. Categories are listed below from most serious to least:

- *Type A or Type B Injury*
 - Type A and B cases are the most severe incidents and injuries. The criteria for injuries to be classified as a type A or B case in ORPS are comprehensive and complex. Examples are a fatality, three or more people requiring hospitalization for the same incident, and any injury that requires hospitalization for more than 48 hours.
- *Non-type A or Type B Injury*

10 "CATS - Main", <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>

- *DOE recordable injury (type C)*. An injury requiring medical treatment beyond first aid or meeting other OSHA recordable guidelines. Examples are a laceration requiring stitches, a broken bone, or a needle stick.
- *First aid injury*. A minor injury that can be treated by SLAC Medical. These cases are not DOE recordable.
- **Non-injury**
 - *Non-injury incident*. An incident in which property or environmental damage was sustained.
 - *Near hit (also referred to as a near miss)*. An incident where no barrier or only one barrier prevented an event from having an (ORPS) reportable consequence
 - *Close call*. An incident that did not result in property damage greater than \$10,000 or cause bodily harm, but had the potential to do so

Lessons learned. A program that makes available a synopsis of any incidents with instructional value and a solution that may prevent a similar incident¹¹

Occurrence Reporting Processing System (ORPS). A DOE computerized recordkeeping system that logs and tracks injuries, incidents, and near hits meeting specific ORPS criteria

ORPS facility manager. A manager designated by the SLAC director to oversee the ORPS process and reporting of incidents to the DOE SLAC Site Office

ORPS facility manager designee. Personnel designated by the ORPS facility manager to be on call, on a rotating basis, for ORPS incidents and to report incidents to the facility manager and the DOE SLAC Site Office

ORPS program manager. Person responsible for managing and tracking ORPS related incidents

OSHA 300 log. A log of OSHA recordable injuries and illnesses maintained by Stanford University

Preliminary notification report (PNR). The initial report filed for those incidents and close calls that may become ORPS-reportable, depending on the classification decision of the ORPS facility manager designee

SU-17A. Employee first report of injury form completed by the injured party

SU-17B. Incident investigation form completed by the supervisor, manager, or university technical representative to document an injury and/or incident. If the facility manager designee and incident investigation program manager determine that the incident is ORPS reportable, a more formal investigation must be conducted.

Spill. The release of any liquid or solid material that results in an increased risk or potential risk to human health, environment, and/or property

Total recordable case (TRC). A work-related injury that requires treatment beyond first aid

Vehicle Incident Review and Assistance Team. Reviews all on-site incidents involving damage to a government-owned vehicle to determine the *chargeability* of the incident. (See *chargeable*.)

¹¹ “Lessons Learned”, http://www-group.slac.stanford.edu/esh/concerns/lessons_learned/

Workers' Compensation claim form (DWC-1). The state of California form for filing a workers' compensation claim with your employer. Copies are available at SLAC Medical.

5 Requirements

5.1 General

When an incident occurs at SLAC, basic requirements include making the notifications that initiate the appropriate response, and completing documentation, investigation, and reporting requirements within the required timeframe as described below.

5.1.1 Notification

Initial notification requirements are

- For a life-threatening emergency, call 911, then SLAC Site Security at ext. 5555 (650-926-5555 from a cell phone) then call supervisor .
- For non life-threatening incident involving an injury, notify the supervisor and go to SLAC Medical (M-F, 8-4:30). If the injury occurs when SLAC Medical is closed, call SLAC Site Security at ext. 5555.
- For non-injury incident, call the supervisor and then SLAC Site Security at ext. 5555.

Calling ext. 5555 ensures that any further required notifications will be made.

Note Additional notification requirements are listed by incident type in sections 5.1.1.1 through 5.1.1.3 below.

5.1.1.1 Type A or B Injury

Type A or B injuries or incidents usually involve emergency responders. Once they have been notified, the following must occur immediately:

- SLAC Site Security must notify the facility manager designee (FMD)
- The FMD then notifies the chief operating officer, the ES&H Division director (ESHDD), and SLAC legal counsel (these functions, in turn, will make additional notifications depending on the circumstances)
- The FMD, ESHDD, or chief operating officer (COO) will ensure that the DOE SLAC Site Office (SSO) is notified immediately
- The supervisor must notify SLAC Medical so that Medical can notify the workers' compensation administrator

5.1.1.2 Non-type A or B Injury

SLAC employees. If a SLAC employee sustains a work-related injury, the supervisor of the injured person must ensure that he/she goes to SLAC Medical immediately. If Medical is closed, the supervisor must

report the injury by calling ext. 5555 and report the injury to SLAC Medical per instructions on the workers' compensation web page.¹²

Subcontractors. If a subcontractor is injured, he/she must inform their supervisor and the SLAC point of contact (POC) immediately. For medical treatment, subcontractors may go to SLAC Medical, SLAC's workers' compensation health care providers, or their employer's workers' compensation health care provider. If SLAC Medical is closed, the SLAC POC must ensure that the injury is reported to SLAC Medical within 24 hours. For more information, see the workers' compensation web page.¹³

Note It is strongly recommended that the supervisor/ SLAC POC accompany the injured person to SLAC Medical.

SLAC Medical must notify the incident investigation program manager and workers' compensation administrator as soon as practicable, but no later than 24 hours after receiving notification.

5.1.1.3 Non-injury

Any non-injury incident must be reported to the supervisor and SLAC Site Security, who will then notify the facility manager designee (FMD). The FMD notifies the incident investigation program manager and the appropriate responders, depending on the incident type.

5.1.2 Classification

How an incident is investigated and by whom depends on its type; classification may be complex and overlapping, depending on the severity of harm to persons, property, or the environment.

- The determination of whether a given injury or incident is ORPS reportable is the responsibility of the ORPS facility manager or designees and the incident investigation program manager.
- The incident investigation program manager will determine which first aid cases and other incidents require additional investigation. He/she will also determine, in conjunction with supervisors, managers, and other Incident Review and Assistance Team (IRAT) members, which corrective actions for non-ORPS incidents will be tracked in CATS.

5.1.3 Scene Documentation

The FMD and/or the incident investigation program manager will determine if the scene of an incident must be preserved for evidence collection. If so, SLAC emergency responders will be deployed to assist. SLAC Site Security and responders may work jointly to secure a scene, control personnel access, and prevent movement of equipment or vehicles in and around the scene.

An incident must be documented by the investigator as soon as possible by taking photographs and witness statements and generating a report, inventory, notes, drawings, and a timeline based on conversations and evidence. (See Incident Investigation: Evidence Collection Guidelines.¹⁴)

12 "Workers' Compensation", <http://www-group.slac.stanford.edu/hr/wc/>

13 "Workers' Compensation", <http://www-group.slac.stanford.edu/hr/wc/>

14 Incident Investigation: Evidence Collection Guidelines (SLAC-I-730-0A21T-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideEvidence.pdf>

These items are evidence and may be used in legal proceedings. Strict chain of custody procedures must be observed for physical evidence. When responding to an incident, particular attention should be paid to documenting transient evidence.

- For ORPS events, hard-copy reports, forms, photos, and other evidence will be kept by the ORPS program manager until the evidence is returned, destroyed, or transferred.
- For non-ORPS events, hard-copy reports, forms, photos, and other evidence will be kept in the Risk Management and Response Department and secured until the evidence is returned, destroyed, or transferred.
- Records relating to spills will be kept by the spills program manager.

5.1.4 Investigation

Once the need for an investigation is established by the facility manager designee (FMD) and incident investigation program manager, the responsible investigator must conduct the investigation within the specified time period.

- For all incidents except spills, the supervisor of the affected person or area must complete an incident investigation form (SU-17B) within three business days.¹⁵
- For spills, the spills program manager determines the need for an investigation and notifies the incident investigation program manager to initiate further action
- Certain incident types may involve more than one line of investigation as determined by the incident investigation program manager. Requirements are listed by type below.

5.1.4.1 ORPS Incidents

All ORPS incidents must be investigated by an ORPS incident investigator and at least one person with technical experience in the relevant discipline(s). (See Incident Investigation: DOE ORPS Reportable Investigation Procedure.¹⁶) ORPS reports must be signed by an ORPS incident investigator and completed within 30 days from the submittal of the preliminary notification report (PNR).

5.1.4.2 Type A or B Injuries

All type A or B injuries will be investigated following DOE requirements.

5.1.4.3 DOE Recordable and First Aid Injuries

All injury incidents will be investigated by the injured party's supervisor, manager, or designee. In addition, all DOE recordable cases will be investigated by the supervisor in conjunction with an investigator who has completed ES&H Course 315, Causal Analysis. The following steps are required:

- The injured employee must report to SLAC Medical to submit the employee first report of injury (SU-17A) within 24 hours of the incident that caused the injury. If the injured party is not a SLAC employee, the supervisor or UTR may complete this form if the subcontractor does not

15 Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)

16 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

- The injured party's manager or supervisor must complete the incident investigation form (SU-17B) within three work days of knowledge of the incident¹⁷

The results of any DOE recordable or first aid injury investigation must be reviewed and approved by the Incident Review and Assistance Team (IRAT).

5.1.4.4 Non-injury Incidents

Non-ORPS related internal investigations will be completed by the involved parties' supervisory, university technical representative (UTR), or other line authority as required within three work days from the date of knowledge of an incident.

5.1.4.5 Close Calls and Near Hit

The incident investigation program manager will ask line management to investigate close calls that could have caused serious injury, environmental hazards, or significant property damage, or that have good learning value. The Risk Management and Response Department will supply investigative resources to the cases that have the greatest potential for learning value.

5.1.4.6 Vehicle Incidents

The initial investigation of vehicle incidents will follow the requirements of Chapter 13, "Traffic and Vehicular Safety".¹⁸ In addition, all vehicle incidents involving damage to government-owned vehicles will be reviewed by the Vehicle Incident Review and Assistance Team to determine *chargeability*.

5.1.4.7 Spills

The spills program manager will contact the incident investigation program manager any time a spill is reportable to any agency, poses a threat to people, environment, or property, or any time a spill may result in a corrective action. For more information on spills notifications and response procedures, see Chapter 16, "Spills".¹⁹

5.1.5 Tracking and Reporting

Tracking and reporting requirements include meeting legal obligations, summarizing and analyzing information, and making it available so that incidents are documented and potential future incidents can be prevented.

17 Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)

18 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 13, "Traffic and Vehicular Safety", http://www-group.slac.stanford.edu/esh/hazardous_activities/traffic_vehicular/policies.htm

19 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 16, "Spills", <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>

5.1.5.1 Privacy

All widely disseminated reports will be observant of privacy laws that place constraints on the use of personal identifying information (PII).²⁰

5.1.5.2 ORPS Incidents

ORPS investigative reports will be made available to all ES&H coordinators and supervisors by the ORPS program manager as soon as possible after final reports are completed.²¹

The ORPS administrator will track ORPS incidents in the Occurrence Report (OR) Log and keep all final ORPS investigative reports with the original signature (paper copy) on file in addition to posting the report electronically.

5.1.5.3 Type A or Type B Incident

The ES&H Division director (or higher) must report any *Type A or Type B* incident to the DOE SLAC Site Office.

5.1.5.4 DOE Recordable Injury

The workers' compensation administrator must fulfill the following reporting requirements for any *DOE recordable* injury

- Enter new DOE recordable injuries into the CAIRS database on a bimonthly basis and enter any revised injury data by the tenth day following the close of each quarter
- Report new cases to Stanford University Risk Management for entry into the OSHA 300 log
- Track recordable injuries in CompWatch

5.1.5.5 Corrective Action Tracking System

ORPS incidents. All corrective actions for ORPS-reportable incidents will be managed to completion using the Corrective Action Tracking System (CATS). Once an investigation report is completed, the ORPS program manager will submit corrective actions to CATS.²²

Non-ORPS incidents. Only items that were not corrected immediately after the action and have a corrective action that will happen in the future with a close out date must be tracked. Items that warrant tracking will be managed to completion using CATS. Once an investigation report is completed, the investigator or the directorate ES&H coordinator will submit items into CATS.

20 *SLAC Today*, "PII: What is it?", <http://today.slac.stanford.edu/feature/PII-what.asp>

21 "ORPS – Occurrence Reporting and Processing System"
<https://slacspace.slac.stanford.edu/sites/esh/cgs/orps/default.aspx>

22 "CATS - Main", <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>

5.1.5.6 Injury Reports

The incident investigation program manager will track all investigated incidents, including *total recordable cases (TRC)*, *days away restricted or transferred (DART)*, *days away from work (DAFW)*, and other injury statistics and use this information to identify and analyze trends and develop prevention strategies.

The incident investigation program manager will ensure all reported injuries are available as soon as possible on the “Real Time Injury Reporting” web page.²³

5.1.5.7 Basic Incident Information Database

All incident data will be recorded in the Basic Incident Information Database (BII) tracking tool. The BII database will be used to develop trend analyses for incidents.

5.1.5.8 Lessons Learned

A collection of *lessons learned* will be maintained and made available. Lessons are reviewed by subject matter experts (SMEs) for content, lesson value, and appropriateness. (See Incident Investigation: Lessons Learned Guidelines²⁴ and the “Lessons Learned” web page.²⁵)

5.1.5.9 Quarterly Reporting

The incident investigation program manager will provide the number of injuries and injury rates for the ES&H quarterly report and will also prepare, or have prepared, a formal quarterly presentation as required that analyzes trends and makes recommendations for improvement to be presented to the ES&H Coordinating Council and the DOE SLAC Site Office.

The workers’ compensation administrator will prepare and distribute as necessary the quarterly data for *total recordable cases (TRCs)* and *days away, restricted or transferred (DART)* and total hours worked for submission into the Computerized Accident/Incident Reporting System (CAIRS) database by the tenth day following the close of each quarter.

5.1.6 Personnel

5.1.6.1 Designation

ORPS Facility Managers

The laboratory director will designate an *ORPS facility manager (FM)*, as required by the DOE. The facility manager will appoint *ORPS facility manager designees (FMDs)* and an *ORPS program manager*. The ORPS facility manager designees must be on call on a rotating basis for site emergencies.

23 “Real Time Injury Reporting - TRC/DART”, <https://www-internal.slac.stanford.edu/esh/safetydata/casereporting/>

24 Incident Investigation: Lessons Learned Guidelines (SLAC-I-730-0A21T-002), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideLessons.pdf>

25 “Lessons Learned”, http://www-group.slac.stanford.edu/esh/concerns/lessons_learned/

Investigators

Each directorate will designate at least one *ORPS incident investigator*. ORPS incident investigators are responsible for investigating ORPS incidents and may be called upon to investigate other incidents as needed.

Each directorate will ensure that all supervisors have completed ES&H Course 316, Incident Investigation.

5.1.6.2 Qualifications

ORPS incident investigators must be formally trained (see Section 5.3, "Training".)

5.1.6.3 Incident Review and Assistance Team

The Incident Review and Assistance Team (IRAT) will comprise representatives of the Human Resources Department (workers' compensation administrator), SLAC Medical, the DOE SLAC Site Office, and the incident investigation program manager.

5.1.6.4 Vehicle Incident Review and Assistance Team

The Vehicle Incident Review and Assistance Team will comprise the incident investigation program manager, SLAC Site Security manager, and a representative of vehicle operations.

5.1.7 Roles and Responsibilities

5.1.7.1 Incident Investigation Program Manager

The incident investigation program manager will

- Coordinate with the ORPS facility manager designee to classify any potential ORPS-reportable events
- Send the Incident Investigation Form SU-17B to the supervisor of the persons or area involved in the incident
- Ensure all reported incidents are recorded except spills, which are handled and evaluated by the spills program manager and then referred to the incident investigation program manager as needed (see Section 5.1.7.15)
- Determine the necessary make up of incident investigation teams to perform causal analysis
- Determine which incidents require scene preservation
- Act as investigator as needed
- Manage and track completed investigation forms
- Chair the Incident Review and Assistance and Vehicle Incident Review and Assistance Teams
- Ensure all incidents are tracked in the BII database and perform incident trending and analysis
- Develop prevention strategies based on tracking and trending analysis
- Track statistics to monitor investigation report completeness and timeliness
- Prepare periodic reports as required (real time, weekly, quarterly presentation to the ES&H Coordinating Council)

- Maintain the Lessons Learned system

5.1.7.2 Incident Review and Assistance Team

The Incident Review and Assistance Team will

- Meet weekly or as necessary
- Review all employee first report of injury (SU-17A) and incident investigation forms (SU-17B) for completeness, accuracy, causal factors, and appropriate corrective actions
- Call in investigators to discuss and review investigations
- Approve investigations or determine what is required for approval

5.1.7.3 Vehicle Incident Review and Assistance Team

The Vehicle Incident Review and Assistance Team will review all vehicle incidents involving damage to government vehicles and/or property to determine *chargeability*.

5.1.7.4 Workers' Compensation Administrator

The workers' compensation administrator will

- Process any workers' compensation claims²⁶
- Enter new DOE recordable injuries into the CAIRS database on a bimonthly basis and enter any revised injury data by the tenth day following the close of each quarter
- Notify Stanford University Risk Management of any recordable injuries. Stanford University is responsible for entering recordable injuries into the OSHA 300 log.
- Track injuries in CompWatch
- Keep original signed employee first report of injury (SU-17A) and incident investigation reports (SU-17B) in a secure location

5.1.7.5 SLAC Medical

SLAC Medical²⁷ will

- Treat medical injuries and illnesses
- Accept employee first report of injury (SU-17A) form from injured party
- Provide the workers' compensation claim form (DWC 1) when warranted
- Notify the incident investigation program manager within one hour and the workers' compensation administrator within 24 hours of all injuries and illnesses
- Attend the Risk Management and Response Department staff meetings and provide updates on injury/illness cases

26 "Workers' Compensation", <http://www-group.slac.stanford.edu/hr/wc/>

27 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 3, "Medical", <http://www-group.slac.stanford.edu/esh/medical/chapter/policies.htm>

5.1.7.6 SLAC Site Security

SLAC Site Security will

- Monitor notification systems including phone systems (911, ext. 5555), alarm systems, and emergency systems
- Initiate the appropriate response and mobilization of personnel as required by the circumstance (emergency, ES&H, security, management)
- Notify the incident investigation program manager
- Immediately notify the on-call facility manager designee of any incident(s)
- Respond to incidents by
 - Securing the scene by controlling personnel access and preventing movement of equipment or vehicles in and around the scene
 - Documenting the scene as appropriate, focusing on transient evidence such as liquids or scuff marks
 - Supporting the emergency response activities as directed by the incident commander, who may be the emergency management coordinator, Security Manager, FMD, or other trained personnel who has assumed the role of incident commander for the incident

5.1.7.7 Emergency Management Coordinator

The emergency management coordinator (EMC) will

- Organize SLAC responders and coordinate with SLAC Site Security
- Assume role of incident commander depending on the circumstance (the incident command may be assumed by the EMC, security manager, FMD, or other trained personnel). As incident commander, the EMC will
 - determine when the immediate incident is over
 - ensure necessary evidence collection has concluded
 - release the scene back to the responsible line management

5.1.7.8 ORPS Facility Manager and/or Facility Manager Designees

The ORPS facility manager and/or designees will

- Be on call for site emergencies on a rotating basis
- Determine which incident scenes must be preserved
- Contact SLAC legal counsel if necessary
- Notify the DOE SLAC Site Office (SSO) of significant events that occur at SLAC
- Review preliminary notification reports (PNRs) and determine from these if an incident will be placed into ORPS
- Approve final reports

5.1.7.9 ORPS Program Manager

The ORPS program manager will

- Coordinate the preliminary notification report (PNR) process with line management
- Transfer information on NRs that are categorized as non-reportable to the incident investigation program manager for assignment of incident investigator as needed
- Assign ORPS incident investigators to ORPS incidents as needed or ensure investigations are already underway
- Maintain ORPS-related records
- Ensure that corrective actions arising from ORPS-reportable incidents are submitted to CATS

5.1.7.10 ORPS Administrator

The ORPS administrator will

- Assign PNR numbers and enter PNRs and ORPS reports into ORPS
- Close corrective actions in ORPS as directed by the ORPS facility manager
- Keep original signed investigation reports in a secure location

5.1.7.11 ORPS Incident Investigators

ORPS incident investigators will investigate ORPS incidents, incidents resulting in recordable injuries, injuries resulting in days away from work or restricted work day (TRCs and DARTs) and incidents with high loss potential.

5.1.7.12 Associate Laboratory Directors

Associate laboratory directors (ALDs) will

- Designate at least one competent incident investigator and one ORPS incident investigator to investigate injuries under their jurisdiction (one investigator may fill both roles)
- Approve investigation reports associated with ORPS or TRC investigations and report the results of these investigations to the laboratory director
- On an as-needed basis, brief the ES&H Coordinating Council of any cases that occurred in their directorate

5.1.7.13 Managers and Supervisors

Managers and supervisors will

- Ensure that any injured employee under their supervision reports to SLAC Medical and completes the employee first report of injury (SU-17A) form within 24 hours of the injury
- Complete the incident investigation form (SU-17B) within three work days for any injury incident, and upon request, attend the IRAT meeting for incident review
- Notify the incident investigation program manager of any non-injury incidents and complete the incident investigation form (SU-17B) within three work days of date of knowledge of the incident (an

- Discuss recordable injuries, other significant injuries, and close calls with involved employees as well as with their management chain up to and including the department head and others, as necessary
- For area(s) of responsibility, initiate lesson learned for an incident of particular interest or value to SLAC and submit to the incident investigation program manager

5.1.7.14 University Technical Representatives

University technical representatives will

- Report all subcontractor incidents to the project manager and the incident investigation program manager as soon as reasonably possible, but no later than one hour following knowledge of the event
- If a subcontractor is injured, the SLAC POC must complete the employee first report of injury (SU-17A) form if the subcontractor does not
- Ensure that an investigation is completed and an incident investigation form (SU-17B) is sent to the project manager and the incident investigation program manager within three work days of knowledge of the incident

5.1.7.15 Directorate ES&H Coordinators

ES&H coordinators will

- Collaborate with the incident investigation program manager to analyze incidents, identify trends, and communicate with the SLAC community
- Ensure, together with the investigator, that corrective actions arising from non-ORPS incidents are entered into CATS

5.1.7.16 Spills Program Manager

The spills program manager will

- Complete a spill report form and enter the information into the BII database. (See Chapter 16, “Spills”.²⁸)
- Evaluate incidents involving spills to determine if an investigation is required and contact the incident investigation program manager as needed to initiate further action

5.2 Procedures and Specific Requirements

For an overview of the incident investigation process that includes incidents by type and investigation stages, see Incident Investigation: Requirements Summary.²⁹ The requirements summary includes links to all investigation procedures and forms. The same information is presented in outline form below.

28 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 16, “Spills”, <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>

29 Incident Investigation: Requirements Summary (SLAC-I-730-0A21S-048), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsReqSummary.pdf>

5.2.1 Notification

The investigation procedure is activated by notifying the appropriate responders (calling 911, ext. 5555, going to SLAC Medical, and notifying supervisor , as required).

5.2.2 Investigation

5.2.2.1 Investigation Requirements

The required procedure depends on such factors as: if the incident involves an injury, how serious the consequences of the incident are, and if the incident involves a government-owned vehicle, as follows

- For investigation procedures for **all types** of incidents, see Incident Investigation: Investigation Procedures³⁰
- For a flow chart of investigations involving an **injury**, see Incident Investigation: Occupational Injury Investigation Flow Chart³¹
- For **type A or B injuries or major property damage**, also see Incident Investigation: DOE ORPS Reportable Investigation Procedure³²
- For any incident that involves a **government-owned vehicle**, see Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart³³

5.2.2.2 Evidence Collection

Helpful exhibits for securing the scene and collecting evidence are

- Incident Investigation: Evidence Collection Guidelines³⁴
- Incident Investigation: Chain of Custody Form³⁵
- Incident Investigation: Interview Guidelines³⁶

30 Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>

31 Incident Investigation: Occupational Injury Investigation Flow Chart (SLAC-I-730-0A21S-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowInjury.pdf>

32 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

33 Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>

34 Incident Investigation: Evidence Collection Guidelines (SLAC-I-730-0A21T-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideEvidence.pdf>

35 Incident Investigation: Chain of Custody Form (SLAC-I-730-0A21J-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormCustody.pdf>

36 Incident Investigation: Interview Guidelines (SLAC-I-730-0A21T-004), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideInterview.pdf>

5.2.3 Investigation Review

In addition to the review requirements listed below, an incident may be selected as a *Lessons Learned*. (See Incident Investigation: Lessons Learned Guidelines.³⁷)

5.2.3.1 Injury

ORPS injury investigations are subject to review through the ORPS process as determined by DOE requirements. See Incident Investigation: DOE ORPS Reportable Investigation Procedure.³⁸

DOE recordable injuries and first aid case investigations are subject to review by IRAT as described in Incident Investigation: Investigation Procedure³⁹ and Incident Investigation: Occupational Injury Investigation Flow Chart.⁴⁰

5.2.3.2 Non-injury

- ORPS non-injury investigations are subject to review through the ORPS process as determined by DOE requirements. See Incident Investigation: DOE ORPS Reportable Investigation Procedure.⁴¹
- Non-ORPS non-injury incident investigations are reviewed by the incident investigation program manager.
- Non-injury accidents involving government-owned vehicles are reviewed by the VIRAT. (See Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart.⁴²)

5.3 Training

5.3.1 Incident Investigator

All supervisors must complete the following course

- ES&H Course 316, Incident Investigation⁴³ (refresher every 36 months)

37 Incident Investigation: Lessons Learned Guidelines (SLAC-I-730-0A21T-002), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideLessons.pdf>

38 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

39 Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>

40 Incident Investigation: Occupational Injury Investigation Flow Chart (SLAC-I-730-0A21S-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowInjury.pdf>

41 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

42 Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>

43 https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=316

5.3.2 ORPS Incident Investigator

ORPS incident investigators must complete the following courses

- ES&H Course 315, Causal Analysis⁴⁴ (refresher every 36 months)
- ES&H Course 316, Incident Investigation⁴⁵ (refresher every 36 months)

5.3.3 Facility Manager and Designees

Facility managers and facility manager designees must complete the online DOE courses on occurrence reporting and causal analysis.⁴⁶

6 Exhibits

- Incident Investigation: Implementation Plan (SLAC-I-730-0A21M-008)⁴⁷
- Incident Investigation: Requirements Summary (SLAC-I-730-0A21S-048)⁴⁸
- Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013)⁴⁹
- Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022)⁵⁰
- Incident Investigation: Occupational Injury Investigation Flow Chart (SLAC-I-730-0A21S-013)⁵¹
- Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014)⁵²
- Incident Investigation: Evidence Collection Guidelines (SLAC-I-730-0A21T-014)⁵³
- Incident Investigation: Interview Guidelines (SLAC-I-730-0A21T-004)⁵⁴
- Incident Investigation: Lessons Learned Guidelines (SLAC-I-730-0A21T-002)⁵⁵

44 https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=315

45 https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=316

46 “Department of Energy (DOE) Computer Based Training (CBT) Courses on Occurrence Reporting and Causal Analysis”, <http://www.hss.energy.gov/csa/analysis/orps/cbt/intropage.htm>

47 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsPlanImplement.pdf>

48 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsReqSummary.pdf>

49 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

50 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>

51 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowInjury.pdf>

52 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>

53 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideEvidence.pdf>

54 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideInterview.pdf>

55 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideLessons.pdf>

- Incident Investigation: Chain of Custody Form (SLAC-I-730-0A21J-013)⁵⁶
- Incident Investigation: Employee First Report of Injury (SU-17A) (SLAC-I-730-0A21J-029)⁵⁷
- Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014)⁵⁸
- Basic Incident Information (BII) Database⁵⁹
- “Real Time Injury Reporting - TRC/DART”⁶⁰
- “CATS - Main”⁶¹
- “Lessons Learned”⁶²
- “Occurrence Reporting and Processing System (ORPS)”⁶³

7 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)⁶⁴

- Chapter 3, “Medical”⁶⁵
- Chapter 13, “Traffic and Vehicular Safety”⁶⁶
- Chapter 16, “Spills”⁶⁷
- Chapter 37, “Emergency Management”⁶⁸

Accelerator Safety Documents

- *SLAC Guidelines for Operations* (SLAC-I-010-00100-000), Chapter 8, “Emergency, Incident, and Alarm Response”⁶⁹

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- 56 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormCustody.pdf>
- 57 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17A.pdf>
- 58 <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)
- 59 [restricted access]
- 60 <https://www-internal.slac.stanford.edu/esh/safetydata/casereporting/>
- 61 <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>
- 62 http://www-group.slac.stanford.edu/esh/concerns/lessons_learned/
- 63 <https://www-internal.slac.stanford.edu/esh/safetydata/orps/>
- 64 <http://www-group.slac.stanford.edu/esh/eshmanual/>
- 65 <http://www-group.slac.stanford.edu/esh/medical/chapter/policies.htm>
- 66 http://www-group.slac.stanford.edu/esh/hazardous_activities/traffic_vehicular/policies.htm
- 67 <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>
- 68 <http://www-group.slac.stanford.edu/esh/emergency/chapter/policies.htm>
- 69 <https://www-internal.slac.stanford.edu/ad/addo/gfo/gfoindex.html>

Other

- “Workers’ Compensation - SLAC Human Resources”⁷⁰

8 Implementation

The requirements of this chapter are effective as noted in Incident Investigation: Implementation Plan.⁷¹

9 Ownership

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

70 <http://www-group.slac.stanford.edu/hr/wc/>

71 Incident Investigation: Implementation Plan (SLAC-I-730-0A21M-008), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsPlanImplement.pdf>

Incident Investigation: Implementation Plan

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

All Chapter 28 requirements will become effective immediately upon publication unless noted otherwise in the “effective date” column.

Section Number	Section Title	Requirement Note	Status	Effective Date	Schedule Note
5	Requirements				
5.1	General				
5.1.1	Notification	Calling ext. 5555 initiates the appropriate responders and the investigation process	New		
5.1.1.1	Type A or B Injury		New	Immediately	
5.1.1.2	Non-type A or B Injury		New	Immediately	
5.1.1.3	Non-Injury		New	Immediately	
5.1.2	Classification		Existing	Immediately	
5.1.3	Scene Documentation		Existing	Immediately	
5.1.4	Investigation				
5.1.4.1	ORPS Incidents		Existing	Immediately	
5.1.4.2	Type A or B Injuries		Existing	Immediately	
5.1.4.3	DOE Recordable and First Aid Injuries		Existing	Immediately	
5.1.4.4	Non-injury Incidents		Existing	Immediately	
5.1.4.5	Close Calls and Near Hit		Existing	Immediately	
5.1.4.6	Vehicle Incidents	On-site incidents involving a	New	Immediately	

¹ *SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)*, Chapter 28, “Incident Investigation”, <http://www-group.slac.stanford.edu/esh/general/accidents/policies.htm>

Incident Investigation: Implementation Plan

Section Number	Section Title	Requirement Note	Status	Effective Date	Schedule Note
		government-owned vehicle must be investigated by SLAC Site Security and are subject to review by the Vehicle Incident Review and Assistance Team			
5.1.4.7	Spills		New	Immediately	
5.1.5	Tracking and Reporting				
5.1.5.1	Privacy		Existing	Immediately	
5.1.5.2	ORPS Incidents		Existing	Immediately	
5.1.5.3	Type A or B Injury		Existing	Immediately	
5.1.5.4	DOE Recordable Injury		Existing	Immediately	
5.1.5.5	Corrective Action Tracking System		New	Immediately	
5.1.5.6	Injury Reports		Existing	Immediately	
5.1.5.7	Basic Incident Information Database		Existing	Immediately	
5.1.5.8	Lessons Learned		Existing	Immediately	
5.1.5.9	Quarterly Reporting		Existing	Immediately	
5.1.6	Personnel				
5.1.6.1	Designation		Existing	Immediately	
5.1.6.2	Qualifications		Existing	Immediately	
5.1.6.3	Incident Review and Assistance Team		New	Immediately	
5.1.6.4	Vehicle Incident Review and Assistance Team		New	Immediately	
5.1.7	Roles and Responsibilities				
5.1.7.1	Incident Investigation Program Manager		Existing	Immediately	
5.1.7.2	Incident Review and Assistance Team		New	Immediately	
5.1.7.3	Vehicle Incident Review and Assistance Team		New	Immediately	
5.1.7.4	Workers' Compensation Administrator		Existing	Immediately	

Incident Investigation: Implementation Plan

Section Number	Section Title	Requirement Note	Status	Effective Date	Schedule Note
5.1.7.5	SLAC Medical		Existing	Immediately	
5.1.7.6	SLAC Site Security	Initiate notifications through ext. 5555 calls	New	Immediately	
5.1.7.7	Emergency Management Coordinator		Existing	Immediately	
5.1.7.8	ORPS Facility Manager and/or Facility Manager Designees		Existing	Immediately	
5.1.7.9	ORPS Program Manager		Existing	Immediately	
5.1.7.10	ORPS Administrator		Existing	Immediately	
5.1.7.11	ORPS Incident Investigators		Existing	Immediately	
5.1.7.12	Associate Laboratory Directors		Existing	Immediately	
5.1.7.13	Managers and Supervisors		New	Immediately	
5.1.7.14	University Technical Representatives		New	Immediately	
5.1.7.15	Directorate ES&H Coordinators		New	Immediately	
5.1.7.16	Spills Program Manager		New	Immediately	
5.2	Procedures and Specific Requirements				
5.2.1	Notification		New	Immediately	
5.2.2	Investigation		New	Immediately	
5.2.2.1	Investigation Requirements		New	Immediately	
5.2.2.2	Evidence Collection		Existing	Immediately	
5.2.3	Investigation Review			Immediately	
5.2.3.1	Injury		New	Immediately	
5.2.3.2	Non-injury		Existing	Immediately	
5.3	Training				
5.3.1	Incident Investigator		Under development	9/30/2009	
5.3.2	ORPS Incident Investigator		New	Immediately	

Incident Investigation: Implementation Plan

Section Number	Section Title	Requirement Note	Status	Effective Date	Schedule Note
5.3.3	Facility Manager and Designees		New	Immediately	

Incident Investigation: Requirements Summary

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

This exhibit summarizes requirements for any type of incident and also links to applicable procedures, forms, and resources. The table is organized into incidents by types and investigation stages.

Incident Types

The table divides incidents into the three main types, from most serious to least: type A or type B injury; non-type A or type B injury; and non-injury. Each main type is subdivided into categories that require specific responses, forms, and procedures, as indicated by footnotes.

The incident investigation program manager and/or the facility manager designee are responsible for classifying incidents and determining requirements. Most incidents will fit into the given categories but some may involve more than one – for instance an injury accident involving a government-owned vehicle. In such cases, requirements for both categories generally apply.

Incident Investigation Stages

Incident investigation requirements depend on the incident type. Notifying the appropriate responder(s) is always the first step in order to set the required level of response and investigation in motion. Once notifications are made, required reports and forms must be completed within the indicated time frame. Investigation review is the final step.

Requirements		Type A or Type B Injury ²	Non-type A or Type B Injury ³		Non-injury ⁴		Accident Involving Government-owned Vehicle ⁵
			DOE Recordable (Type C)	First Aid	Close Call / Near Hit	Incident	
Notification and Response	Emergency responders / 911	Required: person on scene notifies	If needed	–	–	If needed	–
	SLAC Site Security (ext. 5555) (Security then contacts FMD and/ or provides contact information, as required)	Required: person on scene notifies	If SLAC Medical is closed, call ext. 5555 for information about closest medical facility		Required; initiates investigation notification to IIPM		
	Facility Manager Designee (FMD)	Required: Security notifies	–	–	If needed		–
	Incident investigation program manager (IIPM)	Notified immediately by SLAC Medical, SLAC Site Security, or FMD					
	SLAC Medical ⁶	Injured SLAC employees must report to Medical in all instances. If injury occurs after hours, call ext. 5555 for help and report to SLAC Medical the next day.			–	–	–
Supervisor of involved party or area		Employee notifies supervisor immediately (subcontractors notify SLAC point of contact immediately)					

Incident Investigation: Requirements Summary

Requirements		Type A or Type B Injury ²	Non-type A or Type B Injury ³		Non-injury ⁴		Accident Involving Government-owned Vehicle ⁵
			DOE Recordable (Type C)	First Aid	Close Call / Near Hit	Incident	
Investigation	ORPS incident investigator ⁷	Lead investigator	–	–	As needed		–
	Incident investigator ⁸	Investigates as requested by supervisor or assigned by IIPM or FMD					–
	IIPM	Coordinates and supports all investigation types					
	ES&H coordinator	Investigates as requested by supervisor or assigned by IIPM or FMD					–
	Supervisor of affected employee or area ^{9,10,11} university technical representative (UTR)	Assists investigation	Is the primary investigator				–
	SLAC Site Security	–	–	–	–	–	Required
Reports and Forms	ORPS Investigative Report ¹²	Prepared by lead investigator	–	–	Contact FMD		–
	Preliminary notification report (PNR) ¹³	Prepared by FMD and IIPM	–	–	Prepared by FMD and IIPM		–
	Employee First Report of Injury (SU-17A) ¹⁴	Injured party reports to SLAC Medical within 24 hours; must submit SU-17A			–	–	–
	Incident Investigation Form (SU-17B) ¹⁵	Supervisor completes within 3 business days and submits to worker's compensation administrator			Supervisor completes within 3 business days / submits to IIPM		–
	Standard Forms SF 91 and SF 94	–	–	–	–	–	SLAC Site Security
	Lessons learned report ¹⁶	Required	As initiated by line management or as requested by IIPM				
Review	IIPM	Reviews all investigation types					
	ES&H director	Required		–	–	–	
	Associate lab director	Required		As requested by IIPM			
	SLAC lab director	Required	–	–	–	–	
	IRAT	–	Required		–	–	–
	VIRAT	–	–	–	–	–	Required

1 SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001), Chapter 28, “Incident Investigation”, <http://www-group.slac.stanford.edu/esh/general/accidents/policies.htm>

Incident Investigation: Requirements Summary

- 2 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>
- 3 Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>
- 4 Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>
- 5 Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>
- 6 “SLAC Medical Department”, <http://www-group.slac.stanford.edu/esh/medical/default.htm>
- 7 Has completed ES&H Course 315, Causal Analysis, https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=315 and ES&H Course 316, https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=316
- 8 Has completed ES&H Course 316, Incident Investigation, https://www-internal.slac.stanford.edu/esh-db/training/slaonly/bin/catalog_item.asp?course=316
- 9 Incident Investigation: Interview Guidelines (SLAC-I-730-0A21T-004), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideInterview.pdf>
- 10 Incident Investigation: Chain of Custody Form (SLAC-I-730-0A21J-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormCustody.pdf>
- 11 Incident Investigation: Evidence Collection Guidelines (SLAC-I-730-0A21T-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideEvidence.pdf>
- 12 “Occurrence Reporting Processing System (ORPS) Program”, <https://www-internal.slac.stanford.edu/operations/orps/>
- 13 “Occurrence Reporting Processing System (ORPS) Program”, <https://www-internal.slac.stanford.edu/operations/orps/>
- 14 Employee First Report of Injury Form (SU-17A) (SLAC-I-730-0A21J-029), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17A.pdf>
- 15 Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)
- 16 “Lessons Learned”, http://www-group.slac.stanford.edu/esh/concerns/lessons_learned/

Incident Investigation: DOE ORPS Reportable Investigation Procedure

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

Strict investigation requirements and procedures apply to incidents that are determined to be recordable into the Department of Energy (DOE) Occurrence Reporting Processing System (ORPS).

An ORPS incident is classified by the facility manager (FM), facility manager designee (FMD) and/or the ORPS program manager. The classification is based on guidelines provided by the DOE and the Occupational Safety and Health Administration (OSHA).

An ORPS reportable occurrence generally has these characteristics:

- Seriously affects the health and safety of SLAC personnel or the public
- Seriously impacts the intended work schedule of DOE facilities
- Has a noticeably adverse effect on the environment
- Is considered a *reportable occurrence*

Procedure

Step	Person	Action
1.	Reporting party	Calls emergency responders at 911 (if necessary) and SLAC Site Security at ext. 5555 (650-926-5555 from a cell phone)
2.	SLAC Site Security	Contacts the ORPS FMD and ORPS program manager
3.	ORPS FM or FMD and ORPS program manager	Determine if the incident is DOE or ORPS reportable according to the ORPS: <i>Workbook for Occurrence Reporting</i> ²
4.	ORPS FM or FMD	Notifies, as appropriate to the circumstances <ul style="list-style-type: none">▪ DOE Stanford Site Office (SSO)▪ ES&H division director▪ SLAC legal counsel▪ Incident investigation program manager (IIPM)
5.	ORPS FM or FMD and IIPM	Prepare a preliminary notification report (PNR) ³ with the assistance, as needed, from the supervisor responsible for the involved party or area. Contact the ORPS program administrator for a PNR number. For details, see the <i>Workbook for Occurrence Reporting</i> or contact the ORPS program manager.

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 28, "Incident Investigation", <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

2 *Workbook for Occurrence Reporting*, <https://www-internal.slac.stanford.edu/esh/safetydata/orps/ORPSWorkbook.pdf>

Incident Investigation: DOE ORPS Reportable Investigation Procedure

Step	Person	Action
6.	ORPS program administrator	Assigns a PNR number
7.	Reporting party	Provides information for the PNR
8.	ORPS program manager	Assigns and/or coordinates the appropriate investigation team and facilitates the investigation according to requirements listed Table 1 below.
9.	Investigator(s)	ORPS incident investigator: <ul style="list-style-type: none">▪ Investigates incidents of type OE, 1, and R and completes the report within 30 days of the event.▪ Provides copy to the ORPS program administrator, IIPM, and ORPS program manager Incident investigator <ul style="list-style-type: none">▪ Investigates incidents of type 2, 3, and 4 within 30 days and submits report to the ORPS program administrator and IIPM
10.	ORPS program manager	Enters corrective actions into the Corrective Action Tracking System (CATS) ⁴
11.	ESH director	Reviews for approval all ORPS investigations and any investigation of an incident with significant consequence(s)
12.	Associate lab director	Reviews for approval all investigation reports within the directorate and communicates investigation results and reviews corrective actions with lab director
13.	IIPM	Ensures ORPS report is added to the Basic Incident Information (BII) database ⁵
14.	ORPS program administrator	Enters report into the ORPS database

3 Preliminary Notification Report Template, <https://www-internal.slac.stanford.edu/esh/safetydata/orps/PNR.doc>

4 “CATS - Main”, <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>

5 [restricted access]

Investigation Requirements

The composition of the investigating team and the final investigation results depend on the classification of the event, as follows.

Table 1 ORPS Investigation Requirements

Event / Condition Classification	Event / Condition Investigation	Event / Condition Causal Analysis
Significance category operational emergency (OE)	Team with trained investigator	Root cause determined
Significance category 1	Team with trained investigator	Root cause determined
Significance category R	Trained investigator	Root cause determined
Significance category 2	Trained investigator	Apparent cause determined
Significance category 3	Critique/ fact finding	Apparent cause determined
Significance category 4	No reporting of causal analysis in ORPS. Managed per contractor-specific corrective action programs	

Incident Investigation: Investigation Procedures

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

Introduction

An incident is any event that requires investigation, either due to the harm it has caused to people, the environment, or property, or due to the potential that it could have caused such harm. This exhibit includes procedures for three types of work-related incidents:

1. Life-threatening injuries or illnesses
2. Non life-threatening injuries or illness / first aid
3. Non-injury incidents, including close calls and near hits

Each procedure includes notification requirements that set in motion the response appropriate for the level of emergency or incident. Making the required notifications initiates an investigation process that ensures that all SLAC external and internal reporting requirements are met and that the any root causes for incidents are identified and remedied. All incidents occurring at SLAC must be investigated.

Note Certain reporting requirements are time sensitive: the employee first report of injury (SU-17A) form is usually completed by the injured person when they report to SLAC Medical for treatment. It should be completed **within 24 hours** of the injury if SLAC Medical is closed. The incident investigation form (SU-17B) must be completed by the supervisor and returned to the workers' compensation administrator **within three business days**.

Subcontractor Requirements

When an incident occurs, the affected subcontractor or their supervisor must notify the SLAC point of contact (POC) immediately. Depending on the contract type, the POC could be the university technical representative (UTR), project manager, facilities technical services representative, or buyer/contract administrator.

The SLAC POC is responsible for meeting all SLAC reporting and investigation requirements as outlined below. Subcontractors must follow the procedure set forth by their employer in addition to cooperating with the SLAC POC.

Note Requirements for subcontractors are called out in each procedure.

¹ SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001), Chapter 28, "Incident Investigation", <http://www-group.slac.stanford.edu/esh/general/accidents/policies.htm>

Investigation Resources

For an overview of all incident types and associated roles, responsibilities, and forms, see Incident Investigation: Requirements Summary.²

For a flow chart representation of the investigation procedure for incidents that involve an injury, see Incident Investigation: Occupational Injury Investigation Flow Chart.³

Exhibits that can help in conducting an investigation include

- Incident Investigation: Evidence Collection Guidelines⁴
- Incident Investigation: Interview Guidelines⁵
- Incident Investigation: Chain of Custody Form⁶

Acronym List

ALD	associate lab director
BII	Basic Incident Information
CAIRS	Computerized Accident/Incident Reporting System
CATS	Corrective Action Tracking System
DOE	Department of Energy
ES&H	Environment, Safety, and Health Division
ESHCC	Environment, Safety, and Health Coordinating Council
FM	facility manager
FMD	facility manager designee
IIPM	incident investigation program manager
IRAT	Incident Review and Assistance Team
LD	laboratory director
ORPS	Occurrence Reporting and Processing System
POC	point of contact
PNR	preliminary notification report
SU-17A	Employee First Report of Injury (SU-17A)
SU-17B	Incident Investigation Form (SU-17B)
UTR	university technical representative

2 Incident Investigation: Requirements Summary (SLAC-I-730-0A21S-048), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsReqSummary.pdf>

3 Incident Investigation: Occupational Injury Investigation Flow Chart (SLAC-I-730-0A21S-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowInjury.pdf>

4 Incident Investigation: Evidence Collection Guidelines (SLAC-I-730-0A21T-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideEvidence.pdf>

5 Incident Investigation: Interview Guidelines (SLAC-I-730-0A21T-004), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideInterview.pdf>

6 Incident Investigation: Chain of Custody Form (SLAC-I-730-0A21J-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormCustody.pdf>

Life-threatening Injury or Illness

A life-threatening injury or illness requires a quick appropriate medical response and may require one or more types of in-depth investigation, as indicated below.

Life-threatening Injury Response and Investigation Procedure

Step	Person	Action
1.	Person observing the incident / reporting party / injured person	<p>Calls 911</p> <p>Then calls SLAC Site Security at ext. 5555 (650-926-5555 from an external phone)</p> <p>Then notifies the responsible person as follows.</p> <p>SLAC employees: notify supervisor</p> <p>Subcontractors: Notify supervisor and SLAC POC / UTR</p>
2.	SLAC Site Security	Notifies responders based on incident particulars, such as emergency medical responders, FM, or FMD
3.	FM or FMD	<ul style="list-style-type: none">▪ Notifies lab director, ES&H director, and SLAC legal counsel, as necessary▪ Notifies IIPM
4.	Responsible person on scene (supervisor / manager / UTR)	<ul style="list-style-type: none">▪ Stops all work in the immediate area▪ Helps guide responders to the scene
5.	FM, FMD, and/or IIPM	<p>Determines investigation requirements.</p> <ul style="list-style-type: none">▪ A serious injury may be an ORPS recordable event. For requirements, see Incident Investigation: DOE ORPS Reportable Investigation Procedure.⁷▪ Injury accidents involving government-owned vehicles must follow two lines of investigation as illustrated in Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart⁸

From this point forward the procedure is the same as for a non-life threatening procedure in the next section, beginning with step 5.

7 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

8 Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>

Non Life-threatening Injuries/ First-aid Initial Response and Investigation Procedure

Step	Person	Action
1.	Injured (or reporting) person	<p>SLAC employee: Immediately notifies supervisor</p> <p>Subcontractor: Informs his/her supervisor, who then must report the injury to the SLAC POC as soon as possible</p> <p>Note: In addition, must follow own employer's procedures for employer notification</p>
2.	Injured person's supervisor / SLAC POC	<p>Ensures that the injured person gets medical help and that the injury is reported</p> <ul style="list-style-type: none"> ▪ If the injury occurs while SLAC Medical is open (Monday through Friday, 8 to 4:30), requests injured person to report to SLAC Medical, even if no medical services will be sought <p>Note: It is strongly recommended that the supervisor accompany the injured person to SLAC Medical.</p> <ul style="list-style-type: none"> ▪ If the injury occurs while SLAC Medical is closed, calls SLAC Site Security at ext. 5555 (650-926-5555 from an external phone) if the injured person has not already done so to report injury and to get current information on the nearest appropriate / approved medical facility
3.	Injured person	<p>SLAC employees:</p> <p>Monday through Friday, 8 to 4:30: Goes to SLAC Medical⁹ for treatment</p> <p>If SLAC Medical is closed, calls ext. 5555 for current information on approved workers' compensation health care providers (including location and hours of operation)</p> <p>Note: May go to the physician designated on the physician predesignation form on file. For additional information, see the workers' compensation web page¹⁰</p> <p>Subcontractor: May go to SLAC Medical, SLAC's workers' compensation health care providers, or subcontractor's worker's compensation health care provider</p> <p>Note: for additional information, see the "Details for Non-SLAC Employees" section on the workers' compensation web page¹¹</p>
4.	SLAC Medical	Makes first medical determination of injury, as required by the circumstance or requested by injured person, and provides initial treatment
5.	SLAC Medical	Notifies IIPM and the workers' compensation administrator
6.	Injured person	<p>SLAC employees: Complete SU-17A form¹² at SLAC Medical. If Medical is closed when the injury occurred, reports to Medical within 24 hours to submit a completed SU-17A form.</p> <p>Subcontractor: Completes or assists SLAC POC in completing the SU-17A within 24 hours of the incident</p> <p>Note: The SLAC POC is responsible for completing the SU-17A and submitting it</p>

9 SLAC Medical Department, <http://www-group.slac.stanford.edu/esh/medical/>

10 Workers' Compensation – SLAC Human Resources, <http://www-group.slac.stanford.edu/hr/wc/>

11 Workers' Compensation – SLAC Human Resources, <http://www-group.slac.stanford.edu/hr/wc/>

Incident Investigation: Investigation Procedures

Step	Person	Action
		to SLAC Medical within 24 hours if the subcontractor does not.
7.	IIPM	Sends the required SU-17B¹³ form to the injured person's supervisor / SLAC POC Notifies ES&H coordinator of the affected directorate.
8.	SLAC Medical	Sends the original completed SU-17A to the supervisor or SLAC POC and sends copies of SU-17A to: <ul style="list-style-type: none"> ▪ Incident investigation program manager at M/S 84 ▪ Workers' compensation administrator at M/S 11
9.	IIPM and directorate ES&H coordinator	Assists as needed with investigation, root cause analysis, and corrective actions or assigns an investigator
10.	Workers' compensation administrator	Provides information to relevant agencies, as required, depending on the severity of the injury: <ul style="list-style-type: none"> ▪ Workers' compensation insurance carrier ▪ DOE Computerized Accident/Incident Reporting System (CAIRS) system ▪ Stanford University Risk Management Department (for OSHA log 300)
11.	Injured person's supervisor	<ul style="list-style-type: none"> ▪ Conducts the investigation: interviews involved parties, identifies root cause and appropriate corrective actions with the help of subject matter experts, if needed ▪ Completes the incident investigation form within three working days of knowledge of the incident and returns original SU-17A and completed SU-17B to the workers' compensation administrator at M/S 11¹⁴
12.	Workers' compensation administrator	Reviews SU-17B and forwards to all members of the SLAC Incident Review and Assistance Team (IRAT)
13.	Injured person's supervisor / SLAC POC	Attends IRAT meeting if requested by IRAT
14.	SLAC IRAT	<p>Holds periodic meetings as needed to process current cases:</p> <ul style="list-style-type: none"> ▪ Evaluates injury incident classification to clarify reporting requirements ▪ Reviews the incident investigation form submitted by the injured person's supervisor for thoroughness and sufficiency to ensure that root causes are addressed and suitable corrective actions are identified and initiated ▪ If deficiencies are noted and cannot be rectified at the meeting, IRAT members will note what the supervisor / SLAC POC must complete by the next IRAT meeting. The IRAT will help identify assistance and resources if needed. ▪ Once all requirements are met, the IRAT chair signs the form
15.	Injured person's supervisor / SLAC POC	Finalizes investigation as determined by IRAT: <ul style="list-style-type: none"> ▪ Completes SU-17B as required, if necessary ▪ Implements corrective actions, as required

12 Incident Investigation: Employee First Report of Injury (SU-17A) (SLAC-I-730-0A21J-029), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17A.pdf>

13 Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)

14 "Workers' Compensation - SLAC Human Resources", <http://www-group.slac.stanford.edu/hr/wc/>

Incident Investigation: Investigation Procedures

Step	Person	Action
16.	SLAC IRAT members	Evaluate each case to confirm current classification or reclassify if needed (for example first aid case may become a recordable case if additional medical treatment was sought)
17.	Workers' compensation administrator	Follows up on recordkeeping requirements for any changes in injury classification
18.	Directorate ES&H coordinator and/or investigator	Enters approved corrective actions into the corrective actions tracking system (CATS), ¹⁵ which ensures that corrective actions are tracked and completed
19.	IIPM	<ul style="list-style-type: none">▪ Enters incident in the BII database▪ Provides a copy of the approved form the affected associate laboratory director
20.	Associate laboratory director	On a bi-weekly basis, briefs the ES&H Coordinating Council (ES&HCC) of any cases that occurred in his or her directorate
21.	Workers' compensation administrator	Keeps reports in a secure location once all causes are identified and corrective actions taken

Non-injury Incident, Close Call, and Near Hit Investigation Procedure

All non-injury incidents, close calls, and near hit incidents are investigated as described in this section.

- A non-injury incident is any event that requires investigation due to the harm it has caused to the environment or property.
- A non-injury accident that involves a government-owned vehicle is investigated by SLAC Site Security. For details see Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart.¹⁶
- A close call is an incident that did not result in property damage greater than \$10,000 or cause bodily harm, but had the potential to do so.
- A near hit (or near miss) is an incident in which no barrier or only one barrier prevented an event from having an Occurrence Reporting and Processing System (ORPS) reportable consequence.

Close calls and near hits will be investigated as determined by the ES&H incident investigation program manager. The Risk Management and Response Department will supply investigative resources to cases with the greatest potential for learning value.

15 "CATS - Main", <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>

16 Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart (SLAC-I-730-0A21S-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFlowVehicle.pdf>

Non-injury Incident, Close Call, and Near Hit Response and Investigation Procedure

Step	Person	Action
1.	Person observing the incident, close call, or near hit	Informs supervisor or SLAC POC and calls SLAC Site Security at ext. 5555 (650-926-5555 from a cell phone)
	SLAC Site Security	Notifies appropriate responders as necessary and the ORPS facility manager designee (FMD)
	FMD	If circumstances warrant, makes required notifications within the applicable time frame (usually immediately to within 24 hours) <ul style="list-style-type: none"> ▪ Notifies ES&H program managers ▪ Notifies IIPM
	Supervisor / SLAC POC	Controls or helps control environmental impacts by containing or diverting any releases into the environment if trained to do so, and only if it is safe. ¹⁷
	IIPM	<ul style="list-style-type: none"> ▪ Provides the supervisor / SLAC POC with an incident investigation form (SU-17B)¹⁸ ▪ Notifies directorate ES&H safety coordinator
	Supervisor / SLAC POC	If needed, requests assistance from directorate ES&H safety coordinator or IIPM in completing the investigation
	Directorate ES&H safety coordinator or IIPM	Assists with root cause analysis and recommended corrective actions, as appropriate
	Supervisor / SLAC POC	Returns completed SU17-B within three business days to IIPM
	IIPM or designee	Enters corrective actions into the corrective action tracking system (CATS) ¹⁹
	IIPM or designee	Enters incident, close call, or near hit into the BII database
	IIPM	Analyzes incident data on a quarterly basis and presents findings to the Environment, Safety, and Health Coordinating Council (ES&HCC) and others, as requested

¹⁷ *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 16, “Spills”, <http://www-group.slac.stanford.edu/esh/environment/spills/policies.htm>

¹⁸ Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)

¹⁹ “CATS - Main”, <https://www-internal.slac.stanford.edu/esh-db/CATS/CATS-Main.aspx>

Incident Investigation: Occupational Injury Investigation Flow Chart

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

The flow chart includes all major steps in the investigation process for cases that involve occupational injury or illness that occur at SLAC. For details, see the procedures for the investigation type, since not all steps are shown on the diagram:

- Incident Investigation: DOE ORPS Reportable Investigation Procedure²
- Incident Investigation: Investigation Procedures³

Flow Chart Acronym Key

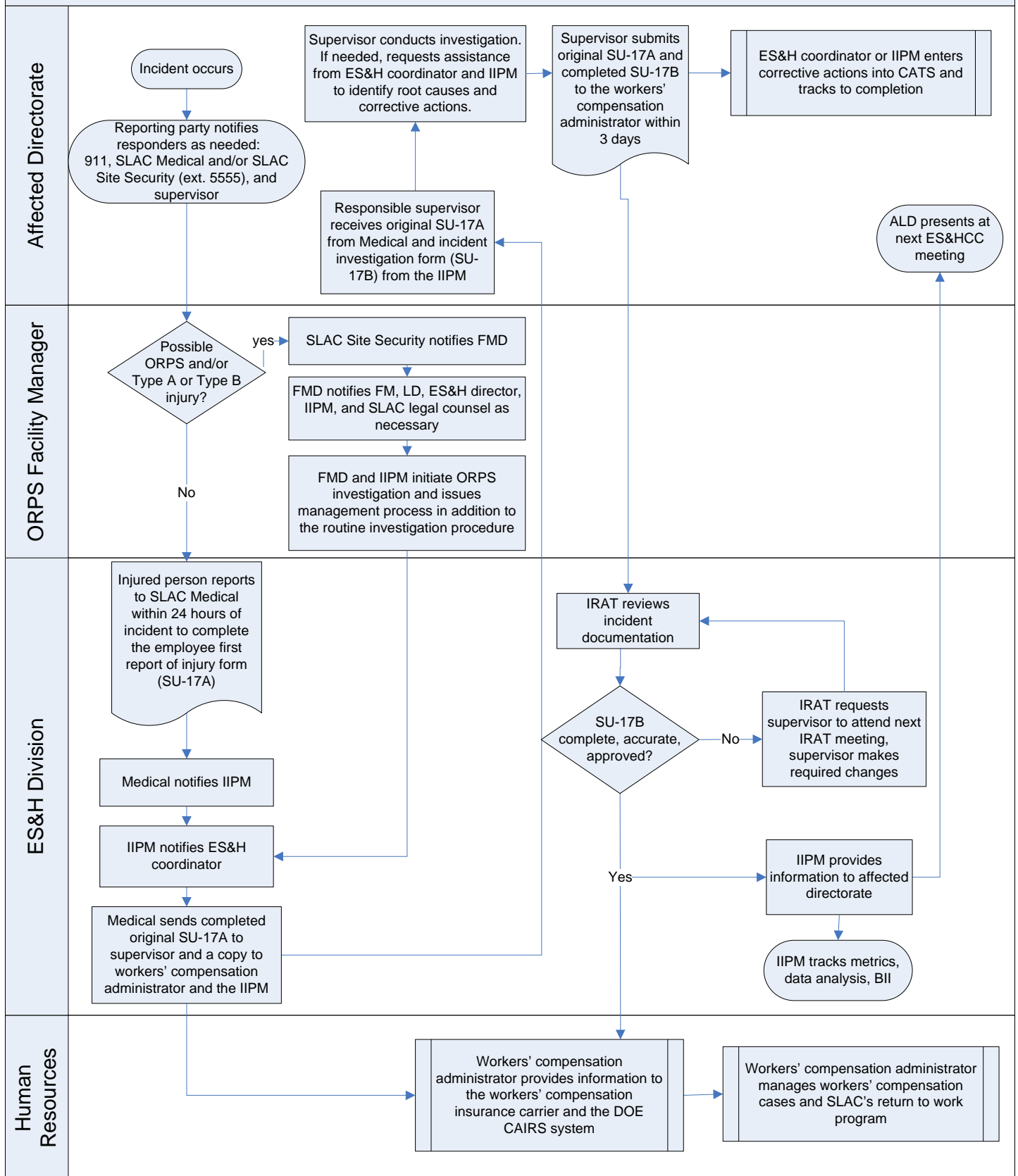
ALD	associate lab director
BII	Basic Incident Information
CAIRS	Computerized Accident/Incident Reporting System
CATS	Corrective Action Tracking System
DOE	Department of Energy
ES&H	Environment, Safety, and Health Division
ES&HCC	Environment, Safety, and Health Coordinating Council
FM	facility manager
FMD	facility manager designee
IIPM	incident investigation program manager
IRAT	Incident Review and Assistance Team
LD	laboratory director
ORPS	Occurrence Reporting and Processing System
SU-17A	Employee First Report of Injury (SU-17A)
SU-17B	Incident Investigation Form (SU-17B)

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 28, “Incident Investigation”, <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

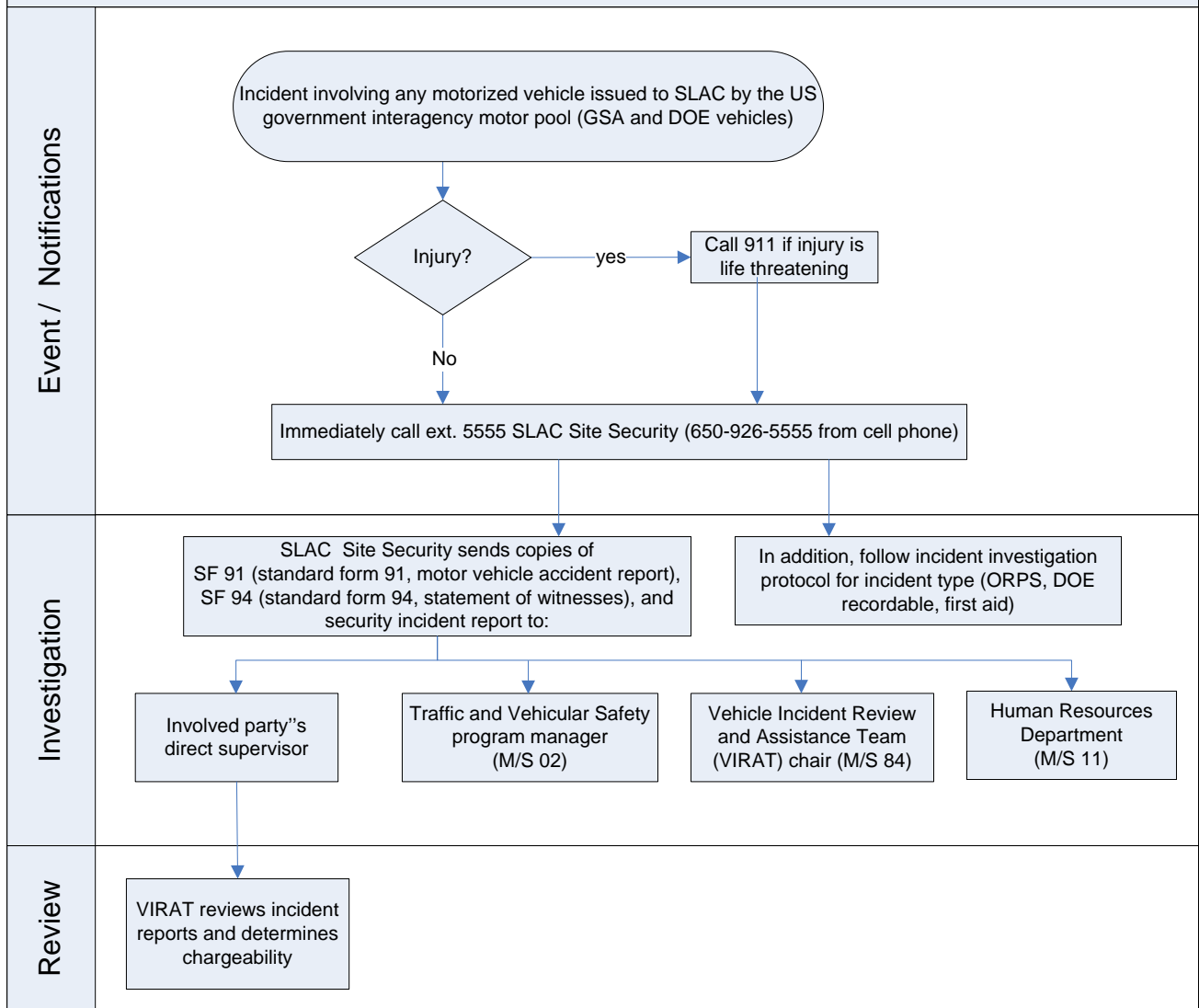
2 Incident Investigation: DOE ORPS Reportable Investigation Procedure (SLAC-I-730-0A21C-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedORPS.pdf>

3 Incident Investigation: Investigation Procedures (SLAC-I-730-0A21C-022), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsProcedInvestigate.pdf>

Incident Investigation Process: Occupational Injury or Illness



Incident Investigation: Government-owned Vehicles



Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart

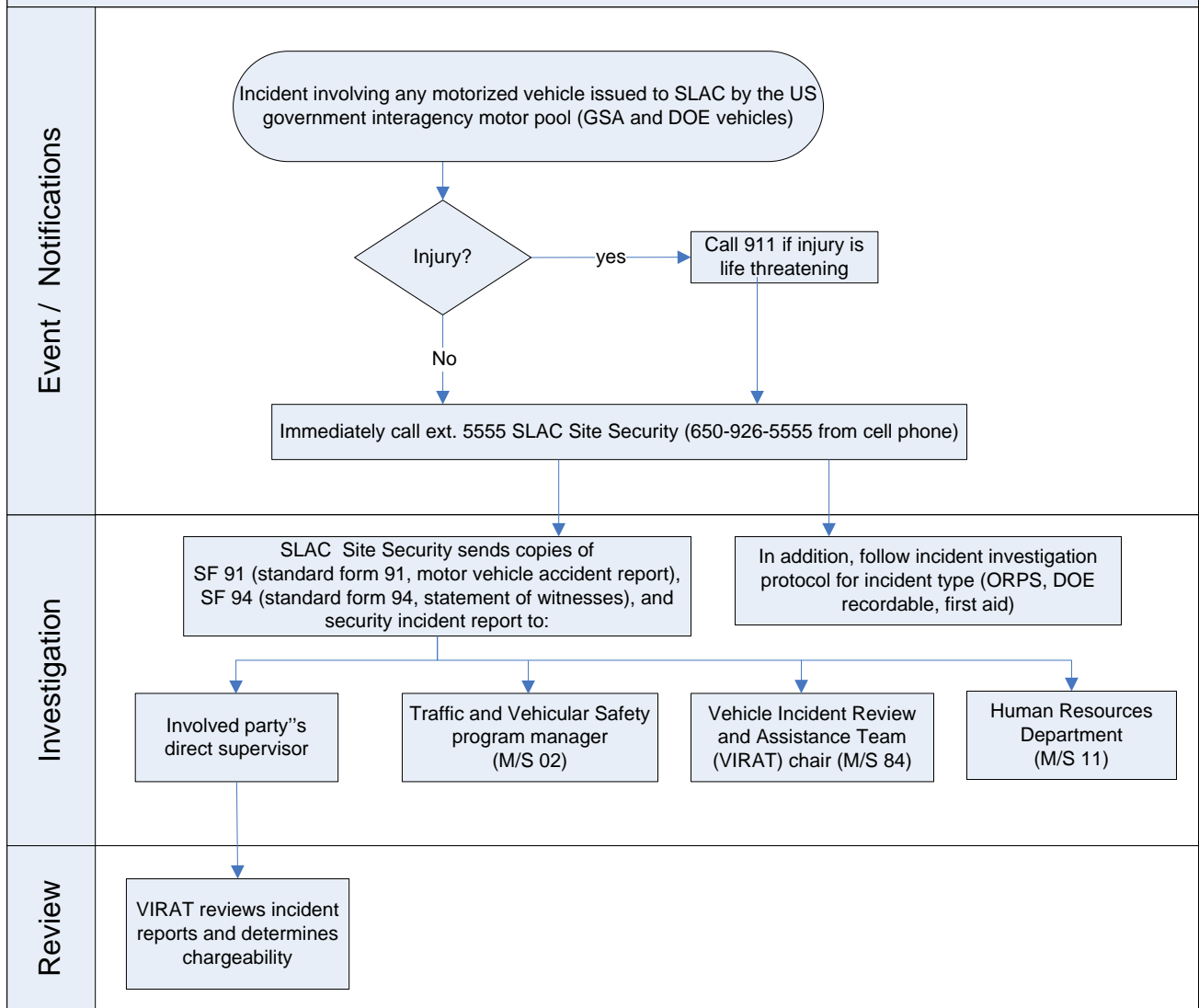
Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation, <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

Incident Investigation: Government-owned Vehicles



Incident Investigation: Government-owned Vehicle Incident Investigation Flow Chart

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation, <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

Incident Investigation: Evidence Collection Guidelines

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

Introduction

Collecting and preserving evidence and documenting the particulars of an incident is essential for meeting a range of reporting requirements and gathering evidence that may be used in legal proceedings.

Evidence should be collected as soon as is reasonably possible and be preserved, documented, and/or tracked by

- Ensuring that the scene of the incident is secured and preserved
- Collecting physical evidence and observing a strict chain of custody protocol
- Conducting interviews
- Collecting any other documentation relevant to the incident

Preserving the Scene

SLAC Site Security and other qualified responders and subject matter experts are responsible for securing the scene of an incident if one or more persons require medical treatment beyond first aid or significant damage to the environment or property has occurred.

Securing and isolating the scene of an incident protects people from any remaining hazards, prevents the scene from being disturbed or altered, and prevents items from being removed from or relocated within the incident scene so that an accurate reconstruction of events is possible. A scene is generally secured by such means as

- Cordoning the area off with rope, tape, or barricades
- Locking doors and gates
- Posting warning signs
- Using a log to document who can enter the area and their justification for entry
- Posting guards to control and limit access

Collecting Evidence

Physical Evidence

The following steps provide guidance for collecting physical evidence. To document the transfer of any evidence to another location or person, use the Incident Investigation: Chain of Custody Form.²

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 28, "Incident Investigation", <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

Incident Investigation: Evidence Collection Guidelines

The investigator / competent person should

1. Cordon off or otherwise secure the scene of the incident if it has not been secured to prevent unauthorized personnel from entering.
2. Prevent personnel from disturbing or removing evidence before it is inventoried, photographed, sampled, or otherwise documented; evidence may be moved only to facilitate rescue, provide immediate medical attention, or to mitigate other hazards.
3. If professional responders were dispatched, debrief responders to obtain any evidence and witness statements they may have already gathered.
4. Begin a more in-depth search for less obvious evidence. Examples include:
 - Blood on sharp edges
 - Oil leaking from machinery
 - Equipment that may be defective
 - Vehicle position footprints around the scene
5. Collect anything that may be useful as evidence; items are easily discarded if not needed, but it may be impossible to recover an item that was not initially preserved.
6. Identify each item and note where it was located prior to collection
7. Secure all evidence by locking it in a safe location and using a strict chain of custody protocol.
8. Document evidence by
 - Providing a written description
 - Photographing or videotaping
 - Sketching the scene

Interviews

The investigator or competent person should begin interviewing involved parties and witnesses as soon as possible after the event to collect facts, construct a timeline, and clarify critical elements. For guidance, see Incident Investigation: Interview Guidelines.³

If any witnesses are injured or in distress, be sympathetic and do not cause additional distress to find out what happened. Instead, diplomatically collect names and contact information and conduct an interview as soon as reasonably possible.

Documentation

The investigator or competent person should collect all relevant documentary evidence, including, as applicable:

- Any work planning and control documentation such as job hazard analysis and mitigation forms (JHAMS), job safety analysis (JSA), or equivalent

2 Incident Investigation: Chain of Custody Form (SLAC-I-730-0A21J-013), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormCustody.pdf>

3 Incident Investigation: Interview Guidelines (SLAC-I-730-0A21T-004), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsGuideInterview.pdf>

Incident Investigation: Evidence Collection Guidelines

- Area hazard analysis (AHAs)
- SLAC training assessments (STAs)
- Standard operating procedures (SOPs)
- Maps and drawings
- Inspection records
- Work plans (elevated work surface, hoisting and rigging, electrical, etc.)
- Permits (excavation, confined space, hot work, etc.)
- Tailgate and coordination meeting minutes

Incident Investigation: Interview Guidelines

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

The following interview format is useful for collecting information to complete the required any required reporting such as the Incident Investigation Form (SU-17B).²

Basics

- Conduct interviews as soon as possible after the incident
- Focus on interviewing persons most directly involved with the incident
- Be respectful of the interviewee's physical and emotional state; if the person has suffered an injury or is in shock, ensure that medical help is available

Initiating an Interview

1. Introduce yourself and ask the person if they can help you determine what happened.
2. Put the interviewee at ease by
 - Explaining that getting the facts may help prevent a recurrence
 - Explaining that information is confidential and on a need-to-know basis only
 - Remaining cordial and professional even if the interviewee is not cooperative
3. If possible, move the interview to a location with enough privacy to
 - Remove distractions
 - Maintain confidentiality
 - Keep interviewee from being influenced or pressured by others

Developing the Narrative

1. **Collect facts.** Ask the interviewee to relate the events of the incident in his or her own words. Allow the person to complete each statement; do not fill silences with leading questions.
2. **Construct a timeline.** Pay close attention to the testimony in order to establish a timeline and identify critical elements for future clarification or expansion.
3. **Clarify critical elements.**
 - Based on testimony, prompt the person to elaborate on critical information
 - Ask open-ended questions to help clarify important information
 - Avoid using emotive or judgmental language

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 28, "Incident Investigation", <http://www-group.slac.stanford.edu/esh/general/accidents/policies.htm>

2 Incident Investigation: Incident Investigation Form (SU-17B) (SLAC-I-730-0A21J-014), <http://www-group.slac.stanford.edu/esh/eshmanual/references/incidentsFormInvestigateSU17B.pdf> | [.doc \(Word\)](#)

Incident Investigation: Interview Guidelines

- Do not prompt interviewees to speculate. Record only what the interviewee considers fact.
4. **Ask control questions.** Ask questions for which you already know the answer to give you a basis for evaluating the reliability of the interviewee's testimony.
 5. **Confirm accuracy.** Periodically summarize events for the interviewee to confirm the information has been accurately recorded.

Collecting Additional Information

1. Once the narrative has been developed, ask the person how the incident could have been prevented.
2. Thank the interviewee for cooperating with the investigation
3. Exchange contact information so that both parties can follow up; the interviewer may have additional questions and the interviewee may remember additional details after the interview is concluded.

Incident Investigation: Lessons Learned Guidelines

Department: Risk Management and Response

Program: Incident Investigation

Owner: Program Manager

Authority: ES&H Manual, Chapter 28, Incident Investigation¹

Lessons learned is a collection of incident summaries that is made available to the SLAC community in order to help prevent similar incidents from recurring. For a current list, see the “Lessons Learned” web site.²

Sources

A primary source of lessons learned is on-site incident investigations. For certain incident types, the person conducting an incident investigation may be required to submit a report to the lessons learned program manager.

Lessons can also be gleaned from

- SLAC incident reports developed for Department of Energy (DOE) recordable and first aid injuries and close calls if an analysis of the circumstances surrounding the incident would provide particular value to the organization
- DOE laboratories
- Greater community

Suitable Lesson Topics

The following are suitable lesson types for posting and distribution:

- Information that is not already covered in SLAC training programs or other documents
- Numerous similar incidents have occurred at SLAC
- The likelihood of a similar event recurring at SLAC is high
- Posting is requested by line management

Lessons Learned Input

There are two ways to contribute to the lessons learned archive: you may reply to information already posted or you may submit material to the lessons learned program manager using the following outline.

1 *SLAC Environment, Safety, and Health Manual* (SLAC-I-720-0A29Z-001), Chapter 28, “Incident Investigation” <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>

2 “Lessons Learned”, http://www-group.slac.stanford.edu/esh/concerns/lessons_learned/

Lessons Learned Outline

Date:

Title:

Lessons Learned Statement:

Discussion:

Analysis:

Recommended Actions:

Priority Descriptor: (Use only 1)

- Red/Urgent
- Yellow/Caution
- Blue/Information
- Green/Good Work Practices

Work Function Categories:

Hazard:

ISM Category:

Savings (if any):

Review

The lessons learned program manager, together with appropriate subject matter experts (SMEs), will review submitted material for content and lesson value. Lessons that are relevant to SLAC hazards and are of particular value or interest will be posted.



OCCUPATIONAL INJURY / ILLNESS REPORT

Employee First Report of Injury (SU-17A)

Status (*check one*)

- SLAC employee
- Subcontractor
- Student / visitor
- Temp personnel from agency
- Non-employee experimenter / user
- Other (*explain*)

SLAC employees: You must complete this form as soon as possible, but **no later than 24 hours** after the onset of a work-related injury or illness. This form is usually completed at SLAC Medical and its completion is required even if no medical treatment is sought.

All others: The injured party is strongly encouraged to complete this form. If this is not possible, the SLAC point of contact (POC) or university technical representative (UTR) must also complete the SU-17A and submit it as an attachment to the required Incident Investigation Form (SU-17B).

For additional information see: Human Resources <http://www-group.slac.stanford.edu/hr/wc/>

1. INJURED PERSON IDENTIFICATION

Name (<i>first / initial / last</i>):		Date of hire:	Time at this job (<i>if applicable</i>):	
SSN (<i>last 4 digits</i>):	Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female	Bargaining unit: <input type="checkbox"/> Yes <input type="checkbox"/> No	Job title:	
Home address:		Supervisor:		
City / state / zip code		Time you started work on date of incident:		
Home phone:		Work phone:	Mailstop:	

2. INJURY OR ILLNESS DESCRIPTION

Incident date (<i>mo/day/yr</i>):	Time it occurred (<i>hh/mm</i>):	Directorate / dept:	Location (<i>building, room no., in / outside</i>):	Date reported:
Injured body part(s) (<i>be very specific</i>):				
Injury type (<i>check all that apply</i>)				
<input type="checkbox"/> No injury	<input type="checkbox"/> Fracture	<input type="checkbox"/> Dislocation	<input type="checkbox"/> Burns / scalds	
<input type="checkbox"/> Strain / sprain	<input type="checkbox"/> Repetitive stress injury	<input type="checkbox"/> Amputation	<input type="checkbox"/> Exposure to (<i>specify</i>):	
<input type="checkbox"/> Laceration / cut	<input type="checkbox"/> Insect bite / sting	<input type="checkbox"/> Foreign body in eye	<input type="checkbox"/> Other (<i>specify</i>):	
<input type="checkbox"/> Scratch / abrasion	<input type="checkbox"/> Splinter	<input type="checkbox"/> Internal injury		
<input type="checkbox"/> Bruising	<input type="checkbox"/> Exposure to heat / cold	<input type="checkbox"/> Reaction to chemical exposure		
First treating physician (<i>name</i>):		Incident witness(es):		
Located at (<i>address</i>):				
Date of visit:				

3. INCIDENT DESCRIPTION

1) What were you doing?

(Continued on page 2.)

Incident Investigation: Employee First Report of Injury (SU-17A)

3. INCIDENT DESCRIPTION, continued

- 2) How did the incident causing injury or illness happen?
- 3) Describe equipment, materials and chemicals being used when incident or exposure occurred.
- 4) List any contributing factors (*such as improper tools, insufficient training, or lack of personal protection equipment*).
- 5) How could the accident have been avoided? (*Examples include asking for help to lift a heavy object or sizing up a load more accurately.*)

(Continue on an extra sheet if necessary.)

4. STATEMENT SIGNATURE

I refuse treatment against medical advice as declared in section 5 below. (*If you refuse treatment you must also complete Section 5.*)

Signing this form does not necessarily constitute acceptance of a workers' compensation claim. *If you are a SLAC employee and your injury becomes more than a first aid case because you need extended medical treatment, complete a DWC-1 Workers' Compensation claim form at SLAC Medical.*

The provided information is true and correct to the best of my knowledge and belief.

Injured person's signature: _____ Time: _____ Date: _____

5. REFUSAL OF TREATMENT AGAINST MEDICAL ADVICE (*complete only if refusing medical treatment*)

To decline medical care against medical advice (AMA) the injured person must meet all of the following criteria:

1. Be an adult (*18 or over*)
2. Exhibit no evidence of altered level of consciousness and not be under the influence of alcohol or drugs that impair judgment
3. Understand the nature of the medical condition as well as the risks and consequences of refusing care

Acknowledgment of Information: I have been advised that medical assistance on my behalf is necessary, and that refusal of said assistance could be injurious to my health, and under certain circumstances risks may include disability and/or death. I have been advised to discuss my medical complaints with my regular health care provider as soon as possible. Nevertheless, I refuse to accept treatment or transport to a medical facility and assume all risks and consequences of any decision.

Release of Liability: By signing this form, I am releasing SLAC, Stanford University, SLAC's Occupational Medical Subcontractor, responding emergency medical service (EMS) agency(ies) of any liability or medical claims resulting from my decision to refuse the medical care/transport offered.

I have read and understand the "Acknowledgment of Information" and "Release of Liability".

Name: _____ Signature: _____ Date: _____

If you change your mind or symptoms from an injury that happened at work occur after SLAC business hours, you may obtain emergency medical treatment wherever necessary (for example, a medical facility close to your home). You must report the injury to SLAC Medical as soon as possible the next day.

Signature witnessed by (*print*): _____ Signature: _____

Address: _____ Phone number: _____

(EMS / SLAC MEDICAL COMPLETES BELOW THIS LINE)

Refused to sign, reason (*if applicable*):

Interpreter name (*if applicable*):

Released injured party into the care or custody of :

Self Spouse Co-worker Friend Parent Guardian Law enforcement: Agency(Badge No. _____) Other:

Name (*print*)

Signature

Date



Incident Investigation Form (SU-17B)

- Injury
- Incident
- Both injury and incident
- Close call / near hit

The SLAC supervisor / UTR / POC of the area where the event occurred must complete this form and submit it **within 3 business days** as indicated below. Be as specific as possible and include drawings, photos, additional narrative, as needed.

PNR #

Injury incidents: Ensure that the injured party goes to SLAC Medical to complete an Employee First Report of Injury Form SU-17A within 24 hours of the incident. If the injured party is a non-employee, the supervisor / UTR / POC completes the SU-17A if the non-employee does not. Submit this completed form to the SLAC workers' compensation administrator, Human Resources Department, Mailstop 11. For additional information, see <http://www-group.slac.stanford.edu/hr/wc/>.

Non-injury incidents: Send original to the ES&H incident investigation program manager, ES&H Division, Mailstop 84. (For additional information, see the ES&H Manual, Chapter 28, "Incident Investigation": <http://www-group.slac.stanford.edu/esh/general/incident/policies.htm>)

Non-injury accident involving a government-owned vehicle: report directly to SLAC Site Security (ext. 5555) and do not complete this form.

SUPERVISOR CONTACT INFORMATION

Supervisor / investigator / UTR / POC name:		Title:	Directorate / dept:	Ext:	Mailstop:
Date of incident: (mo/day/yr)	Time of incident: <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Time of first knowledge of incident::	Date of report:		

Subcontractor involved? If yes, name and contact information.....

INJURED PARTY

If no injury, check box and skip this section. <input type="checkbox"/> No injury	Injured party's name:	Injured party's contact information:
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Injury description:

WITNESSES AND/OR WITNESS STATEMENT

Witnesses (name and contact information)	Witness statement attached? <input type="checkbox"/> Yes <input type="checkbox"/> No
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PROPERTY DAMAGE

List property / material damaged (use control numbers if available):	Nature of damage:
Object / substance inflicting damage:	Approximate cost:

THE INCIDENT

Required analysis type (to be determined by incident investigation program manager)

- Root cause analysis Apparent cause

Describe what happened.

Investigate scene of incident or conditions. Describe who was involved, when and where the incident happened, what happened, and how. (In addition, check events and substandard conditions boxes on next page.)

Why did it happen?

What actually caused the illness, injury, or incident?

List immediate actions taken and results.

Incident Investigation: Incident Investigation Form

What should be done to prevent a recurrence?

Use descriptive constructive statements (such as: worker should wear safety glasses; worker needs training in lifting techniques; a ladder should have been used).

CORRECTIVE ACTIONS TRACKING SYSTEM ITEMS

List action(s) that have or will be taken to prevent a recurrence.

By whom

Scheduled date

Actual end date

List action(s) that have or will be taken to prevent a recurrence.	By whom	Scheduled date	Actual end date

JOB HAZARD ANALYSIS AND MITIGATION (JHAM) REVIEW

Is there a JHAM or non-routine JHAM that applies to the **task** being performed when the injury or incident occurred? Yes No

If yes, review the JHAM, answer the following questions, and attach a copy to this report.

If no, please explain why the JHAM did not include the task.

Were hazards sufficiently identified? If not, please explain. Yes No

Were identified controls adequate and implemented? If not, please explain. Yes No

Were the identified controls not implemented? If not, please explain. Yes No

AREA HAZARD ANALYSIS (AHA) REVIEW

Is an AHA available for this area? Yes No

If yes, review the AHA, answer the following questions, and attach a copy to this report.

If not, please explain.

Was the AHA available and reviewed by the injured party? Yes No

Is the AHA adequate for the hazards? If not, please explain. Yes No

Were adequate controls in place? Yes No

OCCURRENCE REPORTING AND PROCESSING SYSTEM (ORPS)

ORPS reportable? Yes No *(If yes, FMD completes this section, if no skip to authorizing signatures)*

ORPS #

ORPS title:

System/building/equipment:

Plant area:

Date discovered:

Time discovered:

Notifications *(name, date, time, organization)*

Date categorized

Time categorized

a.m.

p.m.

FMD *(name and signature)*

Significance category

ORPS reporting criteria

Group:

Subgroup:

Sequence:

Group:

Subgroup:

Sequence:

Group:

Subgroup:

Sequence:

Incident Investigation: Incident Investigation Form

Cause codes (<i>List all that apply. See Workbook for Occurrence Reporting, Appendix F</i>)	Integrated Safety and Environment Management System (ISEMS) review (<i>Select step(s) that should be reviewed to prevent a similar incident.</i>) <input type="checkbox"/> Scope of work <input type="checkbox"/> Hazard analysis <input type="checkbox"/> Hazard control development and implementation <input type="checkbox"/> Work performed within controls <input type="checkbox"/> Continuous improvement feedback <input type="checkbox"/> Not applicable (as determined by management review)
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AUTHORIZING SIGNATURES

(*Print and sign.*)

Completed by (*name, title*)

(*date*)

Reviewed by (*name, directorate ES&H Coordinator*)

(*date*)

Investigation approved by (*name, Incident Review and Assistance Team chair*)

(*date*)

Investigation approved by (*name, ES&H Director / ES&H Deputy Director*)

(*date*)

Reviewed by (*name, Associate Lab Director*)

(*date*)