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Std. No.
E17

Safety, Health, and Environmental Standard

Title: OIL & HAZARDOUS SUBSTANCES SPILL RESPONSE

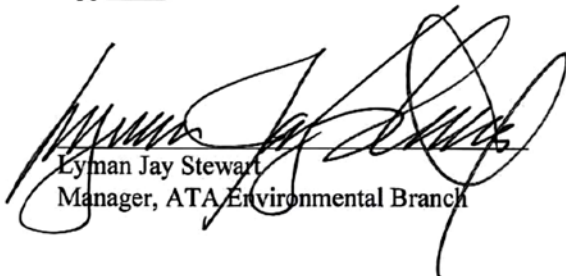
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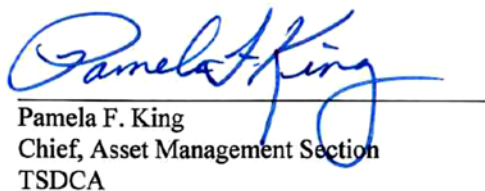
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The provisions and requirements of this standard are mandatory for use by all AEDC personnel engaged in work tasks necessary to fulfill the AEDC mission. Please contact your safety, industrial health and/or environmental representative for clarification or questions regarding this standard.

Approved:



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Manager, ATA Environmental Branch



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Record of Review/Revision

(Current revisions are highlighted in yellow and marked with a vertical line in the right margin.)

Date/POC	Description
04/26/13	Added NFAC supplement; administrative change to indicate training records for base operating contractor are available from the base operating contractor training office.
3/12/12 Kraig Smith	Added two new sections, 5.0 – <i>Training Requirements</i> and 6.0 – <i>Inspections/Audits</i> , according to revised format structure. Added several definitions referenced in the document. Removed Section 4.2.3 and incorporated it into Section 4.2.1, renumbered sections accordingly. Global replacement of 704 CES/CEA with TSDCA to reflect organizational change. Updated POC list that is referenced from a hot link in Annex B. Clarifying language throughout.
10/30/09 Hunter Beavers	Removed all references to On-Scene Commander (<i>OSC</i>). Added requirement to submit Spill Report within 30 days of request. Updated <i>Section 3.0 Definitions</i> for better clarification. Updated spill contacts in Annex B.
03/01/08 Hunter Beavers	Changed <i>Spill Prevention and Response Plan (SPRP)</i> to <i>Spill Prevention Controls and Countermeasures Plan (SPCC)</i> . Updated contact information in Annex B. Changed references to <i>Full Spectrum Threat Response Plan (FSTR)</i> to <i>Comprehensive Emergency Management Plan (CEMP)</i> . Updated throughout to reflect Environmental Flight (704 CES/CEV) organizational change to Asset Management Flight (704 CES/CEA).
03/01/07 Hunter Beavers	Updated personnel and AEDC organizational information throughout document. Added scope to cover incidents involving hazardous substances in Section 1.2 and 4.1.1. Added description of supplemental guidance documents in Section 1.2. Added definitions in Section 3.0 for <i>HAZMAT incident</i> , <i>Incident Command System</i> , and <i>National Incident Management System</i> . Added requirement to follow ICS and NIMS in supplemental documents. Standardized requirements for site control and support of HAZMAT recovery in Sections 4.2.1 and 4.2.2. Added requirement to follow HAZMAT zone control process in Section 4.2.6.9. Added requirement to develop organizational specific procedures in Sections 4.2.6.10 and 4.2.13.8. Added requirement for Environmental review of HAZMAT incident/spill response procedures in Sections 4.2.10.7 and 4.2.14.2. Added requirement for Safety review of JSA in Section 4.2.11.5. Converted <i>Annex B (Spill Contact/Coordinators)</i> to a stand-alone document to allow “real-time” updates; document to be posted on Aedcfs05\aedcpubs\shestand.
03/01/06 Hunter Beavers	Added note to definition of <i>Operational Release</i> in Section 3.0. Standardized language throughout to change Remediation Team to <i>Contractor Spill Cleanup Team</i> . Added requirement to inventory spill response supplies. Added requirements for providing, storing, and maintaining a supply of PPE for spill response. Added requirements for maintaining call lists, training requirements, health fitness, and respiratory fit-testing of the Contractor Spill Cleanup Team. Updated Annex B.
03/01/04 Hunter Beavers	Updated language and text to reflect changes to operations under one contract instead of two. Updated personnel changes and standardized language throughout the document. Updated <i>Requirements</i> and <i>Procedure</i> sections to reflect current program requirements; added <i>Basic Hazards/Human Factors</i> section. Updated Annex B. Added Annex C, Spill Notification Flow Chart.
02/05/02 Hunter Beavers	Added <i>Introduction/Purpose</i> , <i>Responsibilities</i> , and <i>References</i> sections in accordance with COI 91-5. Reformatted titles and numbering of standard in accordance with COI 91-5. Moved one line from old <i>Scope/Application</i> and moved it to <i>Introduction/Purpose</i> . Added last bullet under item 3.12 of <i>Definitions</i> to incorporate reference to HWSA; also added “NOTE” to item 3.12 of <i>Definitions</i> . Edited step 5.49 of <i>Procedure</i> to include reference to HSWA. Updated Annex B.



Safety, Health, and Environmental Standard

Oil & Hazardous Substances Spill Response

1.0 INTRODUCTION/SCOPE/APPLICABILITY

1.1 Introduction

Various types of oil and hazardous materials are used at Arnold Engineering Development Center (AEDC) to conduct testing and support operations. In addition, hazardous and non-hazardous wastes are routinely generated by testing and support operations. Each of these substances must be considered as a potential spill source. Proper response to spills is imperative in order to prevent or minimize contamination of the environment. This standard provides guidance for immediately reporting and responding to spills and subsequent events.

1.2 Scope/Applicability

This standard is applicable to all oil spills, hazardous substance spills, and incidents involving hazardous substances that could occur at AEDC. This standard is used to supplement guidance given in the following documents:

- *Comprehensive Emergency Management Plan 10-2 (CEMP)* – Plan used at AEDC to identify procedures to be followed in the event of major accidents, natural disasters, enemy attacks, and terrorist use of Weapons of Mass Destruction.
- *AEDC Spill Prevention Controls and Countermeasures (SPCC) Plan* – Supplemental plan to the CEMP used to implement the requirements for oil spill prevention as required by 40 CFR 112. The response portion of the plan is applicable to all spills at AEDC.
- *Oil Spill Facility Response Plan* – Supplemental plan to the CEMP and the SPCC used to mitigate “substantial harm” as defined in 40 CFR 112. Typically, this plan would only be used for a spill of petroleum in excess of 3,000 gallons that reached “navigable waters.”

2.0 BASIC HAZARDS/HUMAN FACTORS

2.1 Basic Hazards

The leading concerns of this standard are hazards to human health and to the environment resulting from a spilled contaminant. Chemical exposures can be hazardous for the following reasons:

- The chemical creates a flammable or explosive atmosphere.
- The chemical is corrosive to skin or other materials.
- The chemical is an asphyxiant.
- The chemical is toxic from either an acute perspective or a chronic perspective.
- The chemical is reactive, releasing harmful energy (pressure, heat, radiation, etc.).

Hazards encountered under normal work conditions such as electric shock, moving machinery, slips, trips, etc., may also be present. Following the guidance of this standard, the use of the Job Safety Analysis (JSA)

process as required under Safety, Health, and Environmental (SHE) Standard A10, and training are the main countermeasures developed by AEDC to prevent injury to personnel involved in chemical spill situations.

2.2 Human Factors

The leading human factor contributing to injuries occurring during response to chemical spills is a lack of knowledge of the hazards of exposure to the chemical or from site conditions at the spill location.

3.0 DEFINITIONS

AEDC Spill Action Plan (ASAP)—ASAP is a computerized tool for the execution and documentation of spill and sheen source searches and spill response. This tool is also used for archiving information and classifying various environmentally sensitive events such as sheens, spills, releases, operational releases, contained releases, etc. Initial information for the ASAP is collected by the Operations Center and updated by the Contractor Environmental Spill Contact (CESC).

Contained Release—Any unplanned, uncontrolled, or accidental event resulting in the discharge of fuel, oil, or a hazardous substance out of its intended containment and into another area of containment that does not contaminate the environment. This includes leaks contained by drip pans, buckets, secondary containment, or spill absorbents, and spills to impervious surfaces where spilled material can be removed with no contamination of the environment. This also includes minor leaks to gravel where the contaminated gravel can be removed.

Contractor Emergency Management – Contractor team responsible HazMat emergency planning, response, and emergency equipment maintenance. Consists of representatives from Environmental, Fire, and Safety.

Contractor Environmental Spill Contact (CESC) – Contractor employee assigned to be the point of contact in the event of a spill. The CESC will be contacted by the Operations Center upon notification of a spill.

Contractor Safety and Health Representative – Person assigned from the Health and Safety Group to assist in the assessment of worker and public health hazards associated with spills.

Contractor Spill Cleanup Team—Craft personnel, craft supervisors, environmental representatives, and other AEDC personnel trained in spill response and remediation who are tasked with spill response and cleanup after the initial response phase. These individuals are trained, at a minimum, to the Hazardous Material Technician Level and are certified to wear required PPE for respiratory protection.

Emergency Operations Center (EOC)— For the purposes of incident management, the EOC is the command and control support elements that directs, monitors, and supports the installation's actions before, during, and after an incident. The EOC is activated and recalled as necessary by the Installation Commander. The EOC updates the Installation Control Center (ICC) with ongoing incident status and seeks support through the ICC when on-scene requirements surpass the installation's inherent capability and the installation's cumulative capabilities acquired through Mutual Aid Agreements. For a complete definition of the roles and responsibilities of the EOC, please see AFI 10-2501, *Air Force Emergency Management Program and Planning Operations*.

Facility Spill Coordinator (FSC)—Appointed by contractor management (see Annex B) as a point of contact for spills in a given area, organization, or a specific spill source. This individual is responsible for the following:

- Assisting the Operations Center with searches for sheen and spill sources.
- Notifying the Operations Center of spills discovered in their area of responsibility.
- Providing all necessary assistance during initial spill response and any spill remediation after the initial response.
- Coordinating initial response to the spill until relieved by the Fire Department Representative (FDR) or the Incident Commander (IC).

Fire Department Representative (FDR)—An Assistant Fire Chief or his representative who responds to all spills and takes command of the spill response until relieved by the IC or until the initial response is finished.

Hazardous Material Emergency Planning Team – Group of Contractor and Air Force personnel responsible for evaluating risks associated with hazardous materials. Members of the group represent Environmental, Safety, Occupational Health, and Bio Environmental Engineering departments.

Hazardous Substance or Material (HazMat)—Any material that is flammable, corrosive, an oxidizing agent, explosive, toxic, poisonous, etiological, radioactive, nuclear, unduly magnetic, a chemical agent, biological research material, compressed gases, or any other material that because of its quantity, properties, or packaging, may endanger life or property. If spilled, it is potentially health or life threatening or constitutes a negative impact to the environment or to AEDC operations.

HazMat Incident—A situation in which a hazardous material is or may be released into the environment.

Incident Commander (IC)—The command function is directed by the IC, who is the person in charge at the incident, and who must be fully qualified to manage the response. Major responsibilities for the IC include: performing command activities such as establishing command; protecting life and property; controlling personnel and equipment resources; maintaining accountability for responder and public safety as well as for task accomplishment; and establishing and maintaining an effective liaison with outside agencies and organizations, including the EOC when it is activated. Typically, this function is performed by the Assistant Fire Chief on duty at the time of the incident.

Incident Command System (ICS)—ICS is the model tool for command, control, and coordination of a response and provides a means to coordinate the efforts of individual agencies as they work toward the common goal of stabilizing the incident and protecting life, property, and the environment. ICS uses principles that have been proven to improve efficiency and effectiveness in a business setting and applies the principles to emergency response.

Initial Responder—Any person taking initial actions to stop the leak or minimize the impact of the spill to the environment under the direction of either the FSC, FDR or IC. Depending upon the actions to be taken and the nature of the material, the person must have the following required level of Occupational Safety and Health Administration (OSHA) training as described in *29 Code of Federal Regulations (CFR) 1910.120* or equivalent experience:

- First Responder Awareness Level training for persons with the potential to discover hazardous material spills.
- First Responder Operations Level training for persons who take defensive actions to minimize impact of the spill to the environment.

NOTE: Initial spill response actions are considered safe only if the action does not present a risk to the individual's health or safety. Initial responders must know the physical and health hazards associated with the spilled material and take all appropriate countermeasures such as use of appropriate personal protective equipment. If the spilled material cannot be identified, the hazards are unknown, or the hazards cannot be mitigated, then isolation of the area and notification to the Operations Center are the only appropriate actions.

- Hazardous Material Technician or Hazardous Material Specialist level of training as a minimum for employees who respond during the emergency to stop the leak of hazardous materials.

National Incident Management Systems (NIMS)—A document covering a core set of doctrine, principles, terminology, and organizational processes to enable the effective, efficient, and collaborative incident management at all levels.

Operational Release—A contaminant released to the environment during normal AEDC operations that does not violate environmental permit parameters, such as fuel and/or oil released from test cells or industrial wastewater released through the internal permitting system.

NOTE: AEDC is fully committed to compliance with all applicable federal, state, local, and Air Force regulations, as well as any permits held to ensure compliance with these regulations. Additionally, AEDC integrates Pollution Prevention into all test and support activities in an effort to reduce costs and risks associated with maintaining environmental compliance and preserving a clean environment. However, AEDC also recognizes that contaminant emissions are an unavoidable byproduct of almost any industrial activity. To ensure compliance with the various environmental regulations and permits, all operational releases should be analyzed and documented.

Release—A discharge of a hazardous material or other contaminant from its intended containment into the environment.

NOTE: The determination of whether a release is considered an operational release or a spill is made by the CESC.

Reportable Sheen—A 25-square-foot contiguous block of distinctly visible floating scum, oil, or fuel that is present at or downstream of a National Pollutant Discharge Elimination System (NPDES) monitoring station or in “navigable waters” as defined in *40 CFR 110*.

Reportable Spill—A spill that requires notification to either state agencies such as the Tennessee Department of Environment and Conservation (TDEC) and the Tennessee Emergency Management Agency (TEMA) or federal agencies such as the National Response Center (NRC). The following requirements determine if a spill is reportable:

- *40 CFR 302.6* requires NRC and TEMA notification within 24 hours of the occurrence any time a substance listed in 40 CFR Table 302.4 is released at a quantity matching or exceeding the reportable quantities (RQs) listed.
- *40 CFR 110* requires NRC notification within 24 hours of any oil discharge that violates water quality standards or causes a sheen in “navigable waters.”
- AEDC’s NPDES Wastewater Permit requires that any discharge that causes a threat to public drinking water supplies or any other discharge that constitutes a threat to human health or the environment must be reported to TDEC within 24 hours of the occurrence.
- AEDC’s Title V Air Permit requires that any air pollution emission source or air pollution control equipment that malfunctions, causing the emission of air contaminants in excess of applicable emission standards, requires TDEC notification within 24 hours of the occurrence.
- Any release of hazardous waste or hazardous constituents to the environment requiring notification under Section IV B, Notification and Assessment Requirements for Newly Identified SWMUs and AOCs, or Section IV C, Notification Requirements for Newly Discovered Releases from SWMUs and AOCs, of the Hazardous Waste Management Permit (Permit TNHW-139), requires notification to the TDEC Commissioner in writing within 15 calendar days of discovery.

NOTE: Although the reporting of spills of sewage to TDEC is required under AEDC’s NPDES permit, these types of spills are not classified as “reportable spills” for the purposes of the Spill Impact Key Performance Indicator (KPI).

Sheen—Any distinctly visible floating scum, oil, or fuel present on the surface of water upstream, downstream, or at a NPDES monitoring station.

Spill—A non-permitted, unplanned, uncontrolled, or accidental event resulting in the release of fuel, oil, or a hazardous substance into the air, soil, ditches, creeks, ground, drains, or discharge sumps.

Spill or Sheen Source Search—A search to locate the source of a contaminant discovered in surface waters or the environment.

4.0 REQUIREMENTS/RESPONSIBILITIES

4.1 Requirements

4.1.1 All HazMat incidents and spills (see note) of oil, fuels, or hazardous substances, regardless of quantity or whether solid, liquid, or gas, shall be reported to the Operations Center (454-7680, 7688, 5361, or 7752). The Operations Center subsequently notifies the Fire Department and the persons tasked with response. Notification can also be made by calling 911 from a base phone; however, these calls will be routed through the *Emergency Dispatcher*.

NOTE: All gaseous refrigerant releases must be reported to the Operations Center.

4.1.2 All spills of hazardous substances shall be prevented or minimized whenever possible. Spill response shall be performed immediately after spills occur with a goal of protecting human health and preventing damage to the environment.

4.1.3 Access to the spill site shall be controlled at all times and only those actions that involve minimal risk are to be taken by AEDC personnel. All spill response, cleanup, and remediation actions shall be analyzed using the JSA process as defined by SHE Standard A10 in order to mitigate risk as much as possible. Only those actions that are immediate and inherently safe shall be performed prior to completing the JSA.

4.1.4 Where applicable, all AEDC Emergency Response documents and functions will adhere to the NIMS and ICS terminology and guidelines.

4.1.5 The FDR or IC shall manage spill response and call for the AEDC employees and/or resources necessary to contain or recover spills. The area supervisor or FSC is in charge of the site until the FDR arrives. The FDR will request the response of the IC. The FDR shall maintain and stock supplies necessary to provide typical spill response.

4.1.6 Training for employees who respond to spills shall be provided in accordance with *29 CFR 1910.120*. Training records will be maintained in PeopleSoft®. All industrial employees shall receive “spill awareness” training as part of new employee training and annually thereafter.

4.1.7 Appropriate levels of spill response supplies shall be maintained both by the contractor organizations that typically incur spills and by the contractor organizations that typically provide spill response. Spill response supplies should be inventoried by location.

4.1.8 The contractor organization with responsibility for a spill shall render all assistance necessary to respond appropriately to the spill.

4.1.9 Spills shall be investigated and documented with a goal of identifying corrective and preventive measures to prevent reoccurrence. The CESC shall investigate and document all spills that occur at AEDC utilizing a format similar to Annex D, AEDC Spill Report Example. The contractor organization with responsibility for a spill shall assist in the investigation and documentation of the circumstances leading to the spill. The contractor organization with responsibility for a spill must implement corrective actions as defined in the Spill Report. The contractor Environmental Office shall keep spill reports on file for six years.

4.1.10 All spills that are reportable either due to a regulatory requirement or a condition of a permit shall be reported as required by **TSDCA**. The CESC shall keep a copy of the spill report on file through the duration of the contract.

4.1.11 Spill trend analysis shall be performed with a goal of preventing and minimizing spills.

4.2 Responsibilities When Spill is Discovered

4.2.1 Employee/Area Supervisor who discovers the spill/sheen shall:

- 4.2.1.1 If inherently safe, take immediate action or assign employees to stop the spill at its source; contain or recover the spilled material and prevent it from reaching drains, ditches, and/or surface streams. Warn personnel near the spill. Control access to the spill site to minimize hazards to employees. Follow all site-specific procedures, work instructions and JSAs to minimize risk.

NOTE: Initial spill response actions are only considered inherently safe if the action does not present a risk to the individual's health or safety. Initial responders must know the physical and health hazards associated with the spilled material and take all appropriate countermeasures such as the use of appropriate PPE. If the spilled material cannot be identified, the hazards are unknown, or the hazards cannot be mitigated, then isolation of the area and notification to the Operations Center are the only appropriate actions.

- 4.2.1.2 Call the Operations Center (454-7680, 7688, 5361, or 7752 or 911 from a base phone) to report all spills, leaks, or releases of contaminants. Provide details to include your name, extension, location, type of spill, and quantity of spill. Follow instructions given by the Operations Center. Assist and support the FSC, FDR, and IC during initial spill response.

- 4.2.1.3 Notify the responsible Area Supervisor or the FSC for the area involved in the spill.

- 4.2.1.4 Remain on site until response personnel arrive.

4.2.2 Area Supervisor shall:

- 4.2.2.1 Maintain the required resources (spill absorbents, pumps, vacuums, etc.) to contain and eliminate typical spills. Designate a central storage area near known spill sources. Submit an inventory by location of these supplies to the Contractor Environmental Office. Periodically inventory and restock this material.
- 4.2.2.2 Notify the Operations Center and the FSC when a spill is discovered. Request assistance, if needed, through the Operations Center.
- 4.2.2.3 Coordinate with the CESC and arrange for the disposal of waste cleanup material in accordance with SHE Standard E18, Managing Wastes Containing Chemicals and Petroleum Products.
- 4.2.2.4 Assume control of the spill scene until relieved by the FDR, IC or the FSC. Control access to the area and warn personnel near the spill. Initiate evacuation procedures if required to protect personnel.
- 4.2.2.5 Ensure employees near the spill take only those spill response actions that are inherently safe, covered under a site-specific procedure, or that employees have received specific training to perform. Ensure that all appropriate safety mitigation occurs such as use of site-specific JSAs and PPE during all phases of HazMat incidents or spills.
- 4.2.2.6 Support FDR, FSC, IC and Contractor Spill Cleanup Team in all phases of HazMat incident/spill recovery.
- 4.2.2.7 Keep an updated Annex A posted on the area bulletin board.

4.2.3 Operations Center (Ops) Representative shall:

- 4.2.3.1 Record information from caller into the ASAP system to include the description of the spilled material (type and quantity), location, and circumstances that produced the spill and steps taken to contain and recover the spilled material. Maintain coordination throughout the emergency with the appropriate representatives.
- 4.2.3.2 Notify the FDR (454-5648, see also Annexes B and C) to respond to all spills reported to the Operations Center.

NOTE: Fire Department response is not required for sheens on ditches unless the Pumping Station requests assistance.

- 4.2.3.3 Notify Pumping Station personnel (454-5501/6230) if spilled material reaches any drains that discharge into any ditch/creek. Notify Water Plant personnel (454-6066/5565) if spilled material reaches drains that discharge into the sanitary sewer collection system.
- 4.2.3.4 Notify the CESC (see Annexes B and C) when any sheen or spill is reported to the Operations Center. Notify **TSDCA** if the Fire Department responds to any sheen or spill. Notify additional organizations as requested. **Annexes B and C contain contact information for TSDCA and other organizations.**
- 4.2.3.5 Request the CESC to respond to the spill/sheen site if requested by Fire Department, Pumping Station, or Water Plant personnel.
- 4.2.3.6 Continue to update the ASAP record throughout the duration of the spill response effort.
- 4.2.3.7 Notify **TSDCA** (see Annexes B and C) as soon as possible when a sheen and/or a spill is potentially reportable to state or federal agencies.

NOTE: Guidance on when spills and sheens are potentially reportable is provided by the CESC.

- 4.2.3.8 Initiate a spill or sheen source search upon notification of contaminants from unknown sources reported in surface waters or the environment. If possible, identify the source of a sheen or a hazardous substance observed on a creek correlating the test schedule and sheen/spill log. Document all correlations between test activities, search activities, and sheens.
- 4.2.3.9 Upon consultation with the CESC, make the decision to terminate a spill or sheen source search. Notify the CESC, Pumping Station, and Water Quality when the spill or sheen source search is terminated.

4.2.4 Pumping Station Operations (PSO) shall:

- 4.2.4.1 Monitor Rowland, Bradley, and Brumalow ditches for the presence/absence of fuel/oil sheens, scum, or other contaminants at least every two hours. Maintain a log (operator, date, time, location, action taken, contaminant and source) of the general conditions of the creeks.
- 4.2.4.2 Notify the Operations Center if a sheen or hazardous substance is observed on any ditch/creek. Report corrective action taken. If possible, identify the source of a sheen or a hazardous substance observed on a creek by reviewing the test schedule and sheen/spill log. Notify the Operations Center once the source has been identified.
- 4.2.4.3 If the source of the sheen is unknown, request the Operations Center to implement a sheen source search.
- 4.2.4.4 Take appropriate actions (vacuuming, skimming, pumping, or absorbing) to prevent a sheen or hazardous contaminant from becoming environmentally noncompliant. Contact the Operations Center if additional assistance is needed.
- 4.2.4.5 Notify the Operations Center when the sheen or spill event terminates.
- 4.2.4.6 Maintain an appropriate inventory of spill supplies at Rowland, Bradley, and Brumalow ditches.

4.2.5 Fire Dept. Representative (FDR) or Incident Commander (IC) shall:

- 4.2.5.1 Respond to all spill situations when notified by the Operations Center and to sheen situations when requested. Assume command upon arrival, provide an on-scene assessment, perform life-saving and rescue assistance, accomplish firefighting operations, and stabilize HazMat emergencies. If the situation warrants, require the activation of the EOC.

- 4.2.5.2 Analyze response, cleanup, and remediation actions and their associated risk using the JSA process as required by SHE Standard A10. Provide instructions to employees at the scene and determine if overtime commitments are necessary.
- 4.2.5.3 Approve required containment actions, countermeasures, and cleanup and disposal operations in consultation with the CESC or other appropriate contractor representative. Implement containment actions, countermeasures, and cleanup until the Contractor Spill Cleanup Team arrives.
- 4.2.5.4 Request Contractor Safety and Health Representatives (CSHR) to determine risk factors and protective equipment requirements when necessary.
- 4.2.5.5 Determine the appropriate response personnel/equipment and request appropriate support through the Operations Center.
- 4.2.5.6 Request contractor Environmental support via the Operations Center to determine if a spill/sheen is reportable to regulatory authorities or if remediation is required.
- 4.2.5.7 Assess the situation and assume command if deemed in the best interest of AEDC and the Air Force. Implement applicable sections of the *AAFB CEMP*.
- 4.2.5.8 Direct spill zone (hot zone, warm zone, and cold zone) control and evacuation; establish cordon and entry control points as appropriate to the situation and material involved.
- 4.2.5.9 Develop specific spill response procedures and checklists consistent with 29 CFR 1910.120, the ICS, the NIMS, the CEMP, appropriate NFPA standards, and Air Force and Department of Defense Directives.

4.2.6 Security representative shall:

- 4.2.6.1 Provide crowd and traffic control.
- 4.2.6.2 Participate in investigations of suspicious circumstances as requested by on-scene personnel.

4.2.7 Facility Spill Coordinator (FSC) shall:

- 4.2.7.1 Assist the area supervisor, the FDR or IC as required.
- 4.2.7.2 When HazMat incident/spill occurs, assign employees to stop the spill, contain or recover the spilled material, and prevent additional material from entering drains (storm or sanitary sewers), ditches, or ground. Ensure that no actions are taken by employees that put themselves or others at risk. Analyze cleanup and remediation actions and their associated risk using the JSA process as required by SHE Standard A10.
- 4.2.7.3 During a spill or sheen alert, initiate and direct a thorough search until the contamination source is found or until otherwise directed by the Operations Center.
- 4.2.7.4 Report the sheen or spill source search results to the Operations Center.

4.2.8 Contractor Environmental Spill Contact (CESC) shall:

- 4.2.8.1 Assist the Fire Department, as required, and recommend containment actions, countermeasures, and cleanup/disposal operations.
- 4.2.8.2 Make a determination that the spill or sheen is or is not reportable to applicable state or federal agencies. Immediately notify the Operations Center to notify TSDCA if the spill or sheen is reportable. Contact information for TSDCA is contained in Annexes B and C.

- 4.2.8.3 Initiate and monitor required sampling.
- 4.2.8.4 Identify and recommend corrective action for containing and remediating sheens or spills. Monitor spill and sheen cleanup progress. Determine when spill and sheen response is complete and make the recommendation to terminate a cleanup action. Advise Operations Center on decision to terminate spill or sheen source search.
- 4.2.8.5 Notify the Operations Center and TSDCA when cleanup action is complete for each spill or sheen requiring Fire Department response and assistance. Review spill response efforts to determine if adequate corrective action was applied for containing and remediating sheens or spills. Contact information for TSDCA is contained in Annexes B and C.
- 4.2.8.6 Update the ASAP with information on spill cause, response, and other details not collected by the Operations Center. Close the ASAP record when the information is complete. Assist appropriate organization in determining corrective and preventative actions. Assist appropriate organization in documentation and appropriate distribution of the spill report. Keep detailed records of spill reports through the duration of the contract.
- 4.2.8.7 Perform periodic evaluations of spill trends, and when appropriate, recommend actions necessary to reduce spill frequency and severity. Review and provide guidance on organizational and site-specific procedures concerning HazMat incident, spill prevention, and spill response.
- 4.2.8.8 Store and maintain PPE to support HazMat response. This includes respirators, respirator cartridges, Level B and C suits, gloves, boots, face shield goggles, and portable secondary spill containment. Transport necessary respirators and other PPE to spill scene or other location as directed by the Incident Commander. Recommend to the HazMat Planning Team the replacement of PPE as required to maintain response capabilities.
- 4.2.9 Contractor Safety and Health Representative shall:**
- 4.2.9.1 Evaluate the potential for worker and public health hazards. Monitor or collect data necessary to evaluate health risks. Recommend personal protection measures. These recommendations are to be coordinated with and provided to the FDR or IC, as well as the Contractor Spill Cleanup Team personnel. Analyze cleanup and remediation actions and their associated risks using the JSA as required by SHE Standard A10. The JSA will be completed in conjunction with the JSA prepared by the FDR, Contractor Spill Cleanup Team personnel or IC.
- 4.2.9.2 Provide and document in PeopleSoft all training required under 29 CFR 1910.120, better known as the Hazardous Waste Operations (HAZWOPER) training.
- 4.2.9.3 Annually certify that members of the Contractor Spill Cleanup Team are medically fit to wear the PPE and perform work required during HazMat emergencies.
- 4.2.9.4 Maintain training and fit-testing records for personnel in the Synergen® database; assist in determining the qualifications of individuals for the Contractor Spill Cleanup Team.
- 4.2.9.5 Provide input to the JSA. JSA will be used to satisfy requirements of 29 CFR 1910.120(b) for HazMat spill/incidents involving hazardous waste.
- 4.2.10 Contractor Service Desk or Work Control (454-4393/4146) shall:**
- Upon notification from the Operations Center, contact the Contractor Spill Cleanup Team Leader (454-7021/4080) to direct the appropriate remediation personnel to report to the Fire Department, the IC, or the CESC at the spill site.
- 4.2.11 Contractor Spill Cleanup Team Leader (454-7021/4080) shall:**

- 4.2.11.1 Maintain a list of personnel qualified for the Contractor Spill Cleanup Team.
- 4.2.11.2 Provide approximately 20 trained, fit-tested, and medically-qualified personnel for cleanup and recovery operations. These 20 individuals will serve as the Contractor Spill Cleanup Team. Ensure that these individuals are current with the HAZWOPER training and certified to wear respiratory protection.
- 4.2.11.3 Direct members of the Contractor Spill Cleanup Team to report to the spill site and provide assistance. Analyze cleanup and remediation actions and their associated risk using the JSA as required by SHE Standard A10.
- 4.2.11.4 Notify the Operations Center of remediation progress.
- 4.2.11.5 Request assistance from the CESC to determine if remediation is complete or if it warrants further corrective action.
- 4.2.11.6 Provide equipment to perform cleanup and recovery operations.
- 4.2.11.7 Maintain current phone number and contact information with work supervisor for inclusion in the Contractor Spill Cleanup Team list.
- 4.2.11.8 Develop and maintain organizational specific procedures for performing HazMat spill response that complies with 29 CFR 1910.120. Implement organizational specific procedures during HazMat spill response situations.

4.2.12 Contractor Spill Cleanup Team shall:

- 4.2.12.1 Maintain fit-testing and medical prescreening necessary to wear Level B or Level C PPE.
- 4.2.12.2 Complete 40-hour HAZWOPER training and maintain current 8-hour refresher training.
- 4.2.12.3 Successfully participate in semiannual SCBA training, which includes donning and doffing of equipment as well as emergency procedures.
- 4.2.12.4 Implement containment actions, countermeasures, and cleanup as advised by the Fire Department and/or CESC.
- 4.2.12.5 Implement organizational specific or site-specific HazMat response procedures.

4.2.13 Appropriate Responsible Organization shall:

- 4.2.13.1 Investigate the circumstances of a spill and ensure that steps are taken to prevent recurrence. Upon request, submit a final written account on the cause and corrective action for spills to the CESC and the Fire Department. This report shall be submitted within 30 days of the request unless a later date is approved by the CESC. (See Annex D for a good example of a spill report.)
- 4.2.13.2 Organizations with responsibility for processes that produce operational releases must develop procedures (work instructions) that ensure compliance with environmental regulations and permits. These work instructions must be routed through the CESC for approval and documented through the Environmental Impact Analysis process as defined in SHE Standard A8. Follow-on documentation of these work instructions must be provided in the System Safety Hazard Analysis (SSHA) as defined in SHE Standard A4. When organizational work instructions related to spill prevention, spill response, or environmental compliance are updated, they must be routed through the CESC for approval.
- 4.2.13.3 Make available resources to replace or repair consumables or equipment used in spill cleanup.

4.2.14 Asset Management Section (TSDCA) shall:

Report all reportable spills, sheens, and releases in accordance with all state, federal and local permits. Reports, whether verbal and/or written, are required in each separate permit [NPDES, Air, Resource Conservation and Recovery Act (RCRA) Part B and HSWA] to maintain compliance. Maintain records of notifications and copy primary CESC of notifications made.

4.2.15 Civil Engineering Branch (TSDC) shall:

Provide appropriate storage area for HazMat response resources (equipment and PPE).

4.2.16 Contractor Emergency Management shall:

- 4.2.16.1 Provide oversight of all HazMat emergency planning and response activities. Budget for training, equipment, and supplies with TSDCA. Maintain the “core” (i.e., response equipment assigned to Fire Department personnel) for the Fire Department HazMat Response Team. Direct and manage all Emergency specialized teams.
- 4.2.16.2 Maintain and operate the Mobile Command Post (MCP) for command and control during emergency operations. The MCP is the focal point utilized by the IC to direct operations.
- 4.2.16.3 Coordinate maintenance of firefighting, rescue, and HazMat response capabilities.
- 4.2.16.4 Maintain, store, and issue equipment to support the Emergency Management Program in accordance with applicable technical orders. Check all equipment required by the Fire Department HazMat Response Team quarterly to verify operational readiness.
- 4.2.16.5 Recommend to HazMat Planning Team replacement of PPE as required to maintain response capabilities.

4.2.17 Hazardous Material Emergency Planning Team shall:

- 4.2.17.1 Compile, approve, and promote training equipment and planning to support HazMat response efforts.
- 4.2.17.2 Review and update the AEDC SPCC and the AEDC FRP. Evaluate plans and procedures during an industrial chemical exercise which is conducted by the Exercise Evaluation Team (EET) on an annual basis. The HazMat Planning Team will track deficiencies identified to completion.
- 4.2.17.3 Provide planning assistance to the EET for completion of required exercises.
- 4.2.17.4 Maintain and report inventory of spill response equipment.

5.0 TRAINING REQUIREMENTS

All personnel potentially involved in spill response activities must receive at least eight hours of training (including spill response) within the first week of their employment. The training emphasizes pollution prevention as a key element of all employees' activities. All personnel who physically respond to hazardous substance spills must have attended a forty-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training course, and must annually attend the 8 hour HAZWOPER refresher course.

In support of the goal to emphasize pollution prevention, AEDC has instituted Pollution Prevention Training. This training is designed to ensure that all AEDC employees understand the meaning of pollution prevention. All new-hire employees receive Pollution Prevention Training. Site-specific training will be conducted for areas with the largest need for spill prevention and/or pollution abatement. The training goal is to teach employees the following:

- Why pollution prevention should be important to everyone.
- The specific goals AEDC has established for the Pollution Prevention Program.
- The employee's role in successfully meeting the Pollution Prevention Program goals.

In addition to the Pollution Prevention training, AEDC trains appropriate personnel as spill responders. Their training is consistent with the requirements for site-specific training, and they have access to all available spill response equipment and supplies as well as outside resources if needed. Spill responders participate in unannounced drills or actual spill responses on an annual frequency. These exercises are coordinated by the base Exercise Evaluation Team (EET) that maintains records of the exercise activities. Spill responders are briefed annually by the ATA Spill Coordinator (454-4027) on the location and use of spill equipment, and any significant changes to the AEDC SPCC plan and the AEDC Facility Response Plan. AEDC maintains trained spill responders in the following organizations:

- Fire Protection Branch
- Environmental Branch
- Utilities Operations Branch

Additional training is provided for all employees who work in industrial areas, the training is in accordance with OSHA requirements set forth in 29CFR1910.120. Training is appropriate to the employee function and is accomplished through the AEDC specific "Spill Awareness" computer based training module and the annual HAZWOPER training. HAZWOPER training contains a training module specific to spill response.

Training records for Spill Awareness and HazWoper courses for the base operating contractor are maintained in the Peoplesoft database and are available upon request from the base operating contractor Training Coordinator.

6.0 INSPECTIONS / AUDITS

A programmatic ESOHCAMP evaluation of the hazardous materials (HazMat) protocols is performed annually.

The spill response equipment is inspected annually by Contractor Emergency Management personnel.

7.0 REFERENCES

Arnold Air Force Base (AAFB) Comprehensive Emergency Management Plan 10-2 (CEMP)
AEDC Spill Prevention Controls and Countermeasures (SPCC) Plan

AEDC Title V Air Permit

AEDC NPDES Wastewater Permit
AEDC HSWA Permit
AEDC RCRA Part B Permit

AFI 10-250, Air Force Emergency Management Program and Planning Operations

29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
40 CFR 110, Discharge of Oil
40 CFR 302.4, Designation of Hazardous Substances
40 CFR 302.6, Notification Requirements

AEDC SHE Standards

A4, System Safety
A8, Environmental Impact Analysis Process
A10, Job Safety Analysis
E18, Managing Wastes Containing Chemical or Petroleum Products

8.0 ANNEXES

- A. All Spills Must be Reported to the AEDC Operations Center
- B. Spill Response Task Assignments, Facility Spill Coordinators, and Points of Contact (stand-alone document)
- C. AEDC Spill Notification Flow Chart
- D. AEDC Spill Report Example

9.0 SUPPLEMENT

NFAC A321-0801-XSP E17 Oil & Hazardous Substances Spill Response

ANNEX A

POST THIS NOTIFICATION IN A PROMINENT AREA

**ALL SPILLS MUST BE REPORTED
to the
AEDC Operations Center**

What to do if you discover chemical or oil spills:

1. If safe, take immediate action to stop the spill at its source and prevent it from reaching drains, ditches, or streams.
2. Call the Operations Center (454-7680, 7688, 5361, 7752, or 911 from a base phone) and give:
 Your **name** and **extension**, **location**, and the **type** and **quantity** of the **spill**.
3. Notify the responsible Area Supervisor or the Facility Spill Coordinator for this area.

FILL IN THE APPROPRIATE CONTACT INFORMATION BELOW:

The Facility Spill Coordinator for this area is:

First Shift Facility Spill Coordinator		Extension	
Second Shift Facility Spill Coordinator		Extension	
Third Shift Facility Spill Coordinator		Extension	

ALL SPILLS MUST BE REPORTED

ANNEX B

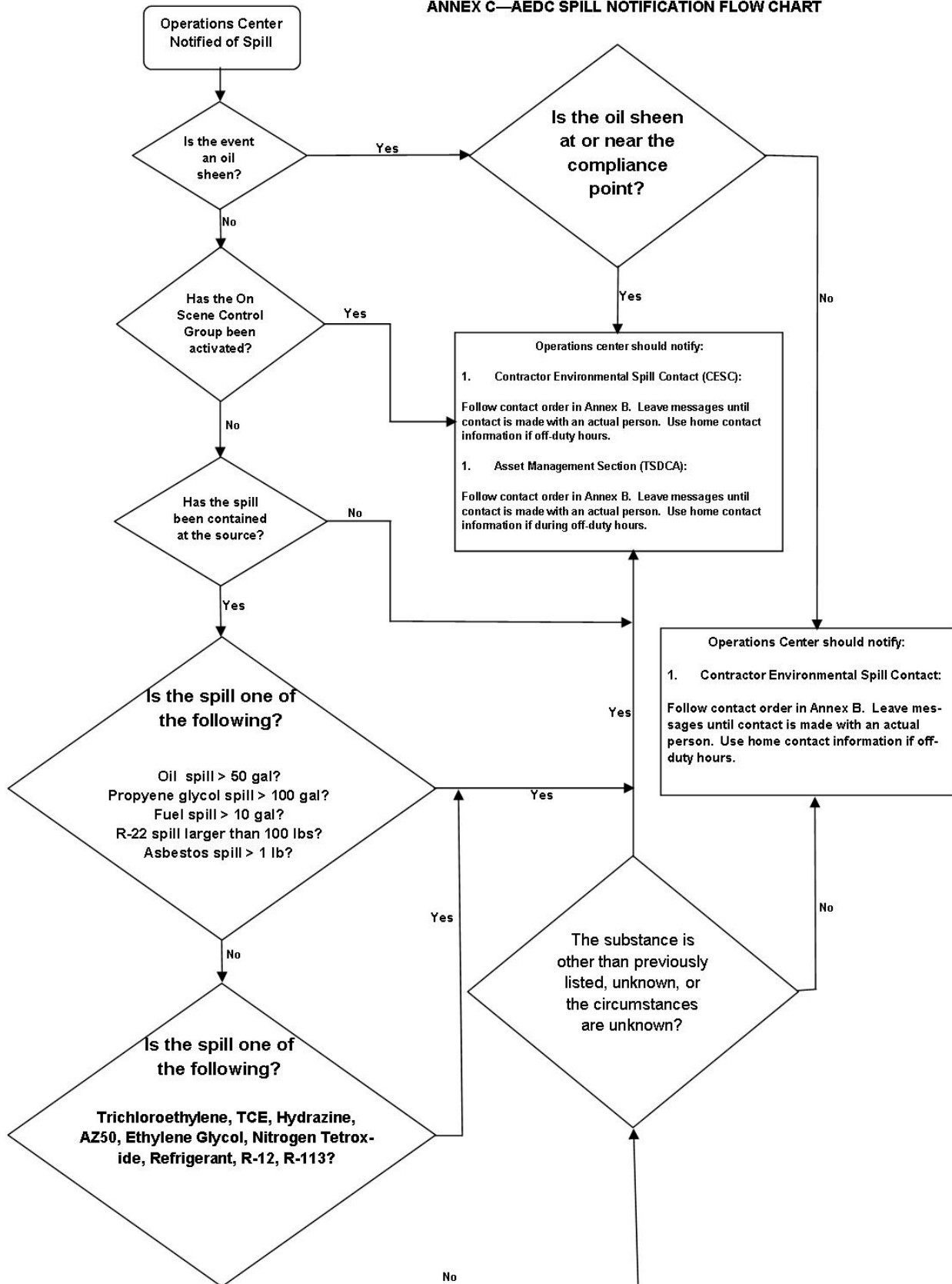
Spill Response Task Assignments, Facility Spill Coordinators, and Points of Contact

The contact list as of the date of this review is included in the following pages. Additionally, Annex B has been converted to a stand-alone document for the purpose of providing a “real time” update of the contact information. For the most up-to-date listing of contacts, reference the POC list accessible at the link below:

[SPILL RESPONSE CONTACTS](#)

Contact 931-454-4284 for questions regarding Annex B or **if you are unable to access the information through this link.**

ANNEX C—AEDC SPILL NOTIFICATION FLOW CHART



ANNEX D – SPILL REPORT EXAMPLE

SPILL REPORT	Responsible Organization: Air Force
REPORT DATE:	7/11/05
ASAP SPILL #	SP-050200-OT
ASAP Sheen #	N/A
SUBSTANCE	2 Cycle Fuel/Oil Mixture
SPILLED:	
ESTIMATED QUANTITY:	Est. less than 2 gallons
LOCATION:	Building 0 near the Commander's Dock
SYSTEM OR DEVICE:	Privately Owned Boat
FAILURE TYPE:	Human Error
CAUSE:	Human Error
CORRECTIVE ACTION:	Boat was salvaged
SPILL DATE:	7/5/2005
REPORTED TO OPS:	7/5/2005
ESTIMATED RECOVERY %:	0
SPILL PATHWAY:	The fuel oil mixture leaked to the surrounding water.
SPILL CLASSIFICATION:	Reportable-Sheen
NOTIFICATION JUSTIFICATION:	Small oil sheen was generated on Woods Reservoir and reported to the NRC on 7/5/05 tracking # 764444.
ROM CLEANUP COSTS:	Less than \$1k

Root Cause:

The most likely reason the boat sank was that the boat motor was too large for the boat and the boat was incorrectly operated.

Corrective Action:

No corrective actions since the boat was privately owned.

Spill Description:

Sometime in the evening of 7/4/05, a privately-owned boat being operated on Woods Reservoir was accidentally swamped and subsequently partially sank. The boat was secured to a tree approximately 200 feet from the Commander's dock. The sinking of the boat and subsequent oil sheen were reported to the Operations Center at approximately 06:30 on 7/5/05. ATA Environmental responded to the incident and secured spill absorbents around the boat in an attempt to mitigate the small amount of fuel/oil mixture that was leaking into the lake. At approximately 11:00 hrs, Franklin County Rescue Services responded to the scene and salvaged the boat for the owner. The amount of oil that leaked from the boat into the water is roughly estimated at less than 2 gallons.

Spill Cleanup:

Spill absorbents were used to mitigate the fuel/oil mixture leaking from the boat. The final cleanup consisted of removing the boat from the water.

Report Filed by: Hunter Beavers, ATA Environmental Qualit

A321-0801-XSP E17 Oil & Hazardous Substances Spill Response

This supplement has been approved for the NFAC Site.

Review: This supplement will be reviewed and updated using the same cycle as the AEDC Standard E17 “Oil & Hazardous Substances Spill Response”.

References: AEDC Safety Standard E17 – Oil & Hazardous Substances Spill Response at the AEDC NFAC Site.

Scope:

Various types of oil and hazardous materials are used at NFAC to conduct testing and support operations. In addition, hazardous and non-hazardous wastes are routinely generated by testing and support operations. Each of these substances must be considered as a potential spill source. Proper response to spills is imperative in order to prevent or minimize contamination of the environment. This supplement provides guidance for immediately reporting and responding to spills and subsequent events.

This supplement is applicable to all oil spills, hazardous substance spills, and incidents involving hazardous substances that could occur at NFAC.

This supplement applies to all NFAC personnel, customers and vendors.

NFAC Worksite Application:

NFAC will follow the local NASA Ames Procedural Requirements APR 8800.3 Chapter 13 “Spill Prevention Control and Countermeasures and Facility Response Plan”

I. NFAC Site Management shall:

1. Ensure that the supplement is followed.

II. NFAC Supervisors, Test Directors and Project Managers shall:

1. Ensure supplement is followed
2. Staff, customer and vendors use the proper storage of chemicals
3. Utilize secondary containment and/or implement methods to block any release to the environment

III. NFAC Safety Engineer shall:

1. Assess and monitor chemical storage
2. Provide countermeasures techniques and equipment
3. Conduct inspections of secondary containment
4. Report to AEDC OP Center any release to the environment

IV. NFAC Staff shall:

1. Ensure that the supplement is followed
2. Utilize the Building Emergency Action Plan (BEAP) for spill response and be currently trained on “Hazardous Waste and Spill Response”. Attend initial class through NASA Ames Code Q and annual refresher through NASA Satern Training.
3. Trained personnel to control spills within their training and capability
4. Request assistance from NASA Ames Fire for spills that staff cannot handle
5. Report all spills to NFAC Safety
6. Do not alter any secondary containment or remove implemented methods to block a release to the environment