EPS 50-T1

Appendix EPS 50-T1
Spill and Release Reporting Requirements

Introduction

This Appendix explains the notification and reporting requirements for releases of materials that could harm the environment or public health. The requirements cover a wide range of materials, from the buffered chemical polish acid mixture (used to etch niobium cavities) and chlorofluorocarbons (spray can propellants) to ethylene glycol (automobile coolant).

In the event of a planned release into any environmental media, arrangements are made with the proper authorities before the release. Some releases are covered under permits. (Refer to Chapter **2420** *Permits and Authorizations from External Agencies* for general information on current permits and reporting requirements.)

Awareness and training help minimize the potential for an unplanned or accidental material release. If a release should occur, exposure to these materials can contaminate the environment or create a safety or health hazard to humans, both on and offsite. In the event of an unplanned or unpermitted release, specific, timely reporting procedures must be followed.

This Appendix lists spill response measures, reporting criteria, and the people and agencies requiring notification for EHM releases.

Planned or unplanned releases may require occurrence reporting. Review Chapter **5300** *Occurrence Reporting* for applicability when there is a spill that has the potential to require external reporting.

Table 1: Immediate Response Contacts

Event or Action	Responsible Personnel	Phone Number
Serious Injury or Emergency Services Needed	Ambulance, Fire Department, or City Haz Mat Team	911
On-site support, including cordoning off area, directing emergency vehicles, subcontractor clean- up of spills, and accelerator control room notification	Facilities Management Director	ext. 4444 (24-hour support)
Event with any possible environmental or DOE occurrence related issues	Facility Manager (designee)	876-1750 (24-hour support)
Spill Control Assistance and/or Accident Evaluation	Chemical Assistance Team	584-7039, ext. 4444
Supervisor Notification	Your supervisor	varies

Program Description

General

Being familiar with EHMs in your work area is an important component of understanding response and notification procedures. Environmentally harmful, non-waste items are identified on applicable MSDSs. Information about environmentally harmful wastestreams may be found in the Task Hazard Analysis (THA) that addresses the process or in the appropriate waste profile, available from the Hazardous Waste Coordinator (HWC).

Regulations that have release reporting requirements (CAA, CWA, EPCRA, CERCLA) may involve overlapping notifications. The major chemicals or other harmful materials at Jefferson Lab that could trigger the external notification or reporting process are listed in *Appendix EPS 50-R1 Chemical/Material Lists of EHMs*.

Two other regulations that have release notification requirements are RCRA, for hazardous wastes, and OSHA for releases (or any accident or injury) meeting certain criteria.

Planned Release Notification and Reporting

Planning

During the identification of a new process, it can be determined that a particular EHM will be released to the environment on a regular schedule or at a certain rate per year. The requirements would be detailed in the THA for the process. Notify your Division Safety Officer if a release is planned and provide to him/her an information copy of any divisional THA involving significant releases of EHMs. The Division Safety Officer and the responsible line manager will assist the ESH&Q Reporting Manager in determining any compliance issues that need to be addressed for the planned release. The ESH&Q Reporting Manager will then determine if a change to an existing permit is applicable or if a new permit is required. The Division Safety Officer or responsible line manager will assist the ESH&Q Reporting Manager throughout the permitting process.

Operation

Upon issuance of a permit or agreement, the process owner will abide by all permit or agreement terms and conditions, including staying within the release quantity requirements. All required reports, including those radiological, should be sent to ESH&Q Reporting for transmittal to the appropriate authority. If the release is permitted, operating parameters are predetermined and no additional reporting requirements may be necessary as long as compliance with the permit terms is maintained. All maintenance and transfer operations with significant risk of exceeding permit limits shall be documented in a standard operating procedure.

Under CERCLA, continuous releases of hazardous substances (HS) are defined as “continuous” and “stable in quantity and rate”. As Jefferson Lab does not expect to have any releases of HSs that would meet this description or exceed the regulatory thresholds on a continuous basis, no reporting requirements need to be addressed.

Response to the Unusual

Refer to Chapter **2420** *Permits and Authorizations from External Agencies* for additional information.

If the operating parameters on a permit or agreement are exceeded, notification under the terms of the permit or agreement to the appropriate agency or authority is warranted. If an increase in output to levels above permit limits is pending, the permit should be renegotiated before a violation is imminent. Work with your Division Safety Officer to determine necessary actions. As well, if operating parameters are exceeded in the quantities and time frames noted in the following section, then reporting under the Accidental Release Reporting section below could also be required.

Spill or Accidental Release: Initial Notification

Response

If a nonpermitted release of an EHM into the environment should occur, anyone involved in or witnessing the release should respond to the situation as qualified. Internal notifications and initial response requirements will be addressed by the discoverer of the spill or release and the discoverer's supervisor. Examples include oil entering a storm drain and a container or hose failure.

If you witness or encounter a spill, follow the steps in *Appendix 3510-R1 Spill/Release Response Procedures*.

- ❖ For additional emergency response actions, see *Appendix 3510-T3 Specific Emergency Response Procedures*.
- ❖ For assistance with cleanup and/or disposal if hazardous wastes are involved, contact the:
  - Chemical Assistance Team at ext. 7039 (work hours only), and
  - Guard House at ext. 4444 (the guard will contact appropriate personnel).
- ❖ If there are potential radiological concerns, contact on-duty RadCon staff at 876-1743 for assistance.
- ❖ For oil release responses and follow-up actions, see Chapter **6732** *Oil-Spill Prevention, Control, and Countermeasures*.
- ❖ If the spill involves an emergency situation, alert the Facility Manager or designee at 876-1750 to immediately notify appropriate DOE personnel.

Spill Reporting

General

If a spill could be equal to or greater than the reportable quantity (RQ), the Facility Manager (or Designee) shall work with the supervisor to assess the event. If it could be reportable to DOE or other agencies, the Facility Manager (or Designee) will notify the DOE. DOE and SURA will jointly determine if the event is reportable and determine which external agencies require notification.

The supervisor shall continue with internal reporting requirements and assist with any identified external notifications as presented at the end of this section.

Quantities requiring external notification can be as small as 0.454 kg or approximately 1 pint of certain materials. Even a small spill in an uncontained area could, therefore, be externally reportable. Examples include:

- Reportable quantities for listed hazardous substances, set forth in 40 CFR 302, range from 1 to 5000 pounds (0.454 to 2270 kg, or ~ 1 pint to ~ 500 gal.).
- Unlisted substances (i.e., characteristic hazardous wastes) have an RQ of 100 pounds (45.4 kg or ~ 12 gal.).
- If the EHM is a mixture and the quantity of all constituents are known, then the reporting requirement applies if the volume of any constituent equals or exceeds its RQ level.
- If the quantity of all hazardous constituents in the mixture are not known, the reporting requirement applies if the total volume of the mixture equals or exceeds the RQ for the constituent with the lowest RQ.

Note: The EPA lists all EHMs and the RQ criteria for each material. Refer to *Appendix EPS 50-R1 Chemical/Material List of EHMs* for those materials known to be present at Jefferson Lab.

The basis for the determination of reportable or not reportable shall be documented by the DOE and the Facility Manager. All releases above the RQ shall be reported.

Employees, experimental physics participants, and subcontractors should familiarize themselves with the basic requirements for reporting a spill. At a minimum, be ready to provide

- location and media into which the EHM was released
- date release was detected
- time and duration of release
- types and quantities of materials released
- possible sources of the release
- where material is headed

If known, provide

- the chemical name,
- its hazard classifications, and
- any health risks associated with the emergency.

Spills and releases meeting the reporting criteria will be jointly (Facility Manager and DOE Site Office) reported to the EPA. (OSHA and RCRA may require reporting as well.) Jefferson Lab contracted hazardous material/waste carriers or transporters are responsible for reporting releases during transport to the Department of Transportation and any other required agency in accordance with DOT regulations.

On-Site Information Contacts

- For information or advice (beyond initial notification) from the Chemical Assistance Team, call the team leader at ext. 7863 or pager 584-7863.
- For information or advice from the Jefferson Lab Industrial Hygienist or the HWC, call ext. 7039.
- For assistance with the reporting and notification process as well as follow-up, contact the ESH&Q Reporting Manager at ext. 7007 or ext. 7308.

Internal Reporting Program

Jefferson Lab maintains an internal reporting program with reduced thresholds to (1) alert management if controls are inadequate and (2) to ensure that externally reportable quantities are properly identified as such. The responsible line manager shall complete a spill report form:

- any time there is a spill or release of an EHM to the environment (e.g., ground or surface water or any building drain) in a quantity greater than 12 fluid ounces or 10% of the RQ, whichever is less; or,
- for any indoor or contained spill or release that is greater than 1 gallon or the RQ, whichever is less.

The Spill Report Form is located in *Appendix 3510-R2 Incident Report Form*. The responsible line manager shall promptly complete the form and provide a copy to the applicable Division Safety Officer and the ESH&Q Reporting Manager on the day of the event.

A Notable Event shall be prepared for an internally reportable spill by the division ESH&Q staff when:

- ❖ the spill or release is in excess of any RQ or 5 gallons, whichever is less; and/or,
- ❖ the spill enters a sewer system inlet;
- ❖ any contaminated water enters the site drainage system; and/or,
- ❖ as requested by the ESH&Q Reporting Manager.

The Notable Event shall chronologically present the event and address cause, actions taken, and lessons learned.

Provide a copy of the Notable Event to the responsible line manager, the Division Safety Officer, and the ESH&Q Reporting Manager within one week of the event.

External Reporting Program

The responsible line manager and the Facility Manager shall determine promptly if any form of DOE and/or external notification and/or reporting may be necessary. The Facility Manager will meet with the DOE Jefferson Lab Site Office (JSO) Representative to determine jointly which agencies, if any, require notification, including the DOE emergency response organization.

Requirements under all three Acts (Case 1, 2, and 3 below) should be reviewed for applicability, as there is substantial overlap. If applicable, the event will also be categorized through Jefferson Lab's Occurrence Reporting Process (ORPS), as presented in Chapter **5300** *Occurrence Reporting*.

OSHA Note: OSHA regulation of Jefferson Lab is performed by the DOE, but it is DOE policy to inform OSHA within 8 hours (oral or written) of any release that results in the hospitalization of 3 or more employees OR is fatal to one or more employees.

Case 1: Does it have the potential to meet CWA reporting criteria?

Applies to Oil and Hazardous Substances (HS)

Oil

Is it more than the RQ? Meaning that it is a quantity that either:

- Violates an applicable water quality standard? (any amount that enters a groundwater or drinking water source) **OR**
- Causes a sheen, film, or discoloration of the surface of any water course? **OR**
- Causes a sludge or emulsion to be deposited beneath the surface of the water.

Upon notification, HRSD can respond very quickly to contain a spill in the sewer and minimize any disturbance or clean-up.

HS

Does the release quantity exceed the RQ set forth in 40 CFR 117.3? Examples include: hydrochloric acid, PCBs.

Special circumstance: If oil or a HS gets into the sanitary sewer system, contact the Facility Manager **(876-1750)** as quickly as possible to notify the local sanitation district.

Case 2: Does it have the potential to meet CERCLA reporting criteria?

Hazardous Substances (HS) (as defined in 40 CFR 302.4) Examples include: sulfuric acid, acetone

- Has the release of a HS occurred? **AND**
- Is it in excess of the applicable RQ? **AND**
- Did it occur within a 24-hour period?

Case 3: Does it have the potential to meet EPCRA, including Section 313, reporting criteria?

See *Appendix EPS 50-R1 Chemical/Materials List of EHMs* and references to the CWA, CERCLA, and EPCRA for materials applicable to Jefferson Lab. Multiple notifications may be necessary in certain circumstances.

Extremely Hazardous Substances (EHSs) and CERCLA HSs.

- Was it a release of an EHS **OR** a CERCLA HS **OR** an EPCRA 313 Toxic Chemical? **AND**
- Did it exceed the applicable RQ? **AND**
- Did it go beyond the site boundary?

Examples include: hydrofluoric acid, nitric acid

If the answer to **ALL** of the questions in either of these three cases could be yes, the DOE and the Facility Manager will make the necessary determination and provide notifications and reports per the Notifications are Necessary section.

NOTIFICATIONS ARE NECESSARY

CWA

Jefferson Lab must ensure that the National Response Center (NRC) is notified as soon as knowledge of any release of oil or a HS becomes available.

The release notification should at a minimum include:

- date and time
- location
- substance and quantity
- the water movement around the release
- possible source(s) of the release
- acute or chronic health risks, if known
- name and phone number of Jefferson Lab contact for more information

CERCLA

Jefferson Lab must ensure that the NRC is notified as soon as knowledge of any release of a HS becomes available.

The notification at a minimum should include:

- date and time
- location
- substance and quantity
- possible source(s) of the release
- acute or chronic health risks, if known
- name and phone number of Jefferson Lab contact for more information

DOE and SURA will jointly contact the NRC at 1-800-424-8802.

EPCRA

Jefferson Lab must ensure that the following agencies are notified for a release of an EHS, CERCLA HS, or EPCRA 313 Toxic Chemical. DOE and SURA will jointly contact the:

LEPC 1-757-868-3510
SERC 1-804-894-6500, ext. 6574
Newport News Fire Department 911

Note: If immediate assistance was needed SURA should already have notified 911.

The (immediate) notification should, at a minimum, include:

- the chemical name or identity of any substance involved in the release
- indication of whether the substance is listed as an EHS
- an estimate of the quantity of any such substance that was released into the environment
- the time and duration of the release
- the medium or media into which the release occurred
- any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed individuals
- proper precautions to take as a result of the release, including evacuation
- the name and telephone number of the person or persons to be contacted for further information

The Lab Public Affairs Department, in coordination with the DOE Site Office, will notify local media, as soon as possible, of any potentially hazardous situations that could impact public health and will follow guidance in EMS SOP EMP-06 in carrying out environmental communications.

The written follow-up report to the initial oral communication shall be provided as soon as practical. It should include

- actions taken to respond to and contain the release; and,
- any known or anticipated acute or chronic health risks associated with the release, and where appropriate, advice regarding medical attention necessary for exposed individuals.