

ES&H manual

Environment, Safety, and Health

Volume I

Part 2: ES&H Management Requirements

Document 2.1 Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management

Recommended for approval by the ES&H Working Group

Approved by: Glenn L. Mara
Deputy Director for Operations

New document or new requirements

Approval date: April 7, 2003

- New document
- Major requirement change

DISCLAIMER

This document was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor the University of California nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or the University of California, and shall not be used for advertising or product endorsement purposes.

This work performed under the auspices of the U.S. Department of Energy by University of California Lawrence Livermore National Laboratory under Contract W-7405-ENG-48.

2.1

**Laboratory and ES&H Policies, General Worker Responsibilities,
and Integrated Safety Management***

Contents

1.0	Introduction	4
2.0	Laboratory Safety Philosophy, Goal, and Policies, and Environmental, Safety, and Health Policy	5
2.1	Philosophy	5
2.2	Goal	6
2.3	Laboratory ISM Policy	6
2.4	Other ES&H Policies	7
3.0	Responsibilities of LLNL Workers and Organizations (Principles 1–4)	8
3.1	General Roles, Responsibilities, and Authorities for Managers	11
3.2	Laboratory Director's Office	13
3.3	Associate Directors	14
3.3.1	Program AD	16
3.3.2	Facility AD	16
3.3.3	Payroll AD	17
3.3.4	Services AD	17
3.3.5	Safety, Security and Environmental Protection (SSEP) AD	17
3.4	Authorizing Organization	18
3.5	Work Supervisors (Responsible Individual)	21
3.6	ES&H Assurance Managers	23
3.7	Facility Points of Contact	23
3.8	Organizations with Specific ES&H Responsibilities	25
3.8.1	ES&H Working Group	25
3.8.2	Assurance Review Office	25
3.8.3	Price-Anderson Amendments Act Project Office	26
3.8.4	Occurrence Reporting Office	26
3.8.5	Risk Management Office	26
3.9	ES&H Technical Support Organizations	27
3.9.1	Environmental Protection Department	27
3.9.2	Environmental Support Teams	28
3.9.3	Hazards Control Department	29
3.9.4	Health Services Department	29
3.9.5	ES&H Teams	31
3.9.6	Quality Assurance Support Office	32
3.9.7	Plant Engineering Maintenance and Operations	33

* Major revision

3.10 Subject-Matter Experts	33
3.11 Materials Management Section	34
3.12 Site 300 Management.....	35
4.0 Roles, Responsibilities, and Authorities for Work.....	35
4.1 Intra-Directorate Work.....	37
4.1.1 Internal Directorate Work	37
4.1.2 Matrixed Work	37
4.2 Inter-Directorate Work (Delegation of Responsibility for Work Authorization).....	38
4.3 Performance of Services	39
4.3.1 Services Category 1—Regular Services	40
4.3.2 Services Category 2—Emergency Response Services	42
4.3.3 Services Category 3—Services provided by Institutional (Unsponsored) Subcontractors.....	42
4.4 The Purchase of Goods.....	45
5.0 Responsibilities of External Organizations and Non-LLNL Personnel	45
5.1 External Organizations.....	45
5.1.1 University of California	45
5.1.2 Department of Energy	46
5.1.3 Other Agencies	46
5.2 Non-LLNL Employees or Personnel.....	46
5.2.1 DOE Prime Contractor Staff Working at LLNL.....	47
5.2.2 Supplemental Labor Workers	47
5.2.3 Contractors	48
5.2.4 Subcontractors	48
6.0 Summary of Remaining ISMS Principles and ISMS Functions	49
6.1 ISMS Principles	50
6.1.1 Safety Requirements are Identified and Implemented (Principle 5).....	50
6.1.2 Tailoring Hazard Controls (Principle 6).....	50
6.1.3 Operations Authorization (Principle 7).....	51
6.2 ISMS Functions	51
6.3 LLNL Fundamental Guiding Principle.....	52
7.0 Stop Work Process.....	52
7.1 Imminent Danger Situations.....	52
7.2 Substantially Dangerous Situations	52
7.3 Potentially Dangerous Situations	53
8.0 Employee ES&H Rights and Responsibilities	53
8.1 How to Resolve Safety Issues	53
8.2 Your Rights.....	54
8.3 Your Responsibilities.....	54
9.0 References	55
9.1 Work Smart Standards	55
9.2 Other Resources	55

Appendices

Appendix A Terms and Definitions	56
Appendix B Space Lease Agreements	58
Appendix C Program/Project Delegation Form.....	61
Appendix D Radiological and Hazardous Waste Management Technician Services	62
Appendix E Facility Management Chain Training.....	66
Appendix F LLNL Joint Agreement On ES&H Responsibilities for Visiting Personnel	67
Appendix G Worker Protection Poster	71

Figures

Figure 1. Basic organizational structure and connections at LLNL for operations and ES&H management.	9
Figure 2. Support structure of the ES&H organizations, ES&H Teams, and Laboratory organizations.....	32

2.1

Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management

1.0 Introduction

The Department of Energy (DOE) Integrated Safety Management (ISM) System consists of seven general principles and five functions that form the basis for how work is to be performed by DOE contractors such as the Laboratory. The five functions are fully described in Document 2.2, "Managing ES&H For LLNL Work," in the *ES&H Manual*. This document implements the first four of the seven general ISMS principles (listed below) by defining the responsibilities of LLNL management and workers, subcontractors, and federal and local agencies with regard to LLNL operations.

1. Line Management is responsible for safety. [Safety is used synonymously with environment, safety, and health (ES&H) to encompass protection of the public, the workers, and the environment.]
2. Clear roles and responsibilities are established and maintained.
3. Personnel possess competence commensurate with responsibilities.
4. Resource allocations are balanced, making ES&H a priority in project planning and execution.
5. Safety standards and requirements are identified and implemented.
6. Hazard controls are tailored to the project work.
7. Operations are authorized before work begins.

In addition to these ISM principles, the Laboratory also has a fundamental guiding principle. Workers, supervisors, and managers are directly responsible for ensuring their own safety and promoting a safe, healthful, and environmentally sound workplace and community.

This document contains:

- LLNL's work philosophy, goal, and policies, and ES&H policy for work activities conducted onsite and offsite.
- Roles and responsibilities of workers, managers, and supervisors, ES&H support organizations, and administrative groups.
- Roles, responsibilities, and authorities for work.

- Responsibilities of external organizations (University of California Office of the President, the Department of Energy, and other regulatory agencies).
- A summary of the ISM System (ISMS) principles #5, 6, & 7 and the five ISMS functions which are described in Document 2.2.
- Handling imminent and substantial danger situations.
- Employee ES&H rights and responsibilities.
- Required work standards.

All workers should be familiar with the information contained in Sections 2.0, 3.0, and 8.0. The balance of the document is written primarily for managers, supervisors, principal investigators, and Responsible Individuals. See the *LLNL ISMS Description*, UCRL-AR-132791, for a more detailed introduction to ISMS.

2.0 Laboratory Safety Philosophy, Goal, and Policies, and Environmental, Safety, and Health Policy

It is the Laboratory's ES&H policy to perform work in a manner that protects the health and safety of employees and the public, preserves the quality of the environment, and prevents property damage. The environment, safety, and health are to be priority considerations in the planning and execution of all work activities at the Laboratory. Furthermore, it is the policy of LLNL to comply with applicable ES&H laws, regulations, and requirements.

2.1 Philosophy

The Laboratory's safety philosophy includes the following concepts:

- Safety is our most important day-to-day consideration as we carry out our technical missions.
- Accidents are preventable through attention to hazards and appropriate action by each individual and the responsible organization.
- Managers and supervisors are responsible for ensuring that an adequate system is in place to carry out work safely. For each work

activity, an identifiable line management chain¹ is ultimately responsible.

- Each supervisor is expected to ensure that all individuals reporting to him or her understand the safety expectations, governing work controls, and the means by which they can safely and successfully perform their assignments.
- Each individual is directly responsible for ensuring his or her own safety and the safety of others who could be impacted by his or her actions by promoting a safe, healthful, and environmentally sound workplace and community.
- All members of the workforce are held accountable for meeting the Laboratory's ES&H requirements and expectations.

2.2 Goal

The Laboratory's safety goal is to continuously strive for a healthy, accident free, and environmentally sound workplace and community while providing the scientific and technical excellence needed to meet national missions.

2.3 Laboratory ISM Policy

The Laboratory's ISM policy is as follows:

- All workers shall:
 - Understand the Laboratory's safety goal and participate in its pursuit.
 - Determine, in concert with others, the best way to achieve this goal while conforming to Laboratory requirements.
 - Utilize appropriate resources at their disposal.
 - Ask for help when necessary to ensure a safe work environment while performing their job responsibilities and pursuing their technical, administrative, or craft objectives.
- Managers and supervisors shall:
 - Establish clear technical, administrative, craft, and ES&H goals.
 - Assign specific responsibilities and tasks to workers.
 - Appropriately define and manage ES&H issues.

¹ The management chain extends from the worker, through the first level supervisor, up to the responsible AD or equivalent.

- Provide necessary resources, including qualified people, space, equipment, time, and funds, to accomplish work objectives safely.
 - Ensure compliance with all ES&H rules and regulations.
 - Monitor and evaluate workers' performance and reward or discipline workers accordingly.
- To achieve the safety goal, work at LLNL shall be done following the *ES&H Manual* with the direct assistance and support of the ES&H Teams and the subject-matter experts.
 - Organizations authorizing work and the associated management chain shall ensure that all work under their purview is conducted safely.
 - Directorates shall ensure that all work activities are performed consistent with requirements and expectations specified in the latest approved version of the *LLNL ISMS Description* as implemented in the *ES&H Manual* and other ES&H documents.

2.4 Other ES&H Policies

All work conducted at LLNL is governed by the following additional ES&H policies:

- Laboratory ES&H Objectives
- Waste Minimization Policy
- Plant, Facility, and Equipment Maintenance Policy
- Policy for Decontamination and Decommissioning of Facilities
- LLNL Training Policy
- Quality Assurance Policy
- LLNL Metrology / Calibration Policy
- Onsite Traffic Safety Policy
- LLNL Policy on Public Participation in ES&H Issues
- Policy on Triennial Review of the ES&H Independent Review System
- Aviation Safety Policy
- Radiological As Low As Reasonably Achievable (ALARA) Policy

These policies are signed by the Director or the Deputy Director for Operations (DDO) and supplement the Laboratory's primary policy. All policies are available electronically at

http://www.llnl.gov/es_and_h/hsm/doc_1.02/doc1-02.html

Institutional policy, requirements, and guidance are developed using committees composed of directorate personnel. The DDO oversees these committees. The ES&H Working Group (ES&H WG) is one such committee.

The Laboratory's work is accomplished in accordance with the LLNL *ES&H Manual* and the Work Smart Standards (WSS) identified for the specific work and associated hazards. The purpose of the Laboratory's safety documents (manuals, plans, and procedures) is to enable all workers, subcontractors, and visitors to work safely. The authors and approving authorities of safety documents are responsible for ensuring that instructions are workable and understandable to the individuals performing and managing the work. The authors and the authorizing and concurring organizations are likewise responsible for ensuring that the safety documents are consistent with applicable rules, regulations, and requirements. Safety documents shall be readily available to all individuals who need access to the information.

3.0 Responsibilities of LLNL Workers and Organizations (Principles 1–4)

This section contains general work responsibilities for all Laboratory workers and managers. The ES&H management (not the line management) structure is depicted in Figure 1. More specific responsibilities can be found in applicable documents of the *ES&H Manual*.

The Laboratory believes that accidents are caused by unsafe conditions and unsafe acts and that they are preventable through attention to hazards and appropriate action by each individual and the responsible organization. It is the responsibility of all Laboratory workers to perform work safely and in accordance with the Laboratory's ES&H policies listed in Section 2.4, the controls in the *ES&H Manual*, and any requirements from LLNL's Work Smart Standard set as identified by subject-matter experts. Workers are accountable for their own safety as well as the safety of others who could be affected by the work being performed. Certain organizations and managers have specific responsibilities for carrying out ES&H-related activities. Employees who perform management functions have increased ES&H obligations, in that they are responsible for their own actions and for the activities and actions of those who work for them.

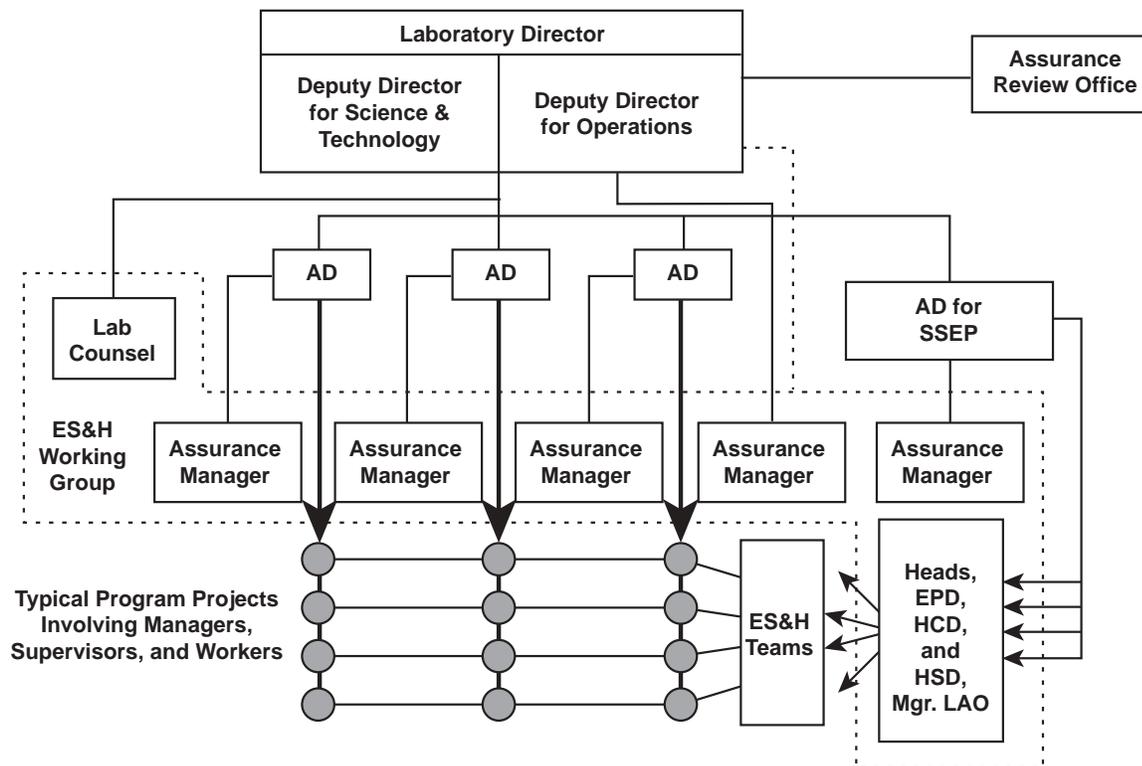


Figure 1. Basic organizational structure and connections at LLNL for operations and ES&H management.

Managers may delegate ES&H authority to others in their management chains; however, the responsibility and accountability for ES&H performance and assurance is not delegable.

The execution of LLNL's ISM is a distributed task, that is, the Director's Office and each Laboratory directorate integrate applicable elements, including self-assessment, of ISM into its work activities. The responsibility for implementing ISM rests with the management chain responsible for the work activity and its workers.

- The management chain is responsible for implementing the ES&H program. Responsibility is delegated from the Director to the Associate Directors (ADs), through each AD's management chain to each worker.
- The DDO advises the Director on ES&H policies and institutional issues, with input from the Safety, Security and Environmental Protection (SSEP) Directorate and the ES&H WG, and oversees the effectiveness of activities and programs to implement these policies.

- The Assurance Review Office (ARO) performs institutional level oversight of ES&H program implementation by the directorates.
- The Assurance Managers, who report to their AD, provide assurance of ISM implementation at the directorate level.
- Managers conduct self-assessments of their operations.

All workers are responsible for:

- Knowing the ES&H plans, controls, and requirements of their assignments and the potential hazards, and emergency plans and procedures for the work area.
- Successfully completing all required training and, if applicable, participating in personnel assurance programs (Document 50.2, "Personnel Assurance Program," and Document 50.3, "Personnel Security Assurance Program," in the *ES&H Manual*), and health monitoring programs.
- Performing work assignments in accordance with requirements listed in the Laboratory's *ES&H Manual*, established safety plans and procedures, and additional input from subject-matter experts consistent with the Work Smart Standards set. Performing work assignments in accordance with these requirements ensures compliance with the Laboratory's Work Smart Standards. Workers are only to perform work for which they are qualified.
- Only performing work that has been authorized. Note that work commonly performed by the public, may be self-authorized, so long as all applicable controls are followed. (See Appendix A for definition.)
- Immediately correcting or informing the Responsible Individual, or supervisor if self authorized, of ES&H-related problems. If a satisfactory response is not received, then a senior manager for the organization should be contacted, and then the AD for SSEP.
- Warning fellow workers and visitors of hazards and defective equipment.
- Requesting that work be stopped if it is observed that an operation presents an imminent or substantial danger to health, safety, or the environment. Each worker is empowered to stop his own work if there is an unsafe or unapproved condition. Section 7.0 contains more details on stopping work.

- Reporting work-related injuries and illnesses to their supervisors and to the Health Services Department.
- Keeping their exposures to radiation, toxic materials, and other such agents as low as reasonably achievable.
- Consulting their managers for guidance when they are uncertain about any ES&H-related work requirements.
- Bringing to the attention of their supervisors opportunities for improvement associated with the work or governing procedures.

The specific roles, responsibilities, and authorities assigned to managers are provided in the following sections.

3.1 General Roles, Responsibilities, and Authorities for Managers

The roles, responsibilities, and authorities (RRAs) in this section apply to all managers in general. Additional RRAs are assigned to individual managers, and are listed in the following sections.

Managers (i.e., the Director through work supervisors) are responsible for the overall safety of their activities. They shall be familiar with the work and associated hazards within their responsibility, the Laboratory's ES&H policies, laws and regulations, and other requirements applicable to their work areas and support organizations.

Furthermore, managers and work supervisors are responsible for:

- Informing workers of all workplace health and safety hazards and their associated controls and requirements, and ensuring that they receive training commensurate with identified hazards.
- Ensuring that their workers adhere to the ISM principles and implement the ISM functions.
- Ensuring that competent people plan, design, operate, maintain, and decommission experiments and facilities, and characterize and handle hazardous waste.
- Ensuring that workers:
 - Are trained and qualified.
 - Are physically capable and medically certified or participate in medical surveillance, as necessary.
 - Are assigned work that reflects their position description.

- Report all work-related injuries and illnesses to the Health Services Department.
 - Have and use the necessary hardware (equipment, materials, and facilities) to safely carry out specified tasks.
- Performing an ES&H evaluation when planning a new activity or changing existing activities (Document 2.2 contains details).
- Maintaining training, qualification, and certification records for all workers.
- Preparing or obtaining:
 - Adequate safety plans and procedures, work procedures, maintenance plans, material safety data sheets (MSDSs), and permits prior to starting an activity.
 - Self-help plans and emergency response procedures for operations and facilities for which they are responsible.
- Ensuring that the work is performed in accordance with the defined work controls and that work does not begin before it is authorized. Work may be authorized in phases; some work may proceed while hazards are being assessed and controls implemented.
- Ensuring that hazardous waste is properly characterized, accumulated, stored, and handled, according to the requirements in Document 36.1, "Waste Management Requirements," in the *ES&H Manual*.
- Verifying that visitors, guests, students, and vendors either have the training necessary prior to entering certain Laboratory areas or are escorted by an individual who has the required training. Managers are to provide an adequate level of supervision to visitors, guests, students, and vendors who perform work activities to ensure all applicable work controls are followed.
- Integrating the As Low As Reasonably Achievable (ALARA) philosophy for safety into their operations. ALARA is an approach to manage and control individual and collective exposures to workers and the general public from harmful chemicals and radiation to levels as low as is reasonably achievable, taking into account social, technical, economic, practical, and public policy considerations. The ALARA philosophy shall be applied to operations involving radiation, toxic materials, carcinogens, and other materials hazardous to workers, the public, and the environment.
- Reviewing work that has been authorized and improving safety practices and project efficiency.

- Implementing a self-assessment program in accordance with their directorate's plans and procedures, and ensuring that the necessary corrective actions are carried out.
- Reporting injuries and illnesses to the Health Services Department.
- Implementing a Return-to-Work Program in accordance with their directorate's plans and procedures.
- Notifying the cognizant senior manager of occurrences and incidents in accordance with Laboratory notification and reporting requirements, and taking appropriate action to correct situations to prevent a recurrence.

Subject matter experts from ES&H and quality assurance (QA) organizations (Environmental Protection Department, Hazards Control Department, Health Services Department, and the Quality Assurance Support Office and Engineering Departments) are available for assistance.

When unique issues or special cases arise that are not articulated in this document, they are to be addressed by the identified management chain and taken to the responsible AD for resolution and then, as necessary, to the DDO.

3.2 Laboratory Director's Office

The **Laboratory Director** is responsible for:

- Ensuring that ES&H are a priority at the Laboratory.
- Approving institutional ES&H policies.
- Assuring that implementation and the overall effectiveness of the Laboratory's ES&H Program comply with applicable laws and regulations and Contract W-7405-ENG-48 (Contract 48) requirements.
- Fostering open communication on ES&H matters with the Laboratory's workers, the public, and external agencies.

The Director may delegate ES&H authority to executives, senior managers, or other LLNL employees. However, the Director's responsibility and accountability to UC and DOE for ES&H performance cannot be delegated.

Deputy Director for Operations. The DDO has been delegated authority for conducting LLNL's ES&H Program. This includes:

- Assisting the Director with ES&H and Laboratory-wide business and administrative and operational activities.

- Approving ES&H-related Contract 48 requirements and assuring satisfactory achievement of the performance measurement goals specified in Appendix F of Contract 48.
- Approving institutional ES&H requirements and guidance including the ES&H Manual.
- Appointing institutional committees and working groups to review and recommend approval of institutional ES&H requirements.
- Requesting exemptions and variances from statutory requirements from the appropriate authority.
- Independently overseeing institutional ES&H activities to assure adherence to requirements, integrations into the line organizations, cost effective implementation, and completion of institutional corrective actions. (The ARO assists the DDO with this function.)
- Assuring that ES&H concerns and priorities are communicated as core values during interactions with DOE, Laboratory management, and workers.
- Resolving ES&H issues that cannot be resolved at the AD level.
- Approving Work Smart Standards for incorporation into the Contract as delegated by the Director.

3.3 Associate Directors

The Laboratory Director has assigned to ADs primary authority and responsibility for conducting work and implementing the Laboratory's ES&H policies. In carrying out this responsibility, ADs can simultaneously function in one or more of the following roles:

- Program AD—Responsible for carrying out program operations.
- Facility AD—Responsible for operating and maintaining the assigned facilities (buildings or areas).
- Payroll AD—Responsible for assigning employees on his or her payroll account to program or facility operations and maintenance or service tasks.
- Services AD—Responsible for managing services for other ADs. This may include assigning workers, with the necessary tools and equipment, to perform the services.

ADs shall ensure that legal, regulatory, and contractual ES&H requirements applicable to their operations and facilities are carried out. They shall ensure that self-assessments are conducted of the directorate operations and facilities to verify the effectiveness of ISM implementation. ADs shall ensure that ES&H performance is a meaningful part of each employee's annual performance appraisal and a factor in determining ranking.

Each Directorate shall have an approved ISMS Implementation Plan that illustrates how the requirements specified in the *LLNL ISMS Description* are satisfied. Once a directorate has implemented ISM, they may retire their implementation plans and use other directorate documentation (e.g., ES&H Management Plan) to carry forward their directorate-specific requirements. However, each directorate shall be able to demonstrate that Sections 4, 6, 7, 8, 9, and 12 of the LLNL ISMS Description are implemented within their directorates.

ADs exercise the authorities listed below. ADs may delegate ES&H authority to managers in their organizations. However, they remain accountable to the Laboratory Director for ensuring that ES&H activities are performed in accordance with LLNL requirements. ES&H-related authority includes:

- Ensuring that operations are conducted safely and comply with applicable Laboratory ES&H requirements.
- Approving resource allocations for work activities (i.e., programmatic, facility, or service) and ensuring that adequate funding is available for ES&H-related requirements associated with those work activities.
- Ensuring that a work activity cannot proceed without a reasonable expectation that there will be sufficient resources to ensure safety requirements are satisfied over the length of the project including close-out activities.
- Approving directorate-level ES&H plans and procedures, occurrence reports, ES&H self-assessment plans, and other appropriate ES&H documents.
- Designating the management levels with authorization to conduct the various reviews and to authorize work.
- Appointing an Assurance Manager to assure that work managed by the directorate is in accordance with applicable ES&H requirements.
- Coordinating responses to ES&H-related incidents.
- Generating reports required by Laboratory ES&H policies.
- Incorporating Lessons Learned into directorate work activities.

- Recording, analyzing, tracking, and correcting safety-related problems, deficiencies, and occurrences associated with their operations and facilities.
- Ensuring that serious safety-related incidents are reported and that formal reviews are conducted and addressed consistent with the provisions of the *ES&H Manual*. For incidents in nuclear and radiological facilities and activities, the Price-Anderson Amendments Act (PAAA) Office is to be involved, as appropriate.
- Ensuring that root cause analyses are performed for occurrences, formal incident analyses, and other safety-related issues deemed appropriate by the Directorate.

3.3.1 Program AD

Program ADs are responsible for ensuring the following:

- Laboratory ES&H policies are integrated into program plans and activities, and that the activities comply with applicable ES&H requirements.
- Required ES&H documentation is prepared and maintained.
- Training requirements are documented. The Program AD shall notify the Payroll AD of program-specific training requirements.
- Appropriate Safety Plans (SPs) and procedures are prepared and followed and programmatic activities follow applicable Facility Safety Plan (FSP) requirements.
- Assuring that the proper job-related ES&H training and medical evaluations have been completed by personnel assigned to the work activities they manage.

3.3.2 Facility AD

The Facility AD is responsible for ensuring the following:

- Operations within the facility are conducted within the facility safety envelope, comply with facility requirements, and that compatibility between different operations are maintained.
- Required ES&H facility documentation is prepared, implemented, and maintained in accordance with the *ES&H Manual* requirements.
- Facility-specific training requirements are identified, documented, and provided in a timely manner to workers and managers. The Facility AD shall notify the Payroll AD of facility-specific training

requirements and ensure that facility-related ES&H requirements are communicated to facility residents and visitors, as appropriate.

- The appointment of an Associate Director Facility Manager (ADFM) to serve as a single point of contact concerning Directorate facility matters with other LLNL organizations. Additional duties may be assigned to the ADFM as determined by the Facility AD.
- The appointment of an appropriate number of Facility Points of Contact (FPOCs) and alternates for their facilities.

3.3.3 Payroll AD

The Payroll AD shall:

- Ensure that personnel on the directorate payroll account have the appropriate base skills through the hiring process and performance review to perform their jobs.
- Verify that personnel receive the training necessary to maintain those skills; complete job-specific training as specified by Program and Facility ADs; and meet all medical evaluation and personnel assurance requirements imposed by the institution, programs, and facilities.
- Maintain training records of all personnel on the directorate payroll account. The Laboratory Training Records and Information Network (LTRAIN) database is used for this purpose.
- Perform injury and illness case management activities for their workers.
- Communicate any medical restriction to the Program AD.

3.3.4 Services AD

The Services AD functions like a Payroll AD, except that they have additional responsibility for managing the ES&H activities associated with the services they provide. See Section 4.3 for further details.

3.3.5 Safety, Security and Environmental Protection (SSEP) AD

The AD for SSEP has the AD responsibilities described above. As the Laboratory's senior manager for ES&H technical support, the SSEP AD is also responsible for the following:

- Providing the necessary ES&H and QA subject-matter experts who maintain knowledge of current DOE Orders, regulatory requirements, codes and standards related to ES&H/QA and provide input to the selection of Work Smart Standards.

- Developing proposed institutional ES&H/QA requirements, including the ES&H Manual.
- Working with DDO-appointed committees and working groups responsible for the review and recommendation of institutional ES&H requirements and guidance.
- Resolving, with the NNSA/LSO Deputy Assistant Manager for the Livermore Site, Work Smart Standard changes or ISMS changes initiated by NNSA/LSO that could not be resolved by the Change Control Board.
- Requesting exemptions and variances from statutory requirements from the appropriate authority as delegated by the DDO.
- Providing guidance and service to assist ADs and their management chains with implementation of the Laboratory's ES&H policies. This includes maintaining a staff of ES&H professionals to monitor the work environment, interpret and document ES&H requirements applicable to LLNL work, and provide feedback on implementation of the requirements.
- Designating the ES&H Functional Manager, who assesses if the Laboratory is in compliance with DOE and Contract 48 ES&H related directives and issues and resolves ES&H-related Contract issues.
- Developing and issuing the institutional ES&H Management Plan as well as other institutional ES&H planning and budget documents.
- Managing preparation of corrective action plans in response to institutional ES&H and QA appraisals, assessments, audits, and inspections performed by the DOE, UC, and other agencies.
- Coordinating changes for continuous improvement to the LLNL ISMS Description and maintaining the Description current.

3.4 Authorizing Organization

The authorizing organization ensures that the seven general ISM principles and five functions are used in the performance of the work that they manage. The authorizing organization (also see Section 4.0) and the management chain it establishes are responsible for:

- Defining the scope of work.
- Defining the tasks to be performed.
- Identifying the facility in which the work should take place.

- Identifying the individuals serving in the management chain, including the individual responsible for authorizing the work.
- Identifying the specific persons who will be supervising the work. This person is referred to in this document as the Responsible Individual.
- Ensuring personnel within the management chain have clearly defined roles, responsibilities, and authorities.
- Allocating sufficient resources (qualified people, space, equipment, time, and funds) to each work element to ensure safe, efficient, and compliant operations.
- Ensuring that the hazards associated with the work activity are identified and appropriately analyzed.
- Being involved as the hazards are analyzed, consistent with the *ES&H Manual*.
- Ensuring that new or modified work is covered by Work Smart Standards.
- Ensuring that the greater the hazards associated with an activity, the more rigorous the analysis to identify the work controls necessary to manage the work.
- Being involved in the determination of the appropriate work controls to be applied to the work activity.
- Ensuring that workers have the skills, knowledge, and abilities (SKA) to evaluate the level of risk associated with a work activity (i.e., know how to determine if the activity is commonly performed by the public) or know who can make that determination.
- Ensuring that all individuals consider the safety implications of their actions, whether or not a formal hazards analysis and documentation are required.
- Actively soliciting worker feedback and strongly encouraging worker involvement in analyzing hazards and developing controls, safety plans, and operating procedures.
- Implementing appropriate controls to address the hazards identified during the hazards analysis steps, and as identified by requirements in the *ES&H Manual* and the Work Smart Standards. The ES&H Team and subject-matter experts will assist in identifying applicable controls from the Work Smart Standards that are not explicitly documented in the *ES&H Manual*.

- Approving the work controls and ensuring that quality assurance principles and processes as described in the *ES&H Manual* are incorporated and used appropriately.
- Ensuring that workers have the SKA and physical capability to apply the required work controls and perform the assigned work safely.
- Ensuring that the proposed work falls within the established safety envelope described in the safety documentation for the activity and facility.
- Ensuring that applicable Lessons Learned that are maintained on the LLNL website are considered during the process of authorizing work.
- Conducting a prestart review when required and as defined in the *ES&H Manual*.
- Authorizing the defined work subject to the implementation of the appropriate controls.
- Performing the work.
- Monitoring the work activity to ensure that it is performed safely, in conformance with applicable institutional, facility, and activity controls, and within the defined budget.
- Periodically reviewing hazards and the adequacy and effectiveness of the engineered and administrative controls for the work activity.
- Using aggregate results of medical surveillance examinations, as appropriate, to assess the impacts of work on employee health.
- Reviewing Lessons Learned maintained on the LLNL website and incorporating them into each authorizing organization's self-assessment program to ensure continued utilization of relevant Lessons Learned.
- Analyzing, tracking, and correcting safety-related problems and deficiencies associated with operations and its facilities.
- Suspending affected parts of operations when there is indication the activity's operating limits or controls are not being followed, or that people, property, or the environment are at imminent or substantial danger of being hurt or damaged. Once confirmed, the work shall be suspended, if appropriate, in a controlled and safe manner until remedial actions are taken.
- Contribute feedback and Lessons Learned to their Assurance Manager.

3.5 Work Supervisors (Responsible Individual)

The Responsible Individual is responsible for:

- Identifying the various skills, knowledge, abilities, and the qualification requirements, including training and medical evaluations (e.g., certifications), for performing the work activity.
- Ensuring that the personnel supporting their activities have the required safety training, including specific facility training, or that they work under the direct supervision of a trained individual.
- Identifying the individuals with the qualifications and training necessary to perform the work.
- Ensuring that roles, responsibilities, and authorities of personnel performing the work are clearly defined and making that information readily accessible to others.²
- Ensuring that requirements necessary to carry out the work are identified and communicated to those performing the work. This includes actively soliciting worker review and comment of proposed operating plans and procedures before work is authorized and taking steps to ensure that each worker is knowledgeable of the governing procedures, including required operating limits and work controls.
- Ensuring that the training necessary to do the assigned work is identified and communicated to the payroll organization.
- Ensuring that the specific hazards for the work are clearly communicated to the staff involved in the activity.
- Ensuring that names of workers who may require medical evaluation for the work are clearly communicated to the payroll supervisor (e.g., those with potential exposure to excessive noise, hazardous material, etc.).
- Ensuring that tailored controls (including engineered and administrative controls) are developed and implemented for each hazard associated with the work activity consistent with the requirements in the *ES&H Manual* and Work Smart Standards with input from subject-matter experts.

² Specifics of how this information is to be communicated within each Directorate are described in the Directorate ISM Implementation Plan or succeeding documentation (e.g., ES&H Management Plan).

- Preparing an Integration Work Sheet/Safety Plan (IWS/SP) and other appropriate documents as discussed in Document 2.2 to ensure that a new or modified activity is adequately reviewed and authorized before work is performed.
- Ensuring that workers have immediate access to the work activity's governing procedures and safety documents.
- Ensuring that work is performed in accordance with the safety controls specified as part of the work authorization process.
- Signing or ensuring that qualified personnel sign hazardous waste requisitions for hazardous waste generated by the work activity (see the *Waste Acceptance Criteria*).
- Signing or ensuring that qualified personnel sign hazardous materials shipping forms when these materials must be shipped by the work activity.
- Monitoring the work activity to ensure that the governing procedures and safety documents are being followed, and, as appropriate, strengthening the work activity's safety performance.
- Periodically reviewing hazards and the adequacy and effectiveness of engineered and administrative controls for the work activity.
- Suspending affected parts of operations when there is indication the approved work activity authorization or facility operations authorization has been exceeded, operating limits or controls are not being followed, or when observation indicates that people, property, or the environment are in imminent or substantial danger of being hurt or damaged. Once confirmed, the work shall be suspended, if appropriate, in a controlled and safe manner until remedial actions are taken.
- Soliciting worker input and contributing feedback and Lessons Learned to their ES&H Assurance Manager.
- Balancing the management of ES&H issues with project concerns (e.g., deliverables, milestones), other work in progress, and the risks associated with the new activity. ES&H costs need to be included in the budget and adjusted to ensure safety considerations are met, particularly if there is a short time schedule for completing the work. Sufficient resources, including qualified people, space, equipment, time, and funds, need to be allocated for engineering design and maintenance of equipment and systems.

3.6 ES&H Assurance Managers

Each AD appoints an ES&H Assurance Manager who is responsible directly to the AD for the following:

- Providing independent ES&H oversight of directorate organizations, activities, and facilities to assure proper implementation of the ES&H Program. (In this context, "independent" means that the Assurance Manager is not in the direct line of authorization or management of the activities being evaluated. When this condition is not met, there shall be a separate independent evaluation of the activity to eliminate any potential conflict of interest.)
- Addressing and resolving institutional and cross-directorate ES&H policy issues through participation in the ES&H WG.
- Assisting in the development of directorate ES&H plans and procedures for approval by the AD.
- Assessing ISM implementation within the directorate.
- Supporting the Contract 48 ES&H Performance Measure Process by either providing or coordinating the input data for the Performance Measures, and integrating them into the Directorates' ES&H performance metrics.
- Advising line managers and work supervisors of changes to institutional ES&H requirements and guidance, and suggesting implementation options.

Assurance Managers are the primary directorate contact with the ARO and for external ES&H audits and assessments.

3.7 Facility Points of Contact

Facility ADs are responsible for ensuring that an FPOC is appointed for each of their facilities. The Facility AD may set limits for the types of work, level of complexity, or level of hazard for which the FPOC may concur. The Facility AD shall determine who shall be the concurring official for work above those levels. The FPOC is responsible for the following:

- Acting as the interface between personnel who will be working in the facility and Facility Management.
- Concurring that the work can be safely performed in the facility.
- Identifying hazards associated with the work location and communicating them to the responsible work management chain.

- Establishing and appropriately communicating to facility residents and the responsible management chain any facility controls and special conditions, including unacceptable collateral effects, that might be associated with the proposed work.
- Coordinating utility and building system shutdowns with building occupants to ensure that ongoing operations are not unduly disrupted.
- Coordinating system status procedures, if applicable.
- Maintaining building ventilation systems.
- Participating in the prestart review of the work, when one is conducted.
- Evaluating proposed operational or activity changes against the facility's existing ES&H documentation (e.g., the authorization basis).
- Concurring that work may proceed in that building, prior to it beginning.
- Monitoring work activities to assure that there are no hazards or unacceptable collateral effects to the facility or other occupants.
- Ensuring that the appropriate level of post-maintenance testing is performed to verify that the equipment functions properly. This is particularly important for safety systems, structures, and components.
- Contributing feedback and Lessons Learned to line management and service organizations.

The training requirements for the FPOC are listed in Appendix E.

FPOCs are required to be familiar with the operational specifics of the facilities to which they are assigned.

- Facility management determines facility familiarity, which could include reading and understanding Safety Basis documents, FSPs, and SPs, and a walkthrough or briefing with plant engineering or the ES&H Team to familiarize FPOCs with the operation of utilities and safety systems in the building.
- Facility management shall document in a letter or memo to file that the assigned FPOC has met all of the requirements, including familiarity with the facility, for the position.

3.8 Organizations with Specific ES&H Responsibilities

3.8.1 ES&H Working Group

The ES&H WG (which reports to the DDO) is composed of Assurance Managers from each directorate, the four heads of the ES&H and QA technical support organizations, and representatives from the Legal Office (as non-voting members). The DDO selects the chairperson of the group on a calendar year basis.

The ES&H WG reviews and makes recommendations for approving most institutional-level ES&H implementation documents containing requirements and guidance, which are developed by the ES&H technical support organizations. These documents are based upon contractually required laws, regulations, and standards. The final documents are approved and signed by the DDO prior to publication in the *ES&H Manual*. There are four standing subcommittees (Environmental; Institutional; Nuclear Facilities; and Hazards Control, Health Services, and Emergency Services) that support the ES&H WG in fulfilling its obligations by analyzing and reviewing specific ES&H issues. The subcommittees comprise WG members, program representatives, and ES&H subject-matter experts.

3.8.2 Assurance Review Office

The ARO provides an independent, internal ES&H appraisal program to assure that Laboratory ES&H policies and their implementation are consistent with Laboratory requirements, ES&H regulations, and DOE orders. The ARO also provides ES&H institutional oversight for all LLNL nuclear and non-nuclear facilities. The ARO is the Laboratory's central point of contact for external ES&H appraisals, including those conducted by the UC and DOE. The ARO compiles and tracks institutional and Directorate-specific corrective actions for ES&H and QA appraisals, assessments, audits, and inspections performed by the DOE, UC, and other agencies.

The ARO is responsible for conducting an annual independent assessment of the Laboratory's ISM Program. This assessment shall include an evaluation of the continued conformance of each directorate's ISM program in relationship to the *LLNL ISMS Description*, and commitments made in that organizations' Directorate ISM Implementation Plan and any succeeding documentation.

Results of the assessments shall be provided to the affected Associate Directors and the DDO for their information and action.

3.8.3 Price-Anderson Amendments Act Project Office

The PAAA Project Office is the initial point-of-contact for the Laboratory with UC, other laboratories, DOE, and the Defense Nuclear Facilities Safety Board for all LLNL nuclear facility rulemaking activities. This office manages development of the PAAA Implementation Plans and is the Laboratory's PAAA coordinator for reporting noncompliance with any rules.

3.8.4 Occurrence Reporting Office

The Occurrence Reporting Office assigns numbers to occurrence reports and incident analysis reports, assists management with the categorization of occurrences and submittal of occurrence reports, and assists the Laboratory Emergency Duty Officer (LEDO) in making initial or follow-on verbal occurrence reports.

Document 4.5, "Incidents–Notification, Analysis, and Reporting," and Document 4.3, "Occurrence Reporting & Processing of Operations Information" in the *ES&H Manual*, provide additional information on occurrence reporting.

3.8.5 Risk Management Office

The Risk Management Office is responsible for:

- Managing the Laboratory's Self-Insurance Program, which includes the Workers' Compensation and general liability programs.
- Maintaining knowledge of current statutes, DOE orders, and other legal requirements to ensure that the Laboratory is in compliance with the State of California Workers' Compensation and other legal and financial mandates.
- Coordinating the Laboratory's responses to any audits of Workers' Compensation or insurance programs.
- Procuring special insurance to meet unique risks.
- Serving as a resource to Laboratory management on insurance matters and requirements.

3.9 ES&H Technical Support Organizations

3.9.1 Environmental Protection Department

The Environmental Protection Department provides Laboratory organizations expertise and guidance on executing the environmental responsibilities. The Environmental Protection Department's role is to:

- Protect the institution by assuring that all Laboratory operations comply with federal, state, and local environmental laws, regulations, and ordinances, and applicable DOE directives, which are designated in the Work Smart Standards.
- Assist programs in developing cost-effective, timely solutions to environmental requirements.
- Clean up environmental contamination from past operations in accordance with regulatory standards.
- Work with the various directorates to minimize the environmental impact from Laboratory operations to levels consistent with regulatory guidelines.
- Manage, treat, and dispose of hazardous, mixed, and radioactive waste for the Laboratory.

In support of the Laboratory's mission, the Environmental Protection Department is responsible for:

- Assigning environmental analysts and other support personnel to the ES&H Teams.
- Responding to onsite emergencies with potential environmental impacts, and, in collaboration with emergency response personnel, guiding the cleanup, sampling, and reporting of incidents.
- Monitoring the Laboratory site and adjacent environment for any impact operations may have on human health and the environment.
- Developing required environmental training for Laboratory workers.
- Coordinating and monitoring LLNL's pollution prevention effort.
- Appropriately handling hazardous, mixed, and radioactive waste for treatment, storage, shipping, or disposal.
- Maintaining awareness of new environmental legislation and informing Laboratory management of the impact such legislation may have on operations.

- Interpreting controls required by the Work Smart Standards, including environmental regulatory requirements, developing implementation guidelines for use by Laboratory organizations, and representing the Laboratory in interactions with regulatory agencies and the public.
- Determining if Laboratory operations comply with environmental laws and regulations, and assessing the risk (if any) or impacts that these operations may pose to the public and the environment.
- Maintaining the Laboratory's inventory of chemicals as required by various state and federal laws and regulations.
- Maintaining the Laboratory's repository of MSDSs.
- Developing, revising, and issuing the following:
 - Laboratory environmental implementation guidance.
 - Laboratory environmental protection plans, regulatory reports (e.g., chemical inventories using ChemTrack), permit applications, and other documents required by the National Environmental Policy Act (NEPA).
 - *ES&H Manual* Volume III documents (formerly known as the *Environmental Compliance Manual*), and other supplemental information in accordance with environmental requirements.
- Conducting pre-activity surveys to determine the presence of sensitive, natural, or cultural resources; issuing any needed impact-mitigating guidance; and documenting the implementation of formal Mitigation Measures that have been previously adopted as part of NEPA, the California Environmental Quality Act (CEQA), or Biological Opinions issued under the Endangered Species Act.
- Managing the Laboratory's interaction with the public on ES&H issues.

3.9.2 Environmental Support Teams

The Environmental Support Teams (ESTs) within the Environmental Protection Department assist LLNL programs with environmental issues, both directly and through the ES&H Teams. Each EST consists of a set of subject-matter experts that cover all the environmental disciplines (e.g., NEPA, permits, or waste management).

Additional information about LLNL's environmental responsibilities can be found in Volume III of the *ES&H Manual*.

3.9.3 Hazards Control Department

Hazards Control provides expertise, guidance, and support to Laboratory programs in their effort to work safely. The goals of this effort are to prevent accidents, maintain a safe workplace, minimize exposure to harmful agents, and control emergency situations.

Hazards Control is also responsible for:

- Establishing and maintaining ES&H Teams that consist of leaders and specialists knowledgeable in health and safety disciplines and health and safety technologists.
- Interpreting controls required by the Work Smart Standards, including DOE directives as well as health and safety laws and regulations in collaboration with Health Services and with the assistance of Laboratory Counsel.
- Supporting managers in implementing ISM.
- Documenting and maintaining a record of all occupational injuries and illnesses.
- Providing analytical laboratories for industrial hygiene and radiological dosimetry activities (e.g., whole-body counting and calibration and maintenance of industrial hygiene and radiological instruments).
- Providing health and safety education and training that meets institutional and regulatory requirements.
- Responding to emergencies through the Fire Department and ES&H Teams.
- Producing the safety-related portions of the Laboratory's *ES&H Manual* and other publications that give consistent up-to-date guidance on health and safety issues and the Work Smart Standards.
- Recommending actions to the programs that will keep exposures to workers and the public ALARA.
- Maintaining knowledge of new health and safety legislation and informing Laboratory management of the impact such legislation may have on operations.

3.9.4 Health Services Department

The primary objectives of the Health Services Department as described in Document 10.1, "Occupational Medical Program," in the *ES&H Manual* are to

promote health and a healthy work environment, prevent and detect diseases early, and treat injuries and illnesses occurring in the workplace.

In support of this program, the Health Services Department is responsible for providing:

- Diagnosis, treatment, and follow-up of occupational injuries and illnesses for all LLNL employees.
- All LLNL medical restrictions.
- Return to Work Program for both occupational and non-occupational injuries and illnesses.
- Examinations for work-related concerns.
- Medical surveillance of employees whose job assignments involve physical, chemical, or biological health hazards or travel to certain foreign countries.
- Medical certifications [e.g., respirator use, Personnel Assurance Program (PAP), Personnel Security Assurance Program (PSAP), commercial drivers].
- Pre-placement, fitness-for-duty, return-to-work, and termination examinations.
- Skin tests for and counseling about the risks of exposure to "San Joaquin Valley Fever."
- Inoculations for job-related disease exposure.
- Assistance in scheduling laser eye exams and maintenance of records of employees who have had these exams.
- Reproductive counseling for workers planning a pregnancy.
- First-aid emergency care to all individuals who become injured or ill onsite.
- Health check: a personal health risk evaluation with counseling and referrals to onsite and offsite resources.
- Facilities and equipment for decontamination and treatment of workers contaminated with chemical, bio-hazardous, or radiological materials.
- Support and consulting with Laboratory programs through the ES&H Teams.

- An Employee Assistance Program which includes short-term, behavioral counseling, crisis-intervention, and organizational psychology program.

3.9.5 ES&H Teams

The ES&H Teams are composed of ES&H specialists and technicians from the Environmental Protection, Hazards Control, and Health Services Departments. The teams provide support to Laboratory programs and are the key interface between line organizations and ES&H support organizations. Figure 2 depicts the support structure by which ES&H organizations, subject-matter experts, and ES&H Teams interface with all Laboratory programs and organizations. The composition of each team is tailored to the work of specific programs and organizations.

The ES&H Teams are responsible for:

- Providing technical support and consultation to authorizing organizations during all operations, including emergencies.
- Assisting authorizing organizations with identifying and analyzing ES&H hazards and in meeting mandatory requirements. The teams, working with subject-matter experts, also advise authorizing organizations of controls that eliminate or minimize identified hazards and concerns and of applicable ES&H Work Smart Standards.
- Providing guidance to authorizing organizations about developing and reviewing safety-related plans, procedures, and documents (e.g., work permits, hazard assessments, IWS/SPs, design reviews, incident analysis reports).
- Independently performing ES&H surveillance of and feedback on planned and ongoing operations, facilities, equipment, and procedures and recommending corrective actions to the cognizant management. When there is a question about the safety of an operation, the teams shall request that management suspend operations until the problems are resolved.
- Immediately stopping any activity that presents an imminent, uncontrolled, high-risk threat to human safety, health, or the environment.
- Monitoring the work environment to identify areas of non-compliance with applicable requirements in the *ES&H Manual* and Work Smart Standards. (The ES&H Teams shall advise management on non-compliances.)

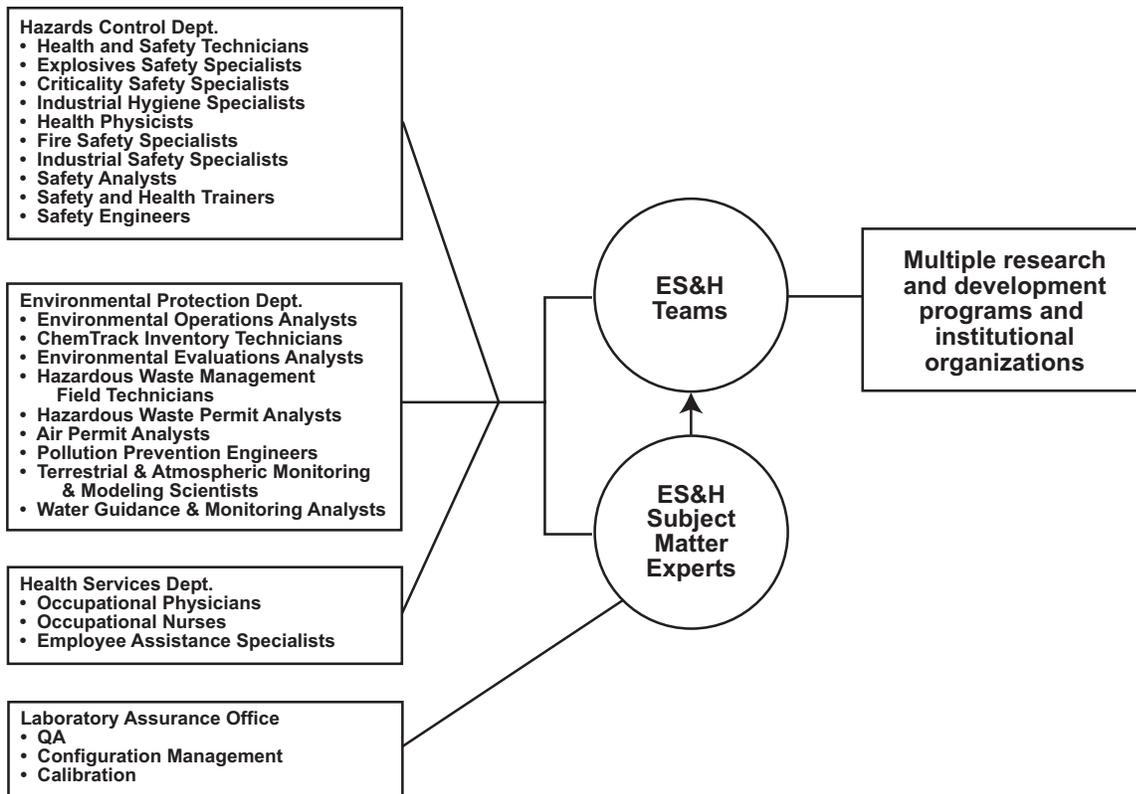
ES&H/QA Organizations

Figure 2. Support structure of the ES&H organizations, ES&H Teams, and Laboratory organizations.

- Bringing to the attention of the Hazards Control Division Leader (through his or her management chain) any concerns that have not been satisfactorily resolved by program management. If necessary, the division leader will raise the issue to the AD SSEP.
- Conducting independent accident and incident evaluations and assisting management in formal incident analyses.
- Conducting activities specified in approved Team Action Plans.
- Providing lost and restricted workday statistics to payroll organizations.

Additionally, Hazards Control responsibilities for specific operations can be found in applicable documents in Volume II of the *ES&H Manual*.

3.9.6 Quality Assurance Support Office

The Quality Assurance (QA) Support Office is responsible for:

- Providing quality assurance guidance and support to Laboratory organizations.
- Preparing and maintaining Document 41.1, "LLNL Quality Assurance Program," and Document 41.2, "Configuration Management Program Description," in the *ES&H Manual*. This document outlines the Laboratory's quality assurance policy and provides guidance on conducting QA evaluations.
- Developing and conducting training on the Quality Assurance Program.
- Coordinating and maintaining the documentation for the 10 CFR 830 Subpart A program for the Laboratory.

3.9.7 Plant Engineering Maintenance and Operations

Plant Engineering Maintenance and Operations (M&O) supports the directorates (specifically, the Facility ADs) in the maintenance of their facilities. Although directorates retain responsibility for their facilities, M&O is the authorizing organization, *with facility management concurrence*, to maintain and service life safety, mechanical, electrical, and structural systems and components necessary for the physical, safety, and environmental soundness of the buildings. M&O receives general & administrative (G&A) and Laboratory Funding Charge (LFC) funding for these responsibilities. Plant Engineering is responsible for the safe execution of M&O work in directorate facilities. The directorates are responsible for informing M&O of hazards associated with their activities and facilities that may impact the performance of specific maintenance activities. (Also see Section 4.3.)

All work in the directorate facilities shall be coordinated through the appropriate FPOC. Emergency Services (the Fire Department) provides quality assurance through audits, which include review of the tasks, record of completion, and history of the life safety systems.

3.10 Subject-Matter Experts

Subject-matter experts are usually health, safety, and environmental professionals or electronics, mechanical, or plant engineers who have specific expertise in a particular area of safety. These individuals provide consultation, advice, education, and guidance on specific issues. In coordination with the ES&H Teams they provide advice on application of the *ES&H Manual* and applicable Work Smart Standards to ensure consistent implementation across the Laboratory. They also assist the ES&H Teams and authorizing organizations in identifying hazards and applicable controls from Work Smart Standards that are not directly documented in the *ES&H Manual*.

Subject matter experts are responsible for:

- Maintaining a working level knowledge of the requirements contained in the standards associated with the assigned subject area.
- Advising others of interpretations of requirements in the standard and their implementation.
- Determining, with other subject matter experts and department or other organizational management, which requirements from the Work Smart Standards set are to be included in the *ES&H Manual* and which are to be retained as subject matter expert “expert knowledge.”
- Specifying the urgency with which requirement changes need to be communicated and implemented and suggesting the methods (e.g., changes to the *ES&H Manual*, training, or other).
- Reviewing revisions to authored *ES&H Manual* documents or authoring documents in the assigned subject area.
- Participating in the Work Smart Standard Change Control process as required (e.g., reviewing changes to the assigned Work Smart Standard and any new standards in the assigned subject area, reviewing and making recommendations on requests for new standards or exemptions from standards, developing or revising Work Smart Standard identification sheets).

Subject matter experts are designated individuals who are technically competent in their subject areas. They are appointed by a department head or by a designated manager of the organization responsible for a standard or standards area.

3.11 Materials Management Section

The Materials Management Section in Engineering is responsible for the control and accountability of controlled materials and assuring that all nuclear materials are in authorized locations for programmatic use. The Materials Management Section is also responsible for the shipping, receiving, transporting, and storing of controlled materials. Controlled materials are radioactive, classified, of national interest, or of high monetary value. The Materials Management Section inspects packages containing controlled materials to verify their contents and to ensure the proper packaging, labeling, and shipping regulations have been followed. Other operations performed include repackaging, providing transport onsite, and arranging for transportation offsite of controlled materials.

3.12 Site 300 Management

The LLNL Director has assigned each facility at Site 300 to an AD. These ADs shall ensure that safety and environmental planning takes place for all operations and facilities for which they are responsible. Although the ADs may assign responsibilities to others, they are ultimately responsible for safety within their organizations, including operational safety, training, facility upgrades, and facility and equipment maintenance. Any facility modifications or corrections that may be required are the responsibility of the facility-assigned AD.

The LLNL Director has assigned overall management responsibility of Site 300 to the AD for Defense and Nuclear Technologies, who has, in turn, delegated the authority for management of Site 300 to the Site 300 Manager.

The Site 300 Manager is responsible for assuring that all safety and environmental programs and procedures are in place and verifying compliance. The Site 300 Manager, in essence, has an oversight role to assure safety of operations, security of operations, environmental compliance, consistency of operations and, in particular, compatibility of performing all day-to-day activities.

The Site 300 Manager shall assure that operations in one facility do not cause an adverse interaction in another facility. In this oversight role, the Site Manager concurs with all IWSs, SPs, Chemistry Peer Reviews, waivers, and procedures from Site 300 Program FSPs after review by the program and facility representatives. If appropriate safety or environmental protection measures are not put in place by the responsible organization for a given operation or experiment, the Site 300 Manager has the authority to stop any operation until the appropriate changes are made.

4.0 Roles, Responsibilities, and Authorities for Work

Integrated safety management means that ES&H issues are addressed and managed along with the technical, financial, and administrative aspects of a given work activity³. Management of work activities generally involves a chain of individuals who are responsible for ensuring that technical objectives are achieved within budget and specific time constraints. This management chain is also responsible for ensuring the work activity is properly analyzed, controlled, performed, and monitored for ES&H issues. The management chain extends

³ A "work activity" is a task or collection of tasks assigned to or performed by one or more individuals. Where practical, it is helpful to group related tasks (i.e., those with the same end goal or that are part of a bigger project) when evaluating the associated hazards to catch interactions between hazards that might otherwise be missed.

from the Laboratory Director to an Associate Director, and in many cases, through personnel in several different directorates before reaching the individuals who actually perform the work.

LLNL has established the following policy governing ES&H responsibility to eliminate confusion about who is responsible for managing the ES&H aspects of a work activity:

1. The organization responsible for the work and in control of the resources is also responsible for managing the ES&H issues associated with that work. Historically, this organization has been referred to as the "program" organization. Throughout this document, this organization is referred to as the authorizing organization because it is responsible for authorizing as well as ensuring the proper conduct of the activities being managed.
2. The responsibility for work authorization, along with the funds or the authorization to use funds, may be delegated to another organization to accomplish a specific work element. Delegation of work authorization and ES&H responsibility shall be formally documented and approved by the management of the directorate delegating the work and the directorate accepting the work. However, the program organization retains the ultimate responsibility back to the sponsor for the conduct of the work.
3. Organizations providing services that are "contracted" for by completion of a written work request are responsible for managing the ES&H issues associated with the services they provide, providing technical capabilities to perform the work and (usually) tools, and fulfilling responsibilities normally performed by the authorizing organization.

Authorizing organizations have three methods for accomplishing their work:

1. They may do the work with their own personnel, in which case the Program AD and the Payroll AD are the same person. Or they may matrix in people with specific skills, knowledge, and abilities (SKA) from another AD (the other AD serves as the Payroll AD).
2. They may delegate the work and funds (or an authorization to use funds) to another organization.
3. They may have a service provided.

The purpose of the following parts of Section 4.0 is to establish a standard set of RRAs for most of the work at LLNL. Inter-directorate work requests should use a simple form, such as a Whiz Tag, Form 1, or equivalent, although the statement of work attached to the form might be more extensive, including drawings, plans, specifications, etc. The form would authorize the use of the account

number to be used for the work. A formal memorandum of understanding (MOU) would not be required. If the authorizing organization does not want to use the standard RRAs, an MOU shall be prepared specifying the RRAs that will be used.

4.1 Intra-Directorate Work

4.1.1 Internal Directorate Work

When an authorizing organization uses its own personnel to accomplish the work, that organization retains all of the primary responsibilities (including ES&H) for the accomplishment of the work. The authorizing organization is also the supervising organization. The authorizing organization may accomplish the work in its own facilities, or they may lease space from another Facility AD. See Appendix B for detailed information about leasing space from another Directorate.

4.1.2 Matrixed Work

When the authorizing organization matrixes in personnel from another Payroll AD, the authorizing organization retains all of the primary responsibilities (including ES&H) for the accomplishment of the work.

Note: Matrixing personnel into an organization is simply a variation, for ES&H RRAs, on doing intra-directorate work.

In addition to their SKA, matrixed personnel bring the work practices (including ES&H practices) of their parent organizations with them. The Payroll AD of the matrixed personnel provides administrative support such as performance monitoring and appraisals, management of training needs, payroll, and other related administrative functions. The authorizing organization may provide day-to-day supervision and assign tasks, or they may delegate that role to the matrixed-in group. An authorizing organization may matrix in a broad range of capabilities: as little as a small fraction of a single person's time, a group of people, up to a full division. Matrixed personnel may fill organizational positions within the authorizing organization and may appear on their organization chart. The authorizing organization usually houses matrixed personnel within their facilities and provides tools, personnel protective equipment, and test equipment. (An exception may occur if specialized facilities, such as a chemistry lab, are required for the work.)

Each directorate shall specify the organizational level that is authorized to matrix-in personnel.

Following is an illustrative example:

Matrixing-in: The Principal Investigator in the authorizing organization may matrix in a small group of Mechanical Engineering (ME) personnel, including a Technician Supervisor and five Mechanical Technicians. The technicians are assigned to operate and maintain experimental equipment for the authorizing organization. The Technician Supervisor develops work schedules and task assignments for the technicians. The Technician Supervisor may also be assigned the additional duty as an FPOC for one of the authorizing organization's buildings. The Technician Supervisor has an office in the building and the technicians have shop and bench space in the room next to the experimental equipment. The Principal Investigator of the authorizing organization writes the SP (with the participation of the ME personnel who will be performing the work) for the experimental operation, analyzing the hazards, establishing the controls, and setting the job-specific training requirements.

4.2 Inter-Directorate Work (Delegation of Responsibility for Work Authorization)

Work authorization and responsibility may be delegated to another organization, along with the funds or an authorization to use an account number, to accomplish a specific work element. Normally, all of the ES&H RRAs associated with the work (including occurrence reporting) are delegated to the accepting directorate that will perform the work, thereby relieving the original organization of the primary ES&H responsibilities. All delegations or transfers of work authorization authority shall be documented, using a simple form (see Appendix C) and a statement of work, and be approved by the management of the delegating and accepting directorates involved.

Formal delegation of work authorization and responsibility are made from directorate to directorate, not from a directorate or sub-tier organization to an individual or from an individual to another individual. This provision does not apply to intra-directorate delegations of work unless specifically invoked by the directorate's internal policies and procedures.

If the full standard set of RRAs will not be delegated, a formal MOU shall be used. The MOU for delegation of work authorization RRAs shall contain the following elements:

- Scope of work covered by the work authorization delegation.
- Resources (personnel, space, equipment, time and funds) allocated to ensure sufficient coverage of programmatic and safety requirements.
- Specific RRAs that are being delegated.

- RRAs for the handling of safety-related incidents that may occur during the course of the work.
- Mechanisms for handling changes in work scope and resource requirements.
- Issues regarding work close out and RRAs for dealing with residual safety concerns (e.g., legacy waste or long term health effects), as applicable.
- Resource issues regarding the facilities to be used, including any modifications required for the work to proceed, or restoration of the facility to "normal" condition after the work has been completed.

Directorates shall retain the resulting documentation associated with the work authorization delegation in accordance with each organization's records retention requirements.

Each directorate shall specify the organizational level that is authorized to delegate work to another directorate. In addition, directorates shall specify the organizational level that is authorized to accept work delegations or transfers.

4.3 Performance of Services

Each directorate shall specify, in its ISM Implementation Plan or related document, the organizational level that is authorized to request services. Usually the Responsible Individual and the FPOC levels (and above) are authorized to request services. The organization providing a service shall specify, in their ISM Implementation Plan or succeeding document, the organizational level that is authorized to accept service requests. In addition, the service provider shall develop or adopt a form, such as the Whiz Tag, Form1, or equivalent, to state the scope of work, whether or not the standard ES&H RRAs are to apply, schedule, and cost account use authorization.

The success of LLNL's ISM Program is ultimately dependent upon the effective interaction between organizational elements in the conduct of work. Work performed as a service by one organization for another poses a particular area of concern with respect to the successful implementation of ISM. Therefore, it is essential that RRAs are clearly defined and communicated for each party prior to starting the service activity.

The program organization is responsible for designating the organizations and individuals responsible for carrying out the various RRAs associated with the work activity. The designation of RRAs is generally straightforward in the conduct of work by a single organization. However, work activities involving more than one organization will typically require additional attention to ensure

that the complete set of safety-related RRAs are covered, appropriately documented, and properly communicated to the parties involved.

The performance of a specific service by one organization for another constitutes a critical subset of the interactions between organizational elements and requires particular attention and a standard division of safety RRAs. In organizing services provided at LLNL, three service categories and their associated safety RRA sets have been identified:

4.3.1 Services Category 1—Regular Services

- a. Work is performed either at the service provider's facility or at the requester's facility.
- b. Service or product is provided upon written request of an LLNL client.
- c. There is a prescribed or negotiated fee for the service or product.
- d. The client performs little or no work.
- e. The product or service can be either long term or defined with a start and stop point.

Safety RRAs: The service provider management chain inherently assumes the ES&H RRAs for the service he or she is providing. The client shall provide information on any hazards associated with the work request and the work location. The service provider then has the responsibility for performing the job, including analyzing the situation for other hazards and implementing ES&H controls. Work concurrence responsibility is exercised by the FPOC, whether the work is done in the requester's facility or the service provider's facility.

This category includes Plant Engineering services performed in response to a Form 1 or Whiz Tag request. It may include activities commonly performed by the public. This category may include ongoing activities such as custodian services and mail delivery. For ongoing activities, the coordination listed below may only be required at the beginning of the activity, or when personnel change.

If the work is to be accomplished in the requester's facility, the requester's FPOC is, at minimum (also see Section 3.7), responsible for items 1 through 6 below. If the work is to be conducted in the service provider's facility, the service provider's FPOC is responsible for items 3 through 6 below.

1. Ensuring that the work scope is defined for the program or facility requesting work (i.e., obtaining work scope information from the requester and communicating this information to the service provider). For Institutionally funded work, the authorizing organization (usually Plant Engineering) defines the scope of work.

2. Ensuring that sufficient resources for safely performing the defined work are provided (i.e., agreeing to a cost estimate and providing an appropriate cost account number). For Institutionally funded work, the authorizing organization (usually Plant Engineering) provides the funding.
3. Identifying hazards associated with the facility, work location, or environment.
4. Establishing and communicating to the service provider any facility-specific safety controls or special conditions, including unacceptable collateral effects, that might be applicable to the requested service.
5. Once satisfied that the facility-related and activity-related aspects of the activity are properly planned and coordinated, the FPOC shall grant permission to the service provider to proceed with the work activity. For ongoing or open-ended services, this may be done annually.
6. As appropriate, participating in the service provider's prestart review.

The requester's facility or program may be responsible for costs associated with unique facility requirements or conditions (e.g., special training or safety controls).

The service providing organization is responsible for:

- Identifying the management chain associated with the service.
- Ensuring that the personnel performing the service are qualified, appropriately trained, and physically capable (including medical certifications or surveillance as necessary).
- Identifying and analyzing hazards pertaining to the performance of the work activity.
- Contacting the FPOC prior to initiating the work activity for the purpose of identifying and communicating to the FPOC potential collateral effects of the service.
- Establishing an integrated set of controls to reduce the residual risk associated with the work activity to an acceptable level in the work location.
- Conducting a prestart review, when required.
- Obtaining permission from the FPOC to proceed with a new work activity. For ongoing or open-ended services, continuing coordination is required.
- Performing the service consistent with the defined controls, including the facility-specific work control process.

- Providing appropriate supervision and review of the activity.

The FPOC shall assume additional responsibilities beyond the standard set listed above if it is determined appropriate to ensure that the requested service will be performed safely and successfully. Any division of safety RRAs between the requesting and service providing organizations that is different from the standard RRAs listed above shall be documented and communicated as part of the formal request for services (i.e., PE Form 1 or equivalent documents).

The ES&H RRAs for the services provided by the Hazardous Waste Technicians are slightly different from the regular services, listed above. These RRAs are listed in Appendix D.

4.3.2 Services Category 2—Emergency Response Services

Safety RRAs: The organization providing service acts as the organization authorizing work. The Laboratory maintains an Emergency Management Plan, and Facility Management provides input in the form of hazards identification and hazardous materials inventories for each facility.

The service provider shall make available to the FPOC appropriate information on incidents or remedial actions. The FPOC's only specific ES&H responsibilities during an emergency response are responding to requests from the emergency response personnel and securing ventilation intakes, doors, windows, etc. under emergency conditions requiring shelter in place.

Examples of emergency responses services are Fire Department emergency responses, hazardous waste spills, alarms response, and performance of emergency Safeguards and Security functions.

4.3.3 Services Category 3—Services provided by Institutional (Un-sponsored) Subcontractors

Additional details regarding the RRAs for services provided by subcontractors is contained in Document 2.5, "Procured Services Subcontractor Environment, Safety, and Health Program," in the *ES&H Manual*. The following attributes characterize this services category:

- Work is performed at the subcontractor's facility, the requestor's facility, or both.
- The requestor is the authorizing organization and, through a Procurement & Materiel (P&M) Technical Release Representative (TRR), purchases the service directly with the subcontractor through an Institutional subcontract or by a Lab credit card purchase. Or, the requestor is the authorizing organization and, through a P&M

subcontract (not a supplemental labor subcontract), brings subcontractor personnel on site to perform work.

- The authorizing organization performs little or no work.
- The service is defined and includes a starting point and an end point.

The requester is the Responsible Individual and at a minimum is responsible for items 1 through 6 below. If the work is to be accomplished in the requester's facility, the requester's FPOC shall concur with items 1 and 3 through 6 below (also see Section 3.7).

1. Ensuring that the work scope is defined (i.e., obtaining work scope information from the requester and communicating this information to the subcontractor).
2. Ensuring that sufficient resources for the defined work to be performed safely are provided (i.e., funding the subcontract, credit card purchase, or release through P&M's PARIS system).
3. Identifying hazards associated with the work location and environment.
4. Establishing and communicating to the service provider any facility-specific safety controls or special conditions, including unacceptable collateral effects, that might be applicable to the requested service.
5. Ensuring that controls are in place to prevent unacceptable collateral effects.
6. Once satisfied that the facility-related and activity-related aspects of the defined work are properly planned and coordinated with the FPOC, the requester shall provide the subcontractor a notice to proceed with the work activity when using a release or credit card or, if using a subcontract, shall notify the Contract Administrator that a notice to proceed may be issued.
7. As appropriate, participating in the subcontractor's prestart meetings or reviews.

Following are some illustrative examples:

Services Category 1: A Program requests that an equipment stand be fabricated in the Plant Engineering weld shop. The Program provides a drawing and welding specification, a due date, and an account number. The weld shop assumes all of the ES&H RRAs for the work, including work and safety practices. Other examples: part machining and non-destructive testing by MMED, photographic developing and material printing by TID, and chemical analysis by CMS Analytical and Nuclear Chemistry Division.

Services Category 1: A Program requests that a new outlet be installed. If the outlet will be installed in an office building, the safety RRAs will likely follow the standard division of RRAs stated above. In contrast, installation of an outlet in a chemistry lab might entail a curtailment of operations, hazardous chemicals being removed from the area, and the electrician having to wear special PPE, such as a respirator, to safely perform the service activity. In this second example, the FPOC would likely have numerous responsibilities in preparation, coordination, and oversight of the service activity.

Services Category 1: An authorizing organization submits a Whiz Tag to Plant Engineering to have a room painted. Plant Engineering M&O becomes the authorizing organization for this task, subject to facility concurrence that the work may proceed. The painting supervisor assigns a painter to the task. The painting supervisor has analyzed the hazards associated with painting and has established safe work practices for that work. The painter or his supervisor coordinates with the FPOC, who verifies that the room is ready to be painted and that the experimental equipment in the room is de-energized. In this example, the painter will supply material to cover the experimental equipment while the work is being done.

- As an extension of this example, some facilities have special training requirements that must be fulfilled before personnel can enter that facility. These requirements are usually provided to Plant Engineering and an MOU is prepared in advance to ensure that a trained cadre of facility-qualified personnel is available to perform work.
- As an extension of this example, some facilities have special conduct-of-operations or technical safety requirements regarding the status of systems and equipment that must be met. These requirements may be covered, in advance, by an MOU, or will be handled by the FPOC.

Services Category 1: A Health and Safety Technician and a Hazardous Waste Technician are assigned to provide guidance, monitoring, and work needed to help staff meet their ES&H obligations. The ES&H Team Division Leader and the RHWMM Division Leader supervise these technicians. Duties, level of effort, and account numbers to be used are reviewed annually.

Services Category 1: Plant Engineering M&O is the authorizing organization for the maintenance of buildings, with their related equipment, and the utilities infrastructure. They are responsible for providing deliverables within their allocated budget, and for the ES&H requirements for their work. Even though they are the authorizing organization, their work is coordinated through the FPOC where the work will be performed. The FPOC grants permission for the

work to proceed, ensures that the workers are entering a safe environment, and minimizes disruption of other work in progress within the facility.

Services Category 2: When a person calls 911 for an emergency situation, the Emergency Management Division automatically becomes the authorizing organization, without any documentation (other than the Emergency Management Plan), to respond to that incident. The Emergency Management Division is responsible for the safety and work practices of the response.

4.4 The Purchase of Goods

Goods include off-the-shelf commercial items, non-commercial items made to a Laboratory specification, and fabrications made to a Laboratory drawing.

The Responsible Individual of the authorizing organization shall ensure that the ES&H hazard associated with the intended use of purchased goods is considered prior to the purchase and that the requestor communicates the hazard level to the procurement organization (either P&M or a TRR) with the purchase request or requisition. The procurement organization will work with the requestor to select vendors capable of providing goods of such quality that will support the intended use. The Responsible Individual shall ensure the quality of the goods in accordance with applicable quality assurance plans and procedures.

5.0 Responsibilities of External Organizations and Non-LLNL Personnel

Section 5.1 lists, for information purposes, some of the main ES&H responsibilities of external organizations. This section does not assign responsibilities to those organizations. Section 5.2 establishes RRAs for non-LLNL personnel.

5.1 External Organizations

As part of its oversight role, staff of UC, DOE, and other regulatory agencies conduct periodic reviews of how the Laboratory implements Work Smart Standards. The review includes briefings by Laboratory personnel; examination of relevant policies, implementation guidance, and records; and workplace inspections. If the personnel from the external organizations are not trained and qualified for the facilities they are inspecting, qualified personnel shall escort them.

5.1.1 University of California

The UC Office of the President's Laboratory Administration Office monitors the Laboratory's progress in meeting ES&H-related performance measurement goals

and the Laboratory's self-assessment. The Laboratory is required to conduct an annual self-assessment to determine whether management has met its performance goals.

5.1.2 Department of Energy

The DOE Office of Independent Oversight and Performance Assurance (OA) provides independent oversight of the Laboratory's ES&H operations to ensure conformance with applicable laws and requirements governing the environment and the health and safety of the public and workers at DOE facilities. The DOE and NNSA Programs (e.g., DP, SC, EM, NN, etc.) have the primary responsibility for ES&H performance in their respective areas.

5.1.3 Other Agencies

Many LLNL activities, primarily in the environmental area (e.g., waste operations, air, and sewer discharges), are governed by federal, state, and local regulations. Environmental agencies frequently perform inspections and audits to ensure compliance. More information about these agencies can be found in Volume III of the *ES&H Manual* (documents formerly known as the *Environmental Compliance Manual*).

5.2 Non-LLNL Employees or Personnel

LLNL employees are directly employed by the University of California to work at the Laboratory and as such are covered by UC/LLNL Personnel Policies and Procedures. Non-LLNL employees or personnel are visitors, participating guests, DOE employees, contract labor, supplemental labor, vendors, and others who work for facility operations contractors. Each non-LLNL person coming onsite shall have an LLNL sponsoring or supervising organization, except as covered by the terms of a contract. The authorizing organization using the non-LLNL personnel shall ensure that these individuals have or receive ES&H training for the hazards associated with the work in the work area (See Document 40.2, "Environment, Safety & Health Training and Education," in the *ES&H Manual*) and the same pre-placement and ongoing medical surveillance examinations as those provided to LLNL employees. Individuals who have not had ES&H training shall be escorted and directly supervised by personnel knowledgeable in the hazards for the area.

Non-LLNL employees or personnel are responsible for:

- Reporting all work-related injuries and illnesses to their supervisor and LLNL point of contact.

- Using the same protective equipment and safety controls required for any other employee working in the area.
- Following LLNL requirements governing the safe and orderly conduct of operations.
- Only performing work that has been authorized.
- Not performing duties that may expose them to hazards beyond those specified in their contract. Non-LLNL personnel without contracts should not perform duties that may expose them to hazards beyond those to which their co-workers are exposed.
- Following activity- and facility-specific work control processes.

The Health Services Department provides emergency first aid to all individuals on site. Respirator review is provided *only* for LLNL employees and supplemental labor employees. The Health Services Department may provide special examinations to supplemental labor employees and others only if requested by LLNL management or as specified in contractual agreement. Consult the ES&H Team for current requirements.

5.2.1 DOE Prime Contractor Staff Working at LLNL

When other DOE prime contractor staff members are working at LLNL and LLNL staff members are working at the prime contractor site, reciprocal agreements may be established. These agreements cover ES&H matters for all activities conducted by visiting staff members at facilities and areas controlled by the host institution. The intent of these agreements is to ensure that ES&H responsibilities and performance expectations are clearly defined and to take advantage of the effectiveness of the host organization's DOE-approved and validated Integrated Safety Management systems. Appendix F provides examples of a joint agreement and signature documents.

5.2.2 Supplemental Labor Workers

The supplemental labor policy states that specific subcontract provisions must be in place to allow for work with a likelihood of exposure to substances not generally encountered in similar work in the relevant job category in U.S. industry. The policy also states that supplemental labor employees require a physical examination within the first 30 days of work. Organizations requesting supplemental labor support shall provide a description of job duties to the vendor to serve as a basis for the examiner's review and recommendations. The vendor shall provide the Supplemental Labor Office evidence of the exam.

Further details on this policy can be found in *the LLNL Supplemental Labor Policy Manual*.

5.2.3 Contractors

All contractors who provide support to the Laboratory or are responsible for facility operations are not relieved of any legal obligations with regard to ES&H. Contractors may augment the Laboratory's ES&H policies with those of their company, but shall appropriately meet the Laboratory's requirements.

5.2.4 Subcontractors

All construction and procured services subcontracts shall contain the requirements and guidance necessary to extend the Laboratory's ES&H policy to subcontractors who perform work in Laboratory-controlled areas. (See Document 2.5 in the *ES&H Manual* for details.) Subcontractors are responsible for the flow down of safety requirements and safety interactions with lower-tier subcontractors. This flow down is not required if the activities are determined to be non-hazardous and non-complex and performed in a work location with only negligible hazards. Before any contract or purchase order can be issued for work at the Livermore site or Site 300, the requester (Responsible Individual) shall:

- Have an ES&H Team evaluate the potential for injury or damage that may result from the operation.
- Inform the subcontractor, through the appropriate Laboratory contract administrator, of any unique hazards of the work environment and any special protective measures specified by LLNL that are required for work.
- Include in the contract or purchase order a reference to the UC-LLNL prescribed safety standards and applicable requirements from this Manual.

All formal interactions between LLNL and the subcontractor shall be through: the Project Manager, Construction Manager, or Inspector for Plant Engineering sponsored subcontracts; the FPOC or Responsible Individual of the authorizing organization for non-Plant Engineering sponsored subcontracts; or through the Procurement Contract Administrator. Either Plant Engineering or the authorizing organization is responsible for providing LLNL ES&H oversight of the subcontractor's activities. Authorizing organization personnel may only have direct contact with subcontractors if it becomes necessary to stop an imminently dangerous operation.

The Laboratory cooperates with subcontractors by restricting potentially hazardous operations near the subcontractor's work area and by providing fire-fighting and emergency ambulance services.

Document 2.5 contains additional requirements for construction subcontractors performing work at the Laboratory and for procured services subcontractors performing work at the Laboratory.

Restrictions for Underage Workers. Federal and state regulations and LLNL policy may restrict the work activities of minors. Following is a summary of the work requirements for underage workers:

- Workers under the age of 18 shall not operate government vehicles or perform work involving human chemical carcinogens, mutagens, teratogens, or reproductive hazards. The radiation exposure limits for minors are specified in Document 20.1, "Occupational Radiation Protection," in the *ES&H Manual*.
- According to California regulation,
 - Workers under the age of 18 shall not operate a forklift, crane, derrick, power hoist, or vehicle exceeding 6000-lb gross vehicle weight; do any work involving explosives, wrecking or demolition, or rigging; or be a rigger's helper.
 - Workers under the age of 18 are restricted from working with hazardous equipment, in an occupation declared particularly hazardous, or on any building or in construction work unless they are in an approved apprenticeship training program or a work experience program. Hazardous operations include roofing, excavation, or operating power-driven woodworking machines, saws, or nailers.
 - Workers under the age of 16 may not use hazardous chemicals unless they are in an approved apprenticeship-training program or a work experience program.
 - Personnel under the age of 18 shall wear a helmet when riding a bicycle.

6.0 Summary of Remaining ISMS Principles and ISMS Functions

This section briefly summarizes the remaining ISMS principles not discussed in this document and the ISMS functions. Additional information can be found in Document 2.2, the *LLNL ISMS Description* at

http://www.llnl.gov/es_and_h/ism/ism-descriptionv5.pdf

and the DOE source documents, DOE G 450.4-1, at

<http://directives.doe.gov/>

6.1 ISMS Principles

6.1.1 Safety Requirements are Identified and Implemented (Principle 5)

Contract 48 Requirements. The University of California operates the Laboratory under Contract 48 for DOE, the primary sponsor of work performed at LLNL. Contract 48 establishes compliance requirements and legal parameters under which the Laboratory shall operate and is held accountable. Sections of the contract that include ES&H requirements are:

- Clause 5.5 and Appendix E, Section 3.2, which covers compliance requirements for the environment, safety, and health.
- Appendix F, which includes objective performance measurement goals that are established annually by UC and DOE (with input from the Laboratory).
- Appendix G, which lists DOE directives and Work Smart Standards that have been accepted by UC for the purpose of imposing standing operational requirements and obligations on the University and thus on the Laboratory. Additionally, the LLNL Work Smart Standards process has identified work, hazards, and standards for existing LLNL activities. Requirements from these standards are to be applied to hazards associated with Laboratory work. Subject-matter experts notify the Work Smart Standard Change Control Board of any new work not covered by Work Smart Standard or changes in the standards included in the Work Smart Standard set.

ES&H Manual. The volumes of the *ES&H Manual* contain or reference the Work Smart Standard that govern specific hazards associated with Laboratory work. Subject-matter experts are used to assist authorizing organizations to identify work activities and applicable controls from the Work Smart Standards that are not directly documented into the *ES&H Manual*.

6.1.2 Tailoring Hazard Controls (Principle 6)

The hierarchy for effectively controlling hazards is as follows:

- Eliminate the hazard by revising the design of the activity.
- Reduce the risk by reducing the degree of severity or the probability of occurrence through redesign or re-engineering of the activity.
- Provide safety devices (e.g., guards, interlocks, shielding).
- Provide personal protective equipment.
- Provide warning devices (e.g., horns, flashing lights, signs).

- Provide safety plans and procedures and other administrative controls.
- Provide medical certification or surveillance as required.

Document 2.2 lists general management controls for hazards associated with Laboratory activities. These controls may be tailored to meet the needs of specific operations.

6.1.3 Operations Authorization (Principle 7)

Work authorization is required for any new or revised operation which involves activities not commonly performed by the public, as discussed in Document 2.2. The Responsible Individual's line manager (i.e., Authorizing Individual) shall ensure that a review is conducted before the start of any new or revised operation. The Responsible Individual shall ensure that the following conditions are met prior to commencing a new or revised operation:

- A review is conducted.
- Hardware and tools are available, the facility is operable, and the equipment is ready for operation.
- The required safety systems are correctly installed and tested.
- The activities or experiments are ready, ES&H documentation is completed, maintenance of safety systems is scheduled, and permits are issued.
- Personnel know their responsibilities, are aware of the hazards and required work controls for the area, and are trained and certified (if needed) for the operation to be performed.
- Applicable facility requirements pertaining to the work have been met.

Additional information can be found in Document 2.2 of the *ES&H Manual*.

6.2 ISMS Functions

The five ISMS functions listed below are the basis for carrying out all work activities at the Laboratory.

1. Define the scope of work.
2. Identify and analyze the hazards associated with the work.
3. Develop and implement hazards controls.
4. Perform the work within the controls.
5. Provide feedback on the adequacy of the controls and continuous improvements in defining and planning work.

More details on the ISMS functions can be found in Document 2.2. Other components of ISM that are based on the specific nature and hazard of the work being performed are documented in safety plans and procedures, hazards analyses, and other administrative reports.

6.3 LLNL Fundamental Guiding Principle

In addition to the ISM principles above, the Laboratory also has a fundamental guiding principle. Workers, supervisors, and managers are directly responsible for ensuring their own safety and promoting a safe, healthful, and environmentally sound workplace and community.

7.0 Stop Work Process

If it is determined that the work activity's operating limits or controls are not being followed, or when common sense indicates that people, property, or the environment are at imminent or substantial danger of being hurt or damaged, the work shall be stopped or suspended until appropriate remedial actions are taken.

7.1 Imminent Danger Situations

Activities that are imminently dangerous to workers, the public, or the environment shall be stopped immediately by any Laboratory employee (not only members of ES&H organizations), supplemental labor employee, or contractor providing support to or operating an LLNL facility. "Stopping work" includes stabilizing an imminent danger situation to the extent that it can be left unattended for a prolonged period of time until the issue is resolved. The person requesting the work stoppage shall notify the manager responsible for the operation. The manager shall notify the area ES&H Team and the Directorate ES&H Assurance Manager of this action as soon as possible. Persons performing the work who disagree with the work stoppage shall contact their management.

7.2 Substantially Dangerous Situations

Each worker is empowered to stop work if an unsafe or unapproved condition exists. The Responsible Individual shall mitigate substantially dangerous situations immediately. As a minimum, mitigation shall include providing a barrier (e.g., cordons, personnel watch) to reduce the possibility of personnel exposure. The person requesting suspension and mitigation shall notify the manager responsible for the situation. The Responsible Individual shall notify the area ES&H Team and the Directorate ES&H Assurance Manager as soon as possible of this action.

7.3 Potentially Dangerous Situations

Informal stop work interventions to correct minor conditions (e.g., to remind workers to put on their hard hats or safety glasses) do not require formal notification.

8.0 Employee ES&H Rights and Responsibilities

No one who requests a work stoppage, or advises his or her supervisor or management of any other safety concern, shall be subject to any adverse action by Laboratory management, even if it is later determined that the activity was safe.

8.1 How to Resolve Safety Issues

Work to resolve issues at the lowest level. As needed, escalate through these steps to resolve safety issues at LLNL:

1. Contact your LLNL supervisor (or your LLNL contact person if you are a visitor).
2. Contact your FPOC or another person in your facility management chain.
3. Contact your ES&H Assurance Manager.
4. Contact your ES&H Team or the Hazards Control Department.
5. If you are a contractor or visitor, speak with your employer.
6. Contact the LLNL ES&H Hotline (2-2922).
7. Contact DIALOGUE via email (dialogue@llnl.gov) or interoffice mail (mail stop L-100).
8. Contact the AD for SSEP.
9. Contact the DDO.
10. Contact the University of California, Office of the President (UCOP) at (510) 987-0801.
11. Contact DOE at (510) 637-1611.

See the "ES&H Contact List" for the current phone numbers for the LLNL listings above.

8.2 Your Rights

You have the right to work in an environment free from recognized hazards likely to cause death or serious injury. Therefore, LLNL shall:

- Inform you of your rights and responsibilities by appropriate means (e.g., this manual, other safety documents, and the Worker Protection Poster, Appendix G).
- Notify you of exposure to harmful substances above legal limits.
- Provide you access to your exposure records.
- Allow you to refuse work in conditions that are likely to cause serious harm to you or others.

The Laboratory is forbidden by Federal Law to make reprisals against employees who raise legitimate safety concerns. As an employee of a DOE contractor, you also have the right to file confidential complaints within 60 days regarding health and safety issues or reprisals in accordance with 10 CFR 708 with the local DOE office. You may write a letter, submit Form 5480.4 (available from DOE), or phone in your complaint to the Department of Energy, Employee ES&H Concerns Program, DOE-LSO, 1301 Clay Street, Suite 700N, Oakland, California 94612. The Employee Concerns 24-hour hotline is (510) 637-1611.

8.3 Your Responsibilities

You are accountable for your safety as well as the safety of those impacted by your activities. Therefore, you shall:

- Understand your work area's hazards and know the procedures and controls necessary to control them.
- Comply with all ES&H regulations and standards.
- Participate in mandatory training and required health and safety programs.
- Immediately correct ES&H-related problems or inform your supervisor.
- Know your work area's emergency plan.
- Warn fellow workers of hazards and defective equipment.
- Report all work-related injuries and illnesses to your supervisor and Health Services.

9.0 References

9.1 Work Smart Standards

DOE Order 440.1A, "Worker Protection Management for DOE Federal and Contractor Employees," Attachment 2, "Contractor Requirement Document, Sections 1–11, 13–18 (delete item 18.a), 19 (delete item 19.d.3) and 22.

10 CFR 708, "DOE Contractor Employee Protection Program."

See the Work Smart Standards set for the complete list of Standards.

9.2 Other Resources

LLNL Integrated Safety Management System Description, UCRL-AR-132791, current version.

DOE G 450.4-1, "Integrated Safety Management System Guide."

29 CFR 1903.11(d), "Whistle Blower Protection."

Appendix A

Terms and Definitions

The following terms and definitions have special meanings and apply to the entire *ES&H Manual*. See Document 5.1 for additional terms and definitions.

Assure	To make sure (verify) that something was done.
Authorizing Organization	The Laboratory organization (e.g., directorate or group) responsible for a work activity's performance. This includes ensuring adequate funding and determining work priorities.
Directorate	The set of organizational elements (e.g., departments, divisions, groups, programs, projects, offices) operating within the management responsibilities and authority of an Associate Director. This term includes Directorate-like organizations at the LLNL (i.e., Chief Financial Officer).
Ensure	To cause something to be done, either by doing it or by following up on assignments and delegations to verify that something was done. To guarantee a particular outcome. The Laboratory uses this term when referring to situations involving direct responsibility for activities, as in the case of the Responsible Individual.
Line Management	Managers from the Director, through the Associate Directors (ADs) and directorate managers appointed to manage work performed at LLNL. The management chain covers the management of programmatic work, payroll personnel, facility operations, and service work. All ADs are responsible for one or more of these lines of management. Thus, care must be taken in using the term "line management" to ensure the specific line being referenced is understood to be programmatic, payroll, facility, or service.

Responsible Individual (RI)	The individual directly responsible for an operation, activity, or group of activities. The RI may be at any level within the organization and is formally identified by the activity's authorizing individual. In some organizations, this person is called the work supervisor. In most cases the RI will be directing the work of others as part of the operation or activity. Examples of RI job titles include supervisor, division leader, group leader, project leader, project engineer, principal investigator, facility manager, building coordinator, lead experimenter, and lead technician.
Shall	Denotes a requirement that is NOT optional. If an exception to a requirement is to be permitted, the level of approval is delineated in Document 2.2 and Document 2.3, "LLNL Exemption Process," in the <i>ES&H Manual</i> .
Should or May	Denotes a desirable or best management practice. Written justification is not required if a "should" or "may" statement in the LLNL <i>ES&H Manual</i> is not used.
Work commonly performed by the public	An activity with hazards commonly accepted by the public, the control of which requires little or no guidance or training to perform the work safely.

Appendix B

Space Lease Agreements

A Program AD may lease space from another Facility AD. The RRAs required to conduct operations in another facility shall be clearly defined. This appendix defines the standard set of RRAs for lease agreements. If a non-standard set of RRAs is to be used, an MOU shall be prepared. A "Building Space Lease Authorization Form" is included, which may be used to specify options and provide a place for signatures.

B.1 Authorizing Organization

An authorizing organization leasing space from another facility AD has the following responsibilities in addition to those listed in Section 3.4:

- Provide a funding authorization (account number) for space and other charges.
- Obtain approval from the Facility AD for all facility modifications before any construction begins.
- The cost of any and all modifications to the occupied space. Modifications will become the property of the Facility AD, unless otherwise agreed upon in writing.
- At the conclusion of occupancy, return the space in a condition equal to or better than its original condition, less normal wear and tear.
- Prepare an SP, if required, with assistance from the ES&H Team that supports the facility and the Facility AD. (This ES&H Team will publish the SP and will provide primary ES&H support for the work.)
- Provide the FPOC with access to all work areas.
- Contact the FPOC when additions or changes to the scope of work are anticipated; prepare an additional IWS, if necessary.
- Provide ChemTrack reconciliation, waste projections, National Emissions Standards for Hazardous Air Pollutants (NESHAPS) data, and other information for the occupied space.
- Conduct reviews of incidents associated with the work consistent with the requirements in the *ES&H Manual*. (The Facility AD files the initial Occurrence Report, when one is required.)

- Provide at least 30 days notice before moving from the space. Perform project closeout activities consistent with the *ES&H Manual*.

B.2 The Facility AD

The Facility AD leasing space has the following responsibilities in addition to those given in Section 3.3, which are exercised through his or her facility management organization:

- Delineate the area to be used by the tenant.
- Communicate the list of services that are included in the space charge. Identify any other charges associated with the lease.
- Monitor compliance, in the tenant's space, with the provisions of the FSP and the RRAs in this document.
- Include the work area in the facility self-assessment program. Enter deficiencies into DefTrack.
- If an incident occurs, file the initial Occurrence Report and ensure that required reviews of the incident are conducted. (If the incident was associated with the tenant's work, the authorizing organization completes the Occurrence Report and conducts the review.)

BUILDING SPACE LEASE AUTHORIZATION FORM

Building/Trailer # _____ Room # _____ Total area _____ sq. ft.
(Attach a list or marked key plan If more space is needed.)

Occupation Date: _____ Initial OFC Rate _____

End of Use Date: _____

Name: _____

Ext. #: _____ L-Code: _____ Department/Division _____

DESCRIPTION of USE of BUILDING SPACE (attach statement of work, if necessary):

IS BUILDING MODIFICATION PROPOSED? (YES/NO) If yes, give details.

Standard ES&H RRAs from Document 2.1 apply to this space lease.

Special ES&H RRAs (attached) apply to this space lease.

IWS or SP REQUIRED? (YES/NO)

ES&H reviews, if required, will be done by the ES&H Team supporting the facility or area where the work is to be performed. The ES&H Team providing support is Team ____.

Account number provided for the following services:

*Space recharge and electricity will allow split of account #'s

Space Charge: _____ - _____ % _____ Electricity: _____ - _____
Space Charge: _____ - _____ % _____ Electricity: _____ - _____

Other Services: _____ - _____ Specify _____

Tenant RI: _____ Date: _____

Tenant

Resource Manager: _____ Date: _____

Tenant

Senior Manager: _____ Date: _____

Facility AD or designee,

Landlord: _____ Date: _____

Resource Manager,

Landlord: _____ Date: _____

Appendix C

Program/Project Delegation Form

The _____ Directorate delegates all of the roles, responsibilities, and authorities (including the primary ES&H responsibilities listed in, Document 2.1, "Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management," Sections 1.4.2, 1.3.4, and 1.3.5 in the *ES&H Manual*) for the performance of the _____ Program/Project to the _____ Directorate. The Statement of Work is attached. Use the account number _____.

 Associate Director Date
 Delegating Directorate

 Associate Director Date
 Accepting Directorate

Appendix D

Radiological and Hazardous Waste Management Technician Services

The ES&H RRAs for the services provided by the Hazardous Waste Technicians are slightly different from the regular services, listed in Section 4.3. These RRAs, for both the service requester and the service provider, are listed in this Appendix. The purpose of this appendix is to provide the standard RRAs that apply to most of this type of work.

If this set of RRAs is used, an MOU is not required. However, the scope of work, level of effort, and account numbers to be used shall be reviewed and documented at least annually. Each directorate shall designate at least one person, familiar with hazardous waste management issues and authorized to commit funds, to conduct this annual review with Radiological and Hazardous Waste Management (RHWM), and to serve as the point of contact for waste issues that might arise. Other divisions of responsibilities may be used and documented.

The characteristics of RHWM services are listed below:

- a. There is no defined end point for the service. Service is either provided on an on-going basis or as needed.
- b. Work is performed either at the service provider's facility, at the requester's facility, or a combination of both.
- c. Service is an institutional requirement.
- d. There may be a prescribed or negotiated fee for part of the service.
- e. Some work is performed by the client or his or her designees.

D.1 The Associate Director of the authorizing organization requesting RHWM services is responsible for:

- Providing knowledgeable, properly trained individuals to accurately identify the waste generation process and expected waste components.
- Ensuring that a client Responsible Individual is appointed for the RHWM services being requested.
- Assuring that the program is complying with the LLNL Waste Acceptance Criteria (WAC). The criteria can be found at

http://www.llnl.gov/es_and_h/wac_rev1/wac_contents.html

- Assuring that Satellite Accumulation Areas (SAA) are maintained in accordance with the requirements of Document 36.3, "Management of Satellite and Waste Accumulation Areas," in the *ES&H Manual*.

D.2 The requesting Responsible Individual is responsible for:

- Contacting RHWM one week prior to completely filling a waste container, or as the time limit for waste removal is approached. This is particularly important for retention tanks.
- Providing notification to the RHWM Waste Generator Services group leader of new waste generating processes prior to the start of work.
- Identifying known or potential workplace hazards for each room, laboratory, retention tank, etc. and conveying the hazard information to the RHWM Division Leader or designee to allow him or her to ensure that only properly trained RHWM employees are provided.
- Identifying applicable programmatic procedures that apply to RHWM operations (i.e., FSPs, SPs, SOP). Conveying training requirements [e.g., explosives waste or transuranic (TRU) waste training] for RHWM service personnel to the RHWM Division Leader or designee.
- Providing appropriate operating procedures when required (e.g., retention tank operating plans or SOPs) and, when appropriate, on-the-job training to assure RHWM personnel can operate client-owned equipment safely, when services require RHWM to understand and operate client-owned processes or equipment.
- Identifying special training requirements (e.g., training for uranium or explosives handlers).
- Ensuring a safe work environment for the RHWM technician when he or she is working in their area of responsibility. This may include providing a knowledgeable individual to accurately identify the waste generation process, expected waste components, and their hazardous, mixed, or radioactive characteristics, and providing a knowledgeable person to work with the RHWM technician when two people are required for certain operations.
- Arranging for any facility access controls or conduct-of-operations controls that might be required.
- Identifying composition of the waste for the RHWM technician. Identification includes specifying the waste matrix, hazardous (including radioactive) constituents present, and the amounts of those

hazardous constituents. If process knowledge cannot be used for waste identification, chemical analysis is required.

- Signing waste requisitions or formally delegating signature authority to a qualified designee who is current in all waste generator training requirements.

D.3 The Cognizant RHWM group leader is responsible for:

- Providing trained personnel to assist generators with hazardous, mixed, and radioactive waste compliance issues (to include guidance in compatibility, segregation, and packaging), and maintenance of waste profile systems. Note that characterization is an activity that occurs subsequent to waste identification by the waste generator. Characterization includes assignment of regulatory required waste codes; assignment of profile numbers; determination of hazardous properties, i.e., toxic, corrosive, ignitable, or reactive; and a variety of other activities to ensure proper treatment, storage, and disposal. Characterization is an activity that can involve the RHWM Field Technician, an Environmental Analyst, a characterization chemist, and radiological characterization analyst working as a team to provide a characterization process that is acceptable from a regulatory perspective.
- Addressing hazards associated with the RHWM technician's work activity. Integrating work location hazards and work activity hazards, and developing and implementing appropriate waste handling and management controls for that set of combined hazards.
- Managing waste sampling, field analysis, Waste Accumulation Area (WAA) management, and retention tank management activities under the auspices of a generic IWS, which will be sent electronically to appropriate FPOCs for annual facility concurrence. Thereafter, the work will be conducted on a routine basis in each of the authorized facilities.
- Providing RHWM technician support to the LLNL Space Action Team (SAT) to perform field labpacking operations and equipment removal and decontamination.
- Providing retention tank management, WAA operations (including transport of waste containers to WAA or Consolidation WAA), and any required waste sampling and field analyses.
- Distributing new waste containers, labels, and waste disposal requisitions.

RHWM will provide special project support on a case-by-case basis with prior agreement by both parties.

D.4 Interconnected Responsibilities

In some cases, the authorizing organization and RHWM have interconnected responsibilities for an operation. Waste identification is solely the responsibility of the waste generator.

D.4.1 Waste Water Retention Tank Systems

- The facility authorizing organization (the tank system owner) is responsible for managing what goes into the retention tank. The Responsible Individual shall write the tank operating plan or specify the controls in a safety plan for the tank system.
- The owner is responsible for the maintenance of the retention tank system.
- RHWM shall review and concur with the tank operating plan (or equivalent), following concurrence with the FPOC.
- RHWM is responsible for sampling the tank contents and then disposing of the contents.

Appendix E

Facility Management Chain Training

Individuals assigned roles within a directorate's facility management chain shall have appropriate ES&H training to carry out their ES&H duties. The Facility AD or designee shall identify what training is needed for each assignment and ensure that it is completed.

FPOCs should have more than 2 (but preferably more than 5) years of experience in facility maintenance, operations, and management.

Each FPOC is required to complete:

- A briefing on the roles, responsibilities, and authorities of a FPOC as defined in Section 3.7 of this document.
- Appropriate elements of the ADFM Training Course to become familiar with maintenance and construction processes and procedures and any potentially hazardous aspects of having others do work in his or her assigned facilities. The Facility AD or designee will determine the appropriate elements.

Each FPOC and alternate is required to complete a core ES&H curriculum to provide knowledge of the inherent or operational hazards associated with his or her assignment. The core ES&H curriculum consists of the following courses:

- PE4017 FPOC Orientation
- EM1000 Interacting with the LLNL Incident Command System
- HS1670-CBT Qualification for Fire Extinguisher Users-CBT
- IS0003-W IWS Awareness
- IS0004-W Roles, Responsibilities and Authority Training for Supervisors, Facility Managers, and Facility Points of Contact
- IS0007-W Work Planning, Authorization and Execution

Additional courses may be needed depending upon specific hazards within the FPOC's areas of responsibility or as directed by the safety envelope of the facility. The Facility AD with appropriate input from the assurance manager and Hazards Control, will make this decision. Subject areas that may be covered by these courses are confined space, pressure systems, lasers, capacitors, cranes, radiation, criticality, and biohazards. Alternate courses (when available) are listed in the LLNL Course Catalog.

Appendix F

[Prime Contractor Name]-LLNL Joint Agreement On ES&H Responsibilities for Visiting Personnel

This Agreement is between [Prime Contractor name] and LLNL who are prime contractors to the DOE. Both organizations have DOE-approved and validated Integrated Safety Management systems. This agreement shall be consistent with the terms and conditions of each contractor's ISMS requirements.

Purpose

This Agreement provides the terms and conditions with regard to assigning ES&H responsibilities from [Prime Contractor name] to LLNL when [Prime Contractor name] staff are working at LLNL, and from LLNL to [Prime Contractor name] when LLNL staff are working at [Prime Contractor site]. The intent of this agreement is to ensure that ES&H responsibilities and performance expectations are clearly defined and to take advantage of the effectiveness of the host organization's processes.

Extent of the Agreement

- This Agreement covers ES&H matters for all activities conducted by visiting staff members (and subcontractors working on those activities) at facilities and areas controlled by the host institution.
- The technical performance and funding arrangements for each work activity (excluding meetings, conferences, visits) will be covered in an operation-specific agreement.

Staff Qualifications and Supervision

- The staffing institution will ensure that its participants are technically qualified for the planned activity.
- The host institution may request recall of the participants when deemed necessary.
- The host institution will exercise administrative control of the participants during the activity (establishing working hours, use of resources, conduct of operations).
- Participants will be required to follow all ES&H Work Smart Standards and Policies in effect at the host institution. The host Project Supervisor

will provide work oversight and feedback on all ES&H matters for the visiting organization staff.

- The host institution may request a statement from the staffing institution's Medical Director to certify the physical ability the of participants to perform the work described by the host institution. Any medical restrictions or limitations pertinent to the planned activity will be transmitted from the staffing institution to the Medical Director at the host institution. Associated workplace accommodations may be arranged through a separate Memorandum Of Understanding. Medical restrictions do not contain medically confidential information and should be managed on a need to know basis.
- Workplace exposure information (personnel monitoring, dosimetry, bioassay) shall be provided to the staffing institution so that proper medical surveillance may be provided.

ES&H Documents

Required activity-specific documents shall be prepared and maintained by the host organization.

Training and Required Reading

[Prime Contractor name] and LLNL agree that the core ES&H training (e.g., radiation worker, laser safety, respirator use) deemed equivalent by each institution provided by either organization is acceptable to the other. A list of acceptable core ES&H training programs will reside with the respective Training Offices at each institution. Unique activity- or facility-specific training requirements will be provided by the host organization. Required reading such as pertinent sections of safety analysis documents, safety manuals, work permits, etc will be made available so that staff may review them prior to beginning work.

Acceptance of Conditions

For each project, the cognizant Program Leader (host organization) and the line manager (staffing organization) shall sign a statement of concurrence with the terms and conditions of this Agreement and the proposed scope of work for the project. (See Attachment). Participants shall acknowledge that they are aware of the terms of this Agreement.

ES&H Obligations and Responsibilities of LLNL Participants at [Prime Contractor Site]

The undersigned agree to the terms stated in the “[Prime Contractor name]-LLNL Joint Agreement on ES&H responsibilities for Visiting Personnel” between Lawrence Livermore National Laboratory and [Prime Contractor name]. This will be in effect from _____(date) _____ to _____(date) _____ while assigned to the _____ project at [Prime Contractor site]. A scope of work for this project is attached.

While working on this project, LLNL employees will be working under the ES&H and administrative requirements of [Prime Contractor name] for the duration of this agreement.

The following ES&H Documents are applicable to this project:

1. General—[Prime Contractor’s ES&H document]
2. Specific for Facilities- [name as appropriate] or Activities- specific document
 - Safety Analysis Document
 - Radiation Work Authorization
 - Sealed Source Authorization
 - Radiation Work Permit
 - Activity Hazard Document

LLNL employees shall be familiar with and follow [Prime Contractor’s] rules and policies for personal conduct, hours of work, ES&H, and protection of intellectual property and may not begin work until all [Prime Contractor] training requirements have been satisfied.

Participant
[LLNL Organization]

Date

LLNL Payroll/Program Supervisor
[TITLE]

Date

[Prime Contractor] Project Supervisor
[TITLE]

Date

ES&H Obligations and Responsibilities of [Prime Contractor name] Participants at LLNL

The undersigned agree to the terms stated in the “[Prime Contractor name]-LLNL Joint Agreement on ES&H responsibilities for Visiting Personnel” between Lawrence Livermore National Laboratory and [Prime Contractor name]. This will be in effect from _____(date) _____ to _____(date) _____ while assigned to the _____ project at LLNL. A scope of work for this project is attached.

While working on this project, [Prime Contractor name] employees will be working under the ES&H and administrative requirements of LLNL for the duration of this agreement.

The following ES&H Documents are applicable to this project:

1. General—*ES&H Manual* (UCRL-MA-119618)
2. Specific for Facilities [list as appropriate for the work and location]
 - Authorization Basis Document (e.g. Safety Analysis Report or Hazard Analysis Report)
 - Facility Safety Plan
 - Operational Safety Plan
 - Integration Work Sheet
 - [any other applicable work permits]

[Prime Contractor name] employees shall be familiar with and follow LLNL's rules and policies for personal conduct, hours of work, ES&H, and protection of intellectual property and may not begin work until all LLNL training requirements have been satisfied.

Participant
[Prime Contractor Organization]

Date

[Prime Contractor] Payroll/Program Supervisor
[TITLE]

Date

LLNL Project Supervisor
[TITLE]

Date

Appendix G
Worker Protection Poster

Occupational Safety and Health Protection for DOE Contractor Employees at Government-Owned Contractor-Operated Facilities

Policy:

U.S. Department of Energy (DOE) contractor employees shall be provided with safe and healthful working conditions in accordance with the standards prescribed pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and the Department of Energy Organization Act of 1977; said standards shall be consistent with those promulgated under the Occupational Safety and Health Act of 1970, Public Law 91-596. Please refer to DOE Order 440.1A for details

DOE Contractors:

DOE has determined that the University of California is subject to DOE Acquisition Regulation (DEAR), Subpart 970.23 and is required to comply with the applicable Occupational Safety and Health standards listed in its contract with the DOE for operating and managing the Lawrence Livermore National Laboratory. This regulation and the standards are available for employee review at the Lawrence Livermore National Laboratory Library. As delineated by DOE 440.1A, the University of California is required to:

1. Furnish to employees, employment and place of employment that are as free from occupational safety and health hazards as possible.
2. Establish and implement programs and procedures to comply with DOE 440.1A. These shall include programs and procedures to monitor the workplace for known toxic materials and harmful physical agents that are used or produced at the facility, and maintain records of the data. As part of these programs and procedures:
 - (a) Advise employees or their representatives – that they are to be provided with an opportunity to (1) observe monitoring or measuring for toxic materials

Revised: June 19, 2002

or harmful physical agents, and (2) have access to the results thereof.

*(b) Provide each employee, former employee, or designated representative, within 15 days of the receipt of a written request, access to or copies of any monitoring or bioassay records relevant to the employee's potential exposure to toxic materials or harmful physical agents during employment.

(c) Notify employees promptly of any information indicating that an exposure to toxic materials or harmful physical agents may have exceeded the limits specified by the DOE-prescribed OSHA standards.

*(d) Provide each employee, former employee, or designated representative, within 15 days of the receipt of a written request, access to or copies of the employee's cumulative recorded occupational radiation dose during employment.

(e) Notify employees promptly of any information indicating that a radiation dose may have exceeded the limits specified by the DOE prescribed OSHA standards.

*If the representative is not the recognized/certified collective bargaining agent, then he or she must have the employee's written authorization, to access an employee's monitoring, bioassay, or radiation exposure records.

Employees:

All employees are required to:

1. Observe the DOE prescribed OSHA standards applicable to their work.
2. Report promptly to the contractor any condition that may lead to violation of these standards.
3. Respond to warning signals which may be activated in the event of fire, radiation, or other possible emergencies.
4. Report emergencies using established procedures.

Inspections:

All activities under this contract are subject to inspection by DOE. When an inspection under DOE 440.1A is conducted, a contractor management representative and a representative authorized by the employees will be given an opportunity to accompany the DOE inspector.

Where there is no representative authorized by the employees, the DOE inspector will consult with a reasonable number of employees concerning safety and health conditions in the workplace.

Concerns:

Employees or former employees may file a concern with the contractor management or with the local DOE office, as described in DOE 442.1A. Concerns may be submitted either verbally by calling the local DOE office Employee Concerns Hotline, telephone (510) 637-1611, or in writing. An example report form is available adjacent to each hotline poster, or one may be obtained from the Employee Concerns Manager at the local DOE office.

Imminent Danger:

For any condition or practice that presents an immediate hazard that could reasonably be expected to cause death or serious physical harm (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization), the contractor and/or DOE shall take immediate and effective remedial actions to remove employees from the hazard and/or eliminate the hazard. As soon as the contractor and/or DOE to assure that appropriate actions have been taken to preclude recurrence of the hazard.

Nondiscrimination:

No contractor shall discharge or in any manner discriminate against any employee by virtue of the filing of a complaint, or in any other fashion exercising on behalf of himself or herself or others any action set forth in the Orders DOE 440.1A or DOE 442.1A.

Inquires:

Inquires should be addressed to the contractor; however, additional inquiries may be addressed to the following local DOE office:

Director of ES&H Division
DOE Oakland Operations Office
1301 Clay Street
Oakland, CA 94612-5208

Posting Requirements:

Copies of this notice must be posted in a sufficient number of places in Government-owned plants and facilities operated by DOE contractors subject to DOE Acquisition Regulation (DEAR), Subpart 970.23, to permit employees working in or frequenting any portion of the plant to observe a copy on the way to or from their workplace.



U.S. Department of Energy
Environment, Safety & Health
Hotline: (510) 637-1611