



**DEPARTMENT OF ENERGY**

**Argonne Site Office (ASO)  
Environment, Safety and Health (ES&H) Program Plan**

**REVISION 0**

Approved by:     -- signed by R. Wunderlich --     Date Issued:     April 7, 2005

## **Argonne Site Office (ASO) Environment, Safety and Health (ES&H) Program Plan**

### **1. ASO Mission**

The ASO mission is to successfully manage and administer the DOE performance-based management and operating contract for the safe, secure, effective, and efficient operation of the Argonne National Laboratory (ANL). ASO supports the SC mission to encourage and conduct forefront basic and applied research programs which advance the science and technology foundations necessary to accomplish DOE missions.

### **2. ASO ES&H Program Objective**

The objective of the ASO ES&H Program is to ensure the protection of the public, workers, and the environment for work performed at ANL. The ASO ES&H Program Plan describes ASO line management responsibilities and associated activities to ensure the development, continued maintenance, and improvement of the ANL Integrated Safety Management System (ISMS). The ES&H requirements are institutionalized through the ANL ISMS. This program represents ASO implementation of Department of Energy (DOE) P 450.5, *Line Environment, Safety, and Health Oversight* and DOE O 540.1, *Environmental Protection Program*.

### **3. ASO Oversight Policy**

ASO has the responsibility to perform line management oversight of the ANL operations and facilities. ASO line management oversight consists of the “acquiring and maintaining sufficient knowledge of contractor program activities in order to make informed judgments on the adequacy of the system or program.” ASO has established an ASO ES&H Program and Policy that ensures that the ANL ISMS is implemented effectively. This ASO oversight policy is based on the following premises:

- a) DOE P 450.5 continues to be an effective policy for line oversight.
- b) A vigorous contractor self-assessment program is the cornerstone.
- c) DOE line oversight and contractor self-assessments ensure ISM is effectively implemented.
- d) DOE line oversight is cost effective, coordinated, integrated, and efficient.
- e) Independent oversight complements DOE line oversight.
- f) DOE oversight scope/frequency is risk-based and performance-based.

As the contractor’s self-assessment increases in robustness and credibility, the DOE line management oversight shifts to evaluating the adequacy of the contractor’s management systems, particularly their self-assessment program, and to maintaining operational awareness of their assigned facilities. The self-assessment program at ANL continues to improve toward adequate robustness and credibility. In addition, the self-assessment program at ASO will improve based on lessons learned and best practices of other DOE Offices.

The DOE Office of Independent Oversight and Performance Assessment conducts independent oversight of ANL and ASO. The DOE Director of Independent Oversight and Performance Assessment reported that “the long-term goal of improving programs in the field is best assisted through robust, comprehensive, critical, performance-oriented contractor self assessment programs, with periodic verification by Independent Oversight.”

#### **4. ES&H Requirements**

The ASO ES&H Program implements Department of Energy (DOE) P 450.5 *Line Environment, Safety, and Health Oversight* and DOE O 450.1, *Environmental Protection Program*. The Department's ISM policy (DOE P 450.4) and line ES&H oversight policy (DOE P 450.5), as well as, the ISM DEAR clause (48 CFR 970.5223-1), are consistent with and supportive of a performance-based management approach. DOE P 450.4 and 48 CFR 970.5223-1 set expectations for the ISMS of DOE facilities, and require the use of performance objectives, measures, and expectations in evaluating performance. DOE P 450.5 describes the need for a robust, rigorous, and credible contractor self-assessment program linked to the contractor ISMS. Finally, DOE P 450.5 requires an effective DOE oversight program. The DOE ISM requirements are implemented through the ANL performance-based management and operating contract. The key elements of a successful ISMS at ANL include:

- a) ANL development and implementation of a validated ISMS that includes an Environmental Management System (EMS).
- b) A robust, rigorous, and credible ANL ES&H self-assessment program linked to the approved ANL ISMS.
- c) ANL achievement of the ES&H performance measures in the ANL contract that reflect DOE expectations.
- d) Positive results from ASO oversight, including ASO evaluations of ANL performance.
- e) Positive results from periodic independent evaluations by others, such as the Office of Independent Oversight and Performance Assurance.
- f) ANL compliance with contract terms and conditions including ES&H requirements.
- g) Continuous feedback and performance improvement including data collection and analysis. The analysis will be used to identify issues regarding ANL ISMS implementation and appropriate corrective actions by ANL management to address identified issues.

#### **5. ASO ES&H Responsibilities**

ASO is responsible for developing an ISM program and overseeing implementation of the ISMS at ANL. Each ASO team in has distinct roles and fulfilling responsibilities to achieve the goals of the ASO ES&H Program. Attachment A defines roles and responsibilities associated with the ASO ES&H Program.

***ASO Manager and Deputy Manager*** – The ASO Manager and Deputy Manager have DOE line management oversight of ANL. The ASO Manager is responsible for ensuring that the ANL ISMS meets the overall objective of protecting the public, workers and the environment for work performed at ANL. To accomplish this, the ASO Manager has responsibility for ensuring that ANL meets the contractual requirements for implementing, maintaining, and continuously improving the ANL ISMS. The ASO Manager utilizes the ASO staff and obtains assistance/support from CH support service organizations and others, as necessary, to accomplish these responsibilities.

The Manager and Deputy Manager provide overall leadership for the ASO ES&H Program, utilizing Program results to make decisions regarding allocation of DOE resources, direction of ongoing projects and programs, and resolution of issues or problems identified during ES&H oversight activities. The Manager and Deputy Manager also provide leadership in integrating ES&H Program activities with ongoing efforts to facilitate the outreach program to the community.

**Safety and Health Team** – The ASO Safety and Health Team consists of Facility Representatives (FRs) who serve as "eyes and ears" of ASO in monitoring routine operations at specific ANL facilities. Their role involves routine presence in ANL facilities and participation in operational awareness activities to ensure the application of ISM core functions to all work. Each ASO FR monitors the work at the assigned facilities to ascertain whether it is properly planned and performed within the approved safety controls. FRs identify and evaluate safety and health issues and concerns, and work with the contractor to diagnose root causes for problems and identify short-term compensatory measures and/or long-term solutions, and follow problem resolution to a satisfactory conclusion. In addition to routine monitoring of facilities, FRs also may serve as ES&H subject matter experts, depending upon their technical expertise.

For optimum performance, FRs must have detailed knowledge of their assigned facilities regarding facility design, authorization basis, operating practices, and administrative controls. They must be able to conduct a meaningful review of incidents and occurrences to verify that appropriate root causes and corrective actions are identified. Specific responsibilities of the ASO FRs are outlined in ASO SOP-26, Facility Representative Program.

**Environmental and Emergency Management Team (EEMT)** - The EEMT consists of environmental and emergency subject matter experts that have substantial expertise and experience in one or more functional areas important to ensuring safe operation of ANL facilities. These SMEs partner with ASO FRs and other teams to ensure that ANL programs relevant to environmental and emergency management are appropriately developed and implemented.

The EEMT has responsibility for ensuring that Environmental Stewardship and Emergency Management programs are maintained at ANL and that the ANL ISMS includes an EMS. Environmental Stewardship encompasses compliance with environmental regulations, minimization of environmental impacts, protecting and caring for ecological and cultural resources, and ensuring long-term protection of people and the environment at cleaned-up contamination sites. The EEMT implements a Programmatic Agreement with the State Historic Preservation Officer for the management of cultural resources at ANL and an Interagency Agreement with the U.S. Department of Agriculture for wildlife management.

**Infrastructure and Project Management Team** - Program/Project Engineers and Managers have primary responsibility for scope, cost, and schedule monitoring of contractor work to accomplish assigned mission activities. The Program/Project Engineers and Managers review and recommend approval of documentation, such as project plans and baselines prepared by the contractor and submitted to ASO. The Program/Project Engineers and Managers monitor progress against established schedule milestones and budgets to ensure that each project and assigned program meets ASO quality objectives. Other roles include ensuring that ES&H is built into assigned projects or programs from planning through implementation, performing project status, including reviewing ongoing physical construction and ES&H walkthroughs, and serving as the point of contact with CH management and DOE Headquarters Program Managers on project and program status.

**Business Management Team** - Financial/Contract Specialists help ASO ascertain whether ANL is meeting DOE requirements established in the contract for operation of

the Laboratory and that ANL is applying acceptable business practices in using funding allocated for programs at the site. The Financial/Contract Specialists coordinate overall reviews of contractor performance associated with determining if contractual performance requirements have been met. Their other roles include monitoring and controlling changes to contract scope, controlling the allocation of funds, and ensuring that specific Departmental requirements relating to contract administration are fulfilled.

## **6. ASO ES&H Program Elements**

The mission of ASO is to manage the performance-based contract with the University of Chicago for the safe, effective, and efficient operation of ANL. ASO is required to develop and maintain a “sense of Laboratory” to ensure safe operations. ASO line management oversight is the “acquiring and maintaining of sufficient knowledge of contractor program activities in order to make informed judgments on the adequacy of the system or program.” The ASO ES&H Program contributes to this concept by performing the following functions:

- a) **Setting ES&H expectations** - ASO conveys clear ES&H expectations and guidance to ANL expressed through contract requirement/language and performance objectives, measures, and expectations and through other formal communications. As part of the ASO mission, contract management entails setting ES&H expectations and communicating them to ANL, integrating DOE ES&H requirements into the ISMS, authorizing work, and providing feedback on ES&H performance to the contractor.
- b) **Facilitating ES&H performance** – ASO oversees implementation of the ANL ISMS and the ANL EMS which is attached to and part of the ANL ISMS. To accomplish the program and project implementation role of the ASO mission, ASO reviews and authorizes work at ANL that has been reviewed and planned to be performed safely and in an environmentally acceptable manner. ASO, serving as the site owner, interacts with regulators to obtain permits and other approvals consistent with DOE ES&H requirements. ASO works with ANL to establish and implement robust, rigorous, and credible ANL ES&H self-assessment programs. ASO promotes incorporation of ISM principles and functions into work planning through involvement in Argonne’s work planning, budgeting, and prioritization decisions.

ASO personnel review the ANL ES&H Management Plan which includes proposed allocation of resources, a system for prioritizing proposed projects, assessment of adequacy of funding levels, and schedules for proposed projects. ASO ensures that funding is allocated to support necessary activities associated with priority projects and programs, especially those required to address issues or conditions with potentially significant risks and consequences, as well as recognized deficiencies in the facilities or site-wide ES&H programs.

- c) **Monitoring ES&H performance** - ASO ES&H Program includes operational awareness activities to monitor Laboratory ES&H performance. The ASO ESH Program allows ASO management to acquire and maintain sufficient knowledge of ANL program activities in order to make informed judgments on the adequacy of the ANL ISMS. ASO measures ANL ES&H performance against established contractual objectives, measures, and expectations, including compliance with ISM clauses in the contract. Monitoring of ANL ES&H performance ensures that the ASO mission role of Federal stewardship is accomplished. Through operational awareness

activities ASO ensures: long-term protection and safety of the public and site workers; protection of the environment; efficiency and effectiveness of operations; and that DOE's assets and resources are maintained and protected.

Operational awareness activities provide a basis for comprehensive monitoring of contractor operations and performance, including: the planning, implementation, and evaluation of work and work control processes; and the implementation and effectiveness of the ANL ISMS. A list of activities and a brief description of each of these activities follows:

Walkthroughs and Observations – This activity involves observing conditions where work is being performed, interacting with contractor personnel responsible for performing the work, and observing activities in progress. Walkthroughs and observations provide a "snapshot" of workplace conditions, the objective being to collect general information on conditions associated with the work and on issues requiring additional evaluation. Walkthroughs and observations are generally unstructured oversight activities that spot-check appropriate work controls, and may focus on specific functional areas or disciplines, work authorization and control documentation, hazard controls, concerns of the workers, the workers' knowledge of hazards associated with their work, etc.

Surveillances – Surveillance is a planned oversight activity that involves observation of specific work planning and work activities to evaluate hazards identification, analysis, mitigation, and controls that are associated with the specific work being conducted. Surveillances evaluate worker implementation of the ANL ISMS through meeting ES&H requirements and compliance with DOE requirements and standards. Surveillances focus on specific work activities and evaluate adequacy of personnel training and qualification, adequacy of and adherence to administrative controls, effectiveness of engineering controls, effectiveness of specific ES&H programs, and overall performance.

Reviews and Assessments – As described in ASO Standard Operating Procedure–13 "Environment, Safety and Health, and Quality Assurance Functional Area Reviews", Functional Area Reviews are in-depth assessments of ANL ES&H programs elements, or ANL implementation of one or more ISM core functions or guiding principles. These assessments include: review of specific documentation, such as ES&H Manual Chapters, quality assurance plans, Tier 2 and 3 documents, records, plans, procedures, occurrence reports, and others documents; interviews and discussions with Laboratory staff; and surveillances and observation of activities to determine the overall effectiveness of the specific ES&H program. The objective of a Functional Area Review is to determine the effectiveness of specific programs across the Laboratory and to identify programmatic weaknesses before they become significant issues. ASO may also perform "for cause" reviews to evaluate programs or areas where weaknesses have resulted in occurrences or incidents.

Focused Reviews are a snapshot of performance in a particular ES&H topical area. Focused Reviews should focus on implementation of specific ES&H program requirements rather than reviews of whole ES&H programs. They may provide a short, focused assessment of a particular issue, hazard control, ES&H procedure, etc.

Readiness reviews and assessments are an evaluation of operations, activities, or facilities before start-up or restart to determine whether they can be conducted safely. They are performed on new operations, activities, or facilities, and those that were suspended for reasons relating to operational safety. ASO personnel may observe readiness reviews performed by the contractor, or may participate as members of DOE teams assigned to independently validate contractor reviews. Readiness reviews and assessments may require review of authorization basis documents, operational procedures, program documents, and special safety program documents. These efforts may also entail observation of work activities, evaluation of personnel training and qualification, walk-downs of systems and equipment, and interviews with personnel.

Meetings – ASO conducts meetings with ANL division and ES&H staff, as well as observing Laboratory operations and ES&H meetings. Some meetings are conducted to discuss the results of FR and oversight activities. Observation of contractor meetings provides ASO personnel with an opportunity to gather information on upcoming activities, examine contractor practices regarding analyzing hazards, and scrutinize overall ISMS, planning, and communications processes. Specific contractor meetings where observations may be warranted include pre-job briefings, experiment safety reviews, safety committee meetings, project status review meetings, work planning meetings, and post-job evaluations. Meetings with the contractor to discuss results from ASO ES&H Program activities provide a valuable opportunity to exchange information, discuss issues, and agree on resolution of findings, concerns, and observations.

Incident and Occurrence Follow-up – ASO monitors the Laboratory’s response to incidents and occurrences, including analysis to identify causes and planning of corrective actions to prevent recurrence. Such events may include accidents and injuries, environmental releases, damage to equipment or structures, or failure of safety systems to perform as intended. ASO Standard Operating Procedure–4 “Occurrence Reporting and Processing of Operations Information” provides direction to ASO personnel for ORPS occurrence reporting/follow-up. This direction implements the requirements of DOE Order 232.1A, “Occurrence Reporting and Processing of Operations Information.” The ASO Procedure provides direction to ASO personnel regarding:

- Timely identification, categorization, notification, and reporting to DOE management of reportable occurrences at ANL.
- Review of reportable occurrences to assess the significance, root causes, generic implications, and the need for corrective actions.
- Timely evaluation and tracking of implementation of appropriate corrective actions.
- Dissemination of occurrence reports to other DOE operations and facilities to prevent similar occurrences.
- Maintenance of a central DOE system for reporting, processing, and retrieving unclassified reports.

“ASO Standard Operating Procedure – 11 “Price Anderson Amendments (PAAA) Coordination” documents the framework for ensuring ANL’s PAAA program is effective. The SOP provides direction to ASO personnel regarding:

- Critically assessing activities that are within the scope of PAAA program (e.g. 10 CFR 830, 10 CFR 835).
  - Ensuring self reporting is rigorous.
  - Verifying noncompliances are identified, reported and tracked on the appropriate database.
  - Trending PAAA related events for systemic problems.
- d) **Providing feedback to ANL** - ASO provides feedback to ANL on ISM performance periodically through a variety of mechanisms including routine meetings with ANL management, evaluations and assessments. ASO feedback can include routine informal and formal communications, including formal direction. ASO management and staff have open communication with the contractor regarding current, emerging, or potential issues affecting operations and performance, and monitor implementation and effectiveness of corrective actions.

ASO qualitative review of data and information related to performance allows the detection of trends and patterns that could indicate an ES&H concern. These data sources include FR reports, ANL monthly and quarterly project/program performance reports, occurrence reports, functional area review results, meeting notes, observation and walkthrough results and surveillance findings. Potential trends/patterns that are discovered may be the basis for ASO follow-up activities, such as identifying the issues to ANL management through formal correspondence and conducting follow-up program reviews to more fully evaluate the area of concern. Correspondence to the Laboratory or the review report would identify any required corrective actions.

As part of the ES&H Program, ASO annually evaluates contractor Performance Measures. ASO Standard Operating Procedure – 22A, “Development of PMs and SAMs,” describes the process used to develop and document Performance Measures in Appendix B of the ANL contract. A comprehensive set of ES&H measures are negotiated annually for the ANL contract to ensure safe operations and continuous ISMS improvement. Data related to these measures are monitored by ASO throughout the year and formally evaluated to determine contractor fee.

The contractor is expected to evaluate itself on an ongoing basis to identify weaknesses that need to be corrected and potential improvements in practices and processes. These self-assessment activities encompass efforts by the line organizations and the contractor's independent ES&H organization. They also may incorporate the results of independent assessments, such as peer reviews, arranged by the contractor. The contract and other agreements of the parties establish the scope and frequency of the self-assessment. ASO uses the results of its ES&H Program to evaluate the effectiveness of the contractor's self-assessment program.

## **7. ASO ES&H Program Effectiveness**

ASO develops systems, processes and procedures to ensure it has the tools to achieve effective line management oversight of ANL operations and facilities. ASO assesses the effectiveness of its ES&H Program through the four primary mechanisms:

- a) External reviews and assessments
- b) ANL performance assessment results (as ASO effectiveness is linked to ANL performance)
- c) ASO Manager's performance evaluation by the SC COO
- d) ASO self-assessments

External reviews and assessments, including those performed by SC or by the DOE Office of Independent Oversight and Performance Assurance, provide a source of independent data that is used to assess the effectiveness of the ASO ES&H Program and may lead to corrective action plans and opportunities for improvement. If the ANL ISMS is not effective then ASO's actions need to be reviewed to determine if improvements to the ASO ES&H Program are needed. ASO effectiveness is also evaluated each year by the SC COO's performance evaluation of the ASO Manager. Even if corrective action plans are not required then issues identified in the reviews and assessments will be examined to determine if changes are needed in the ASO ES&H Program. Finally, ASO performs periodic self-assessments to determine what systems and processes are working and which ones are not.

If the ANL ISMS performance does not meet DOE expectations then one or more the following interactions between ASO and ANL may be warranted:

- a) Improve the communication of ASO expectations and feedback to ANL, including the type, level of interactions, and frequency.
- b) Introduce changes in the ASO oversight of ANL.
- c) Identify corrective actions for ANL performance, and communicate those to ANL management for completion/implementation.
- d) Include performance results in the periodic formal assessments of ANL performance (mid-year performance reviews and final DOE Performance Evaluation Report) to communicate performance issues.
- e) Assess fee award penalties based on final DOE Performance Evaluation Report of ANL performance for fiscal year.
- f) Negotiate changes in ANL contract performance measures and system assessment measures for the upcoming fiscal year to address specific performance issues.

To ensure that ASO line management oversight activities address the Continuing Core Expectations (CCEs) presented in Chapter IV Maintaining an Approved ISMS of DOE G 450.4-1B Integrated Safety Management Guide, ASO performs activities aligned with the CCEs (Figure 1). ASO line management activities are grouped within the CCE topics. The functions outlined in Attachment B are performed by ASO to continually validate that the ISMS at ASO and ANL are effective, are maintained current, and are continuously improved.

## **8. Resources and Staffing**

The success of the ASO ES&H Program depends upon adequate staff resources.. ASO Manager and ASO Deputy Manager have ES&H responsibilities including development of contract ES&H expectations, ES&H reviews and assessments, operational awareness (including periodic walkthroughs), communicating ES&H issues with ANL management, performing periodic ES&H evaluations of ANL and ASO self-assessments.

Facility Representatives have responsibilities of performing many of the ES&H program elements. Facility Representatives may be assigned to one or more facilities depending

on the facility's level of activity, overall hazard level (a function of probability of accidents or events and potential consequences), and its operational history.

ES&H SMEs (environmental specialists and engineers, occupational safety, industrial hygiene, health physics, etc.) provide adequate specialized expertise to support the ASO mission. The number of ASO staff and the time allocated to perform operational awareness activities may vary over time, based on the quality of the ANL ISMS, DOE ES&H initiatives, as well as the level and type of research activities.

ASO Business staff ensure that appropriate ES&H and ISM clauses are included in the ANL contract, that new work is reviewed for ES&H prior to inclusion in the contract, and that ES&H performance issues, requiring a Contracting Officer, are accomplished in a timely manner.

It is not practical to maintain staff resources with specialized training and expertise in all functional areas that are directly relevant to operations at ASO; therefore additional resources need to be available from the Integrated Support Center (primarily Chicago Office) to support the ASO ES&H Program. These resources provide assistance for accident investigations, development of corrective action plans, restart validations, functional reviews and assessments. They are also available to assist in reviews and other actions requiring subject matter expertise not available within ASO.

Present ASO ES&H resources include:

- a) Five Facility Representatives who serve as SMEs (electrical engineering, industrial hygiene, nuclear engineering, safety)
- b) Four Environment and Emergency Management Specialists
- c) One Health Physicist
- d) Six Project Managers

## **9. ASO Documents**

The highest level document in the ASO Document Hierarchy is the ASO Annual Management Plan. Sub-tier documents to the ASO Annual Management Plan include the ASO ES&H Program Plan. ASO Standard Operating Procedures are sub-tier documents to support the Annual Management and ES&H Program Plans. ASO SOPs are important for clearly communicating management's expectations, supporting consistent implementation of the ASO programs, and ensuring accountability for ASO activities.

## **10. ASO Document Reviews and Updates**

Periodic reviews of the ASO ES&H Program Plan are to be conducted to determine if the document continues to meet its intended purpose. This document is to be modified and re-issued if significant changes in the ASO ES&H Program are required based on weaknesses, strengths, and potential improvement opportunities. Review of this Program is part of the self-assessment performed by ASO.

The following topics are typically addressed in the annual ASO self-assessment:

- a) Effectiveness of policies, procedures, and guidance documents;
- b) Adequacy of planning processes;
- c) Adequacy of training and qualification processes;

- d) Effectiveness of ES&H Program activities in identifying, preventing, and correcting issues;
- e) Effectiveness of communications within ASO, with the contractor, and with DOE offices;
- f) Adequacy of performance measures;
- g) Contractor responsiveness to issues identified and corrective actions taken as a result of the ASO ES&H Program activities;
- h) Management involvement in the ES&H Program; and
- i) ASO staff satisfaction with the Program.

**Attachment A**  
**Argonne Site Office (ASO)**  
**Roles and Detailed Responsibilities Associated with the**  
**ASO Environment, Safety and Health Program**

**Objective**

This document describes the implementation of the ASO ES&H Program through assigned ASO roles and responsibilities.

**Roles and Responsibilities**

ASO is responsible for performing a set of roles and responsibilities that will assure the site office mission will be successfully achieved. The ASO responsibilities are essentially the same as the ASO functions in the ASO Mission and Function Statement. The specific site office responsibilities have been categorized below by the roles assigned to ASO. These roles are contract management, program and project implementation, federal stewardship, and internal operations. The detailed roles and responsibilities below have been slightly modified from the ASO Mission and Function Statement to reflect the specific ES&H duties that are tied to implementing ASO ES&H Program.

**Contract Management** – provide effective leadership and maximize the effective working relationship between DOE and the contractor to ensure that the ASO and ANL ES&H Programs can be effectively implemented; manage and administer the contract by setting and communicating ES&H expectations, integrating DOE ES&H requirements into the contract, authorizing work consistent with ES&H requirements, and providing timely feedback on ES&H to the contractor.

1. Establish effective working relationships with DOE-HQ, the Integrated Support Center, and with ANL concerning the ASO and ANL ES&H Programs. Serve as the single point of contact between DOE and the contractor for ES&H issues.
2. Determine the applicability of ES&H policy and requirements from all sources and integrate these into a single set of ES&H requirements for ANL. Formally communicate these ES&H requirements to the contractor and enforce the contract ES&H requirements.
3. Authorize the Laboratory to perform work safely and in an environmentally acceptable manner. Review and approve contract deliverables for their implementation of ES&H requirements.
4. Provide formal direction and guidance to the contractor on ES&H matters. Develop and include ES&H performance measures and other ES&H expectations in the Laboratory contract to measure contractor success.
5. Conduct ES&H oversight of the Laboratory and assess contractor ES&H performance. Provide timely feedback to the contractor on their ES&H performance. Implement appropriate contractor incentives/penalties associated with ES&H performance.
6. Review and approve contractor business and administrative systems consistent with contract ES&H requirements.
7. Periodically review the laboratory contract; negotiate changes and modify the Laboratory contract, as required to reflect changes in ES&H requirements.

8. Obtain approval from the Head of Contracting Activity for contractual ES&H items not delegated to the Site Office

**Program and Project Implementation** – monitor overall contractor operations for implementation of ES&H requirements, review and approve work and coordinate ES&H activities related to assigned programs and projects.

9. Ensure that ES&H requirements are included in the conduct of program/project management/implementation/oversight as delegated by program sponsors. This includes determining applicability of DOE ES&H policies and direction for assigned work and performing oversight and operational awareness reviews, as required.
10. Review and authorize work to the contractor through formal processes to ensure that it meets ES&H requirements.
11. Serve as the federal project director for assigned projects and take responsibility for the project ES&H performance
12. Maximize the effective working relationship between the contractor and DOE in executing programs safely and in an environmentally acceptable manner. Serve as the point-of-contact for integrating the ES&H needs of SC and other non-SC sponsors into ANL programs and projects.
13. Facilitate the execution of programs by resolving DOE and/or other stakeholder ES&H issues. This includes conducting negotiations with other federal agencies, as appropriate, to ensure that ES&H is built into the work.
14. Participate in reviews, evaluations, and inspections of the contractor ES&H programs for ANL programs and operations to ensure the adequacy of the contractor's management and administrative systems to manage the program work safely and in an environmentally acceptable manner. Coordinate DOE and external ES&H reviews, evaluations, and inspections of the Laboratory.
15. Participate in the planning and establishment of overall SC ES&H expectations and directions, and provide feedback. Provide input and respond to periodic and other special requests, concerning ES&H, as required.
16. Seek approval for activities where ES&H authority does not reside within ASO
17. Develop and maintain a working relationship with the sponsoring research program offices, such as the SC Program Assistant Secretary level, to ensure integration of the ANL ES&H program requirements into ANL science programs and operations.

**Federal Stewardship** – maintain and protect federal assets at the site or assigned to the Site Office to ensure effective implementation of the ASO and ANL ES&H Programs

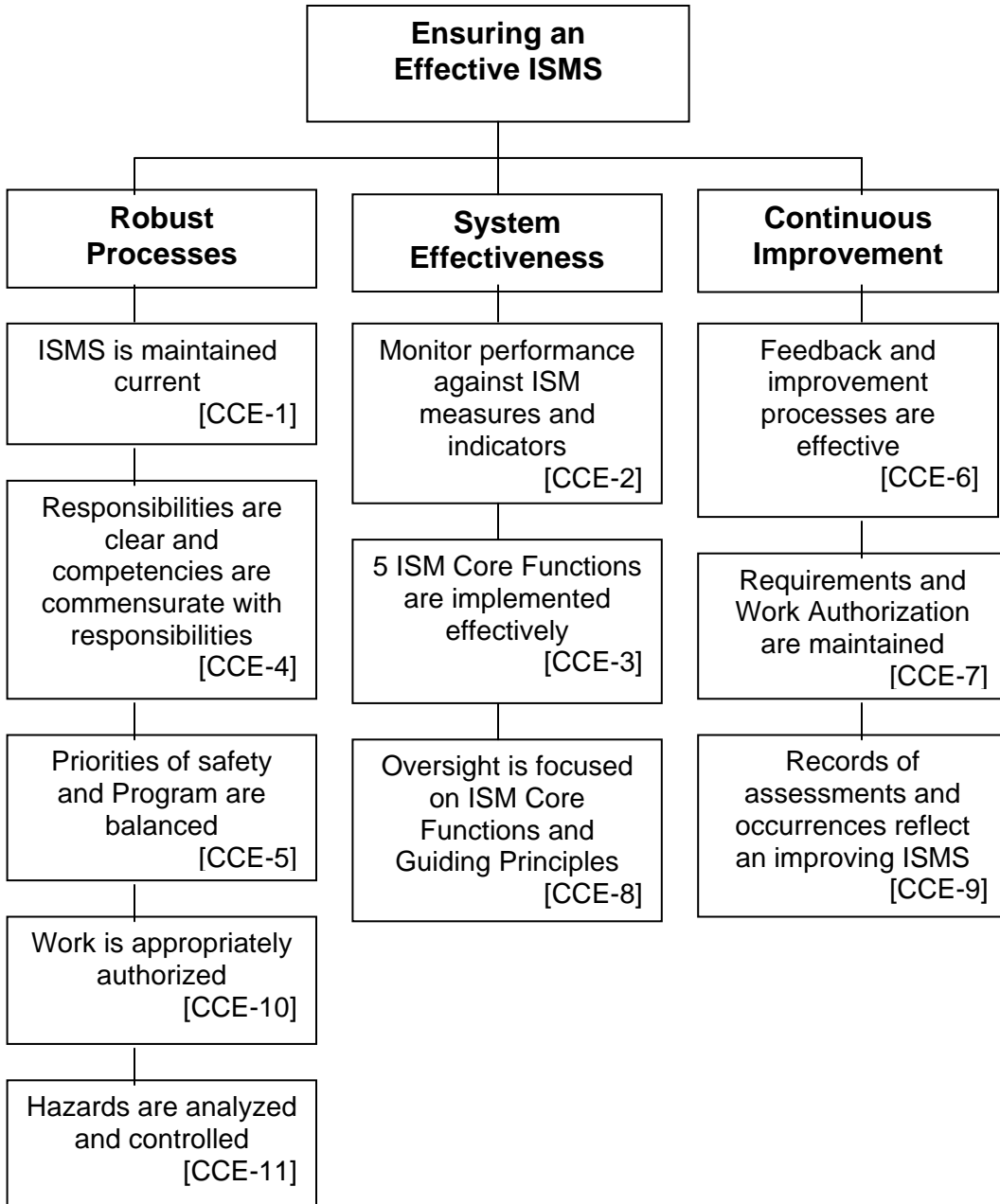
18. Review and assess the Laboratory support activities and stewardship needs against the contract requirements for ES&H and take action, as necessary, such as the reallocation of resources.
19. Develop and maintain an effective working relationship and communication with DOE-HQ, other DOE organizations, elected officials, federal, state and local agencies, and as appropriate other key stakeholders, such as the national and international science community to ensure that ES&H requirements are identified and integrated into the ANL contract and program direction. Develop and maintain effective community stakeholder and media relations programs to describe the ANL ES&H Program and get feedback.

20. Coordinate with DOE-HQ and other potential stakeholders to determine the optimal allocation of resources to meet the stewardship and associated ES&H needs.
21. Provide feedback to SC and other HQ Program sponsors on the HQ funding, planning, and direction that impact to the Laboratory site, infrastructure, or ES&H Program.
22. Serve as the owner for transactions affecting the government's rights in federal assets, such as transfers of interest and execution of permits to ensure that the ANL and ASO ES&H Programs are not adversely affected. Serve as the federal steward and ensure the protection and maintenance of federal assets located at the Laboratory.

**Internal SO Operations** – manage the Site Office resources and business systems to ensure that the Site Office successfully meets its ES&H responsibilities while accomplishing its overall mission.

23. Manage the SO resources associated with ES&H. Determine the site office needs (staffing, travel, training, and awards) to develop and maintain an ASO ES&H Program and request those needs through the SC Chief Operating Officer.
24. Identify, develop, and maintain appropriate tools and techniques (such as standard operating procedures) to ensure that the Site Office can successfully accomplish its assigned ES&H Program
25. Work with the Chicago Office and the Oak Ridge Office to obtain required technical and administrative support to ensure that the ASO and ANL ES&H Programs are effectively implemented. Provide ASO resources when needed and available to support the rest of the SC ES&H Program.
26. Conduct self-assessments of ASO management, organization, and operations to ensure the effective implementation of the ASO ES&H Program. Revise internal ASO management structure, organization, and operations, as appropriate to ensure the effective implementation of the ASO ES&H Program.

Figure 1



**Attachment B**  
**ASO Functions that Ensure an Effective**  
**Integrated Safety Management System (ISMS)**  
**at ANL**

**1. Robust Processes:** ASO ensures, through its various line management and oversight activities, that robust ISM processes have been implemented within the ASO and ANL.

**1.1 ISM System is maintained current:** [reference CCE-1]

ASO ensures that the ISM/ES&H-related portions of the contract between ASO and ANL, including Appendix I (list of directives/requirements/standards or “List B”) and Appendix B (performance objectives and performance measures), are current.

ASO ensures that ANL annually reviews and revises, as necessary, its ISMS Description (as described in 48 CFR 970.5223-1).

ASO reviews and approves ANL’s annual revision of its ISMS Description, and monitors revisions of ES&H policies and manuals.

ASO monitors the ANL contracting process for the purpose of promoting the incorporation of ISM concepts into the flow-down of requirements for subcontractors.

ASO works with ANL to establish ES&H commitments in response to deficiencies and improvement opportunities from assessments, accident and incident investigations, and other feedback, and monitors implementation effectiveness.

**1.2 Responsibilities are clear and competencies are commensurate with responsibilities:** [reference CCE-4]

ASO monitors implementation of the ANL Job Hazard Analysis (JHA) process and the ANL staff’s accomplishment of mandatory ES&H training.

ASO oversight of ANL operations, ANL work planning sessions, and work authorization documentation includes checking on the implementation of the ISM principles regarding responsibilities and competencies.

**1.3 Priorities of safety and program are balanced:** [reference CCE-5]

ASO promotes incorporation of ISM concepts into early phases of work planning through involvement in the ANL work planning, budgeting, and prioritization decisions.

ASO monitors the ANL implementation of the environment, safety, health, and infrastructure (ESH&I) Planning Process, and reviews and approves the ANL ESH&I Management Plan submittal.

The ANL site's "ES&H Commitment Affirmation Letter" is developed annually and submitted to the CH Manager.

ASO monitors the ANL change process for project funding.

**1.4 Work is appropriately authorized:** [reference CCE-10]

ASO reviews, approves, and monitors safety basis documents (e.g., authorization agreements (AAs), safety analysis reports (SARs), safety analysis documents (SADs), and accelerator safety envelopes (ASEs), etc.).

ASO ensures that the site's National Environmental Policy Act (NEPA) process is adequate.

ASO conducts and/or monitors readiness reviews and readiness assessments.

ASO reviews the use of activity-level authorization documents (Radiation Work Permits (RWPs), confined space permits, welding permits, hot work permits, etc.).

ASO obtains required environmental permits, and ensures that ANL has processes to comply with permit conditions.

**1.5 Hazards are analyzed and controlled:** [reference CCE-11]

ASO reviews and approves, as required, authorization basis (AB) documents (e.g., AAs, SARs, SADs, ASEs, Technical Safety Requirements (TSRs), etc.) and monitors adherence.

ASO conducts ES&H reviews in each relevant ES&H functional discipline; these reviews evaluate the adequacy of the ANL systems for hazards analyses, and the selection and implementation of corresponding hazard controls.

ASO reviews the ANL ES&H documentation.

ASO oversight checks the adequacy of activity-level work authorization documents (e.g., RWPs, confined space permits, hot-work permits, welding permits, etc.).

ASO conducts oversight of on-going work; oversight includes evaluation of the adequacy of hazard identification and analysis, and hazard control selection and implementation, for the work being observed.

ASO ensures that the ANL NEPA process provides for the identification, analysis, and control of environmental hazards related to proposed work.

**2. System Effectiveness:** ASO observes, through its line oversight activities, that the ANL ISMS is effectively implemented.

**2.1 Monitor performance against ISM measures and indicators:** [reference CCE-2]

ASO ensures that the annual process for development of Contract Performance Measures (PMs) and Performance Indicators (PIs) is effectively implemented.

ASO periodically monitors ANL performance against PMs and PIs, and formally gives feedback to ANL on a semi-annual basis.

ASO benchmarks ANL performance against Office of Science (SC) Laboratories and industry.

**2.2 Five (5) ISM Core Functions are implemented effectively:** [reference CCE-3]

ASO observes and evaluates implementation of the five core ISM functions. For the work activities observed, ASO checks on how (1) the work has been defined; (2) the hazards inherent in the work have been identified; (3) corresponding hazard controls are implemented; (4) the work is authorized and performed within the controls; and (5) the workers were involved in carrying out the core ISM functions.

ASO ES&H functional reviews evaluate components of the ANL ISMS that govern how the ISM core functions are implemented. Examples of components evaluated may include feedback and improvement processes such as corrective action tracking and leASOs learned program; hazards identification and control processes such as the experimental safety review system, the lock-out/tag-out system, etc.; and work authorization processes such as the systems for radiation work permits, confined space permits, welding permits, etc.

ASO ensures that ANL performs causal analysis of occurrences and accidents. The causal analysis of occurrences, accidents, and near-miss events are performed to identify weaknesses in various components of the ANL ISMS.

**2.3 Oversight is focused on ISM Core Functions and Guiding Principles:** [reference CCE-8]

ASO ES&H reviews incorporate the ISM core functions and guiding principles into its planning and criteria to facilitate identification of ISM-related issues.

ASO oversight reports, written at least monthly, identify issues related to the implementation of the ISM core functions and guiding principles.

ASO evaluates the Laboratory's causal analyses of occurrences/accidents to identify issues related to the implementation of the ISM core functions and guiding principles.

ASO ensures that the ANL annual performance self-assessment includes a self-evaluation of its ISMS implementation. ASO evaluates the ANL conclusions based upon the ASO's accumulated operational awareness information.

**3. Continuous Improvement:** ASO determines, through its line management and oversight activities, that the Laboratory has effective processes for feedback and improvement. ASO ensures the ANL ISMS is maintained current relative to the work, and continually improved to increase its effectiveness in facilitating the safe accomplishment of work.

**3.1 Feedback and improvement processes are effective:** [reference CCE-6]

ASO periodically conducts ES&H Reviews of the ANL feedback and improvement processes, including leASOs learned program, issues management, and corrective actions. ASO monitors the effectiveness of the feedback and improvement systems, including corrective action tracking.

ASO monitors Occurrence Reporting and Processing System (ORPS), Non-Compliance Tracking System (NTS), accident investigations, Computerized Accident/Incident Reporting System (CAIRS), for repeat occurrences.

ASO evaluates the ANL self-assessment program's robustness and credibility.

ASO's annual self-assessment identifies opportunities for improvement within the ASO's ISM-related processes.

**3.2 Requirements and Work Authorization are maintained:** [reference CCE-7]

ASO maintains its process for conveying new/revised DOE Directives to the Laboratory.

ASO maintains/updates the Appendix (i.e., Appendix I) of the contract between ASO and ANL that provides the listing of the DOE Directives. Contract modifications are issued as needed, but at least annually, to incorporate new/revised DOE Directives into the contract.

ASO reviews revisions of the ANL ES&H requirements documents.

ASO ensures that ANL has an effective process for maintaining AB documents.

ASO ensures that ANL has an effective process for tracking their compliance with environmental permit conditions.

**3.3 Records of assessments and occurrences reflect an improving ISMS:**  
[reference CCE-9]

ASO monitors relevant records (e.g., ORPS, NTS, CAIRS, accident/incident reports, external reviews, etc.) for trends.

ASO monitors the effectiveness of the ANL feedback and improvement processes in observed work.

