CHAPTER 3

The Environmental Management Systems (EMSs) for the Idaho National Laboratory (INL) and Idaho Cleanup Project (ICP) contractors implement the commitments of the United States (U.S.) Department of Energy (DOE) for the protection of the environment and human health. DOE strives to be in full compliance with environmental laws, regulations, and other requirements to protect the air, water, land, natural, archaeological, and cultural resources potentially affected by operations and activities conducted at the INL Site. These commitments are implemented by integrating environmental requirements, pollution prevention, and responsible practices into work planning and execution, and by taking actions to minimize the impact of INL Site operations and activities.

3. ENVIRONMENTAL MANAGEMENT SYSTEMS

INL's mission is to advance nuclear energy research, development, and deployment in ensuring the nation's energy security and environmental stewardship. INL's EMS plays a crucial role in supporting this mission by providing a structured framework for managing environmental responsibilities. The EMS ensures INL complies with regulatory requirements, minimizes environmental impacts, and promotes responsible practices across its operations. By systematically identifying and addressing environmental risks and opportunities, the EMS enhances operational efficiency, reduces waste, and conserves resources. Furthermore, INL's EMS fosters a culture of environmental stewardship among employees, bolsters community and stakeholder trust, and reinforces the laboratory's commitment to protecting the environment while achieving its strategic objectives.

INL represents a collaboration among all operating contractors and the U.S. Department of Energy, Idaho Operations Office (DOE-ID), which encompasses the Idaho Falls campus, as well as the research and industrial complexes collectively known as the INL Site, which is located 50 miles west of Idaho Falls, Idaho. For the purposes of this report, the INL Site includes facilities operated by Battelle Energy Alliance, LLC (BEA), the INL contractor, as well as the Idaho Environmental Coalition, LLC, the Idaho Cleanup Project (ICP) contractor. INL Site contractors refers to these entities, identified by their respective acronyms, and includes all facilities under their individual responsibilities.

DOE recommends using International Organization for Standardization (ISO) Standard 14001:2015, "Environmental Management Systems – Requirements with Guidance for Use," as a Best Management Practice (BMP) for EMSs. The ISO 14001:2015 standard provides a structured approach that includes policy development, planning, implementation, operation, checking, corrective action, and management review. The goal of ISO 14001:2015 is to enhance environmental performance through a continuous improvement cycle. The INL Site contractors have adopted EMSs based on this standard for their respective operations.

In 2024, the INL Site contractors underwent audits to assess their adherence to the ISO 14001:2015 standard. The audit for the INL contractor revealed commendable results, with no nonconformities identified. In addition, the audit highlighted four notable strengths within the management system, demonstrating robust environmental practices and processes. However, the audit also identified one opportunity for improvement, providing a pathway for further EMS enhancement. Results from the audit for the ICP contractor showed no nonconformities and seven management system strengths. These findings underscore the collective commitment of the two contractors to maintain high-standards of environmental stewardship while continuously seeking ways to improve operations.

3.1 Environmental Policy

The INL Site contractors state their commitments to the environment through an overarching policy that is displayed to all employees. These policies commit to incorporate sound environmental management policies and practices into all work planning and execution in a safe, compliant, and cost-effective manner that protects human health and the environment. The environmental policies apply to all employees and they encourage all personnel to report environmental concerns to management. The INL contractor policy commits specifically to do the following:

- *Environmental Protection:*
  - The practice of conserving and preserving the natural environment and its resources for the benefit of present and future generations.
- *Environmental Compliance:*
  - The adherence and conformity to laws, regulations, standards, and other requirements set by governmental bodies and delegated authorities in order to promote and ensure environmentally responsible behavior and practices by businesses and organizations.
- *Pollution Prevention:*
  - The practice of reducing or eliminating pollution at its source, rather than treating it after it has been created. This approach aims to minimize the release of harmful substances into the environment, thereby protecting human health and ecosystems.
- *Continual Improvement:*
  - The ongoing process of making incremental advancements and enhancements in various aspects of environmental protection. It involves continuously identifying areas for growth and implementing changes to achieve better results over time.

INL contractor employees integrate environmental requirements and pollution prevention techniques into work planning and execution to minimize the environmental impacts of their activities.

The ICP contractor policy commits to do the following:

- *Leadership Commitment:*
  - Integrate appropriate environmental practices into all project operations; document environmental objectives and targets; measure progress; and report performance through the EMS.
  - Educate employees on their environmental responsibilities and train them to ensure they comply with requirements.
  - Continuously improve their EMS through self-assessments and corrective actions.
  - Promote environmental stewardship, take prompt action to address concerns and issues, and have zero tolerance for noncompliance.
- *Environmental Compliance and Protection:*
  - Identify and comply with all applicable, relevant, and appropriate environmental laws, regulations, and permits.
  - Assess the effects of operations on the environment through a comprehensive environmental monitoring program.
  - Provide full disclosure and openness with DOE and regulatory agencies regarding any noncompliance with regulatory requirements.
- *Environmental Stewardship:*
  - Protect the unique natural, biological, and cultural resources associated with the INL Site contractors.
  - Minimize the effects of operations on the environment and conserve natural resources by reusing and recycling materials, purchasing recycled materials, and performing other pollution prevention practices.
  - Use all means practicable to minimize or eliminate any newly generated wastes—whenever possible; newly generated waste shall have a clear disposition path before it is generated.
- *Client, Employee, and Stakeholder Engagement:*
  - Communicate openly and honestly with all parties and stakeholders.

- Share respective environmental policies with all employees and subcontractors and make them available to the public.
- Consider the input of all stakeholders when weighing alternative courses of action.
- Measure environmental performance, monitor the environmental impacts and communicate results to all parties.

The ICP contractor's policies are available to the public.

3.2 Environmental Management System Structure

The INL Site contractors' EMSs incorporate a plan-do-check-act approach to provide a framework under which the environmental, safety, and health programs are managed:

Plan – Define work scope, identify environmental aspects, analyze hazards, and develop hold points and mitigations

Do – Implement defined controls and perform work scope

Check – Evaluate performance, management reviews, and contractor's assurance practices

Act – Incorporate corrective actions, improvements, and lessons learned into practices.

This approach is both interactive and iterative, integrating various work activities and functions, including policies, programs, and processes. It also is an essential component of overall management of the INL Site's environmental compliance and performance. This systematic plan-do-check-act process ensures a continuous improvement loop, promoting effective management of the INL Site's environmental responsibilities while driving enhanced environmental performance and compliance.

3.3 Plan

3.3.1 Environmental Aspects

The INL Site contractors have evaluated activities, products, and services to identify the environmental aspects of work events that could affect the environment or the public, or result in noncompliance with regulatory requirements. They perform these evaluations against all applicable federal and state regulations, state permits, and local laws, which are the foundation for environmental standard operating procedures and implementing documents. The INL Site contractors use the National Environmental Policy Act planning tool for all proposed actions that would take place onsite. INL uses the Environmental Compliance Permit Process, while ICP uses the Environmental Checklist process to evaluate all activities and projects to ensure the proposed actions consider and mitigate the following environmental aspects as necessary:

Air Emissions. Operations or activities that have the potential to generate air pollutants in the form of radionuclides, chemical and combustion emissions, fugitive dust, asbestos, and refrigerants. The INL Site contractors have an Environmental As Low As Reasonably Achievable review process per DOE O 458.1, "Radiation Protection of the Public and the Environment," that protects the public and the environment against undue radiation risk. The Environmental As Low As Reasonably Achievable Committee evaluates activities that have the potential for radiological impact on the environment and the public and determines the requirements for radiological emissions.

Chemical Use and Storage. Activities that purchase, store, or use laboratory or industrial chemicals, pesticides, or fertilizers. INL Site contractors have processes in place to maintain the adequate inventory of appropriate emergency response equipment and to report inventories and releases.

Contaminated Sites Disturbance. Activities in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) areas of contamination or Resource Conservation and Recovery Act (RCRA) corrective action sites. INL Site contractors have processes to properly identify contaminated sites.

Discharging to Surface, Storm, or Groundwater. Activities that have the potential to contaminate groundwater or water. INL Site contractors have spill-prevention policies and response plans in place for areas that have the potential to contaminate groundwater or water.

Drinking Water Contamination. Activities related to constructing, operating, and maintaining drinking water supply systems and equipment or activities with the potential to contaminate drinking water supplies. This includes the bacteriological, radiological, or chemical contamination of drinking water.

Disturbing Cultural Resources. Activities that have the potential to adversely affect cultural resources, such as disturbing soils by grading, excavating, sampling, off-road vehicle use, or removing vegetation. It applies to the protection of sensitive cultural or biological resources from disturbance as well. The potential for adverse effects also applies to modifying or demolishing historical buildings or structures that are 50 or more years old. INL has a cultural resources management team that evaluates work activities at INL to minimize the impact on historical buildings and cultural sites before an activity begins.

Generating and Managing Waste. Activities that generate, store, treat, transport, or dispose of regulated, hazardous, radioactive, or industrial waste. INL Site contractors have waste management programs that integrate and disposition containerized hazardous, radioactive, or industrial waste and provide guidance on how to minimize the amount of regulated waste that is generated.

Releasing Contaminants. Activities that may release potentially hazardous contaminants into water, soil, or other noncontaminated or previously contaminated locations. All INL Site contractor employees are trained to report the release of any contaminant to either their Program Environmental Lead or to the Spill Notification Team. Releases are tracked to verify proper cleanup is performed. Planned operations and research with the potential to release contaminants are evaluated to mitigate any significant environmental impacts.

Polychlorinated Biphenyls (PCB) Contamination. Activities that use PCB-contaminated equipment or store and dispose of PCB-contaminated waste. INL Site contractors have processes in place to identify PCBs in excess equipment and to comply with regulatory requirements related to the use, marking, storage, and disposal of PCB equipment or waste.

Interaction with Wildlife/Habitat. Activities with the potential to disturb or affect wildlife or their habitat or activities involving revegetation and weed control. INL Site contractors have processes in place to ensure identification and consideration is given to the cumulative impacts required by the National Environmental Policy Act, the Endangered Species Act, or the Migratory Bird Treaty Act. Procedures and processes are also implemented to control noxious weeds and the revegetation of disturbed sites.

Using, Reusing, and Conserving Natural Resources. Activities that use or recycle resources such as water, energy, fuels, minerals, borrow material, wood, or paper products, as well as other materials derived from natural resources. This beneficial aspect also applies to waste disposition activities, including building demolition and activities implementing responsible practices and conserving natural resources.

Identifying Environmental Aspects Offers Numerous Benefits. By systematically recognizing and evaluating the interactions between its activities, products, or services and the environment, INL Site contractors can pinpoint areas where adverse environmental impacts can be minimized. This proactive approach allows for the implementation of effective control measures, reducing the risk of noncompliance with environmental regulations and potential liabilities.

3.3.2 Compliance Obligations

The INL Site contractors are dedicated to maintaining the highest standards of environmental compliance, adhering to a comprehensive array of federal, state, and local regulations. These obligations encompass a wide range of activities, including hazardous waste management, air and water quality protection, and natural resource conservation. The environmental compliance frameworks used by the INL Site contractors are designed to ensure all operations are conducted in a manner that minimizes the environmental impact, safeguards public health, and promotes responsible environmental practices. This commitment is supported by rigorous internal policies, regular audits, continuous monitoring, and proactive engagement with regulatory agencies. Through these efforts, INL Site contractors demonstrate an unwavering dedication to environmental stewardship in their roles as responsible leaders in the scientific, technological, and environmental cleanup and restoration communities.

3.3.3 Environmental Objectives

The INL Site contractors establish objectives based on environmental policy, legal concerns, ISO 14001, environmental aspects, INL's Annual Laboratory Plan (INL 2024), and the perspectives of its stakeholders. The INL contractor plans, implements, monitors, and reports triennially on these objectives and targets in management review reports and an annual performance evaluation and measurement plan. The ICP contractor develops its objectives and targets annually and reports the status biannually to senior management through the Executive Safety Review Board.

The INL contractor completed 96% of its EMS objectives and targets in Fiscal Year (FY) 2024. Figure 3-1 identifies the progress that was made on these environmental objectives and targets.

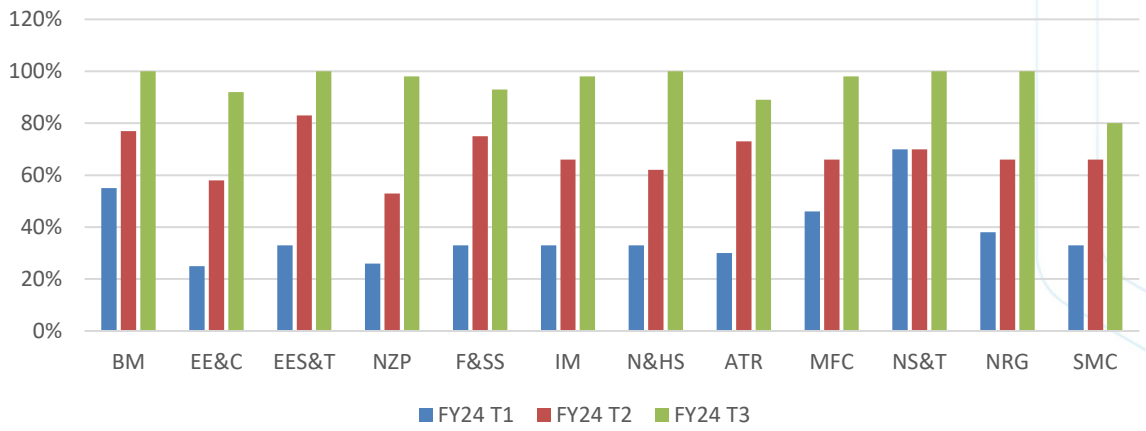

Figure 3-1. INL ISO 14001 objectives progress for FY 2024.

Each year, the ICP contractor identifies the environmental objectives and targets to be met. During FY 2024, the ICP contractor identified 15 objectives that were implemented by 15 targets. All of these objectives and targets were completed successfully during FY 2024.

3.4 Do (Implementation and Operations)

3.4.1 Structure and Responsibility

The organizational structures that INL Site contractors have in place establish the roles and responsibilities for environmental management within research, development, and demonstration; operations; waste management; decontamination and decommissioning; and other support organizations within environmental, safety, health, and quality. Identified technical points of contacts (POCs) communicate the environmental regulatory requirements and required document submittals to the U.S. Environmental Protection Agency (EPA), the Idaho Department of Environmental Quality (DEQ), and other stakeholders. The technical POCs work with the projects, researchers, and facilities to ensure the requirements are implemented as required.

3.4.2 Competence, Training, and Awareness

The training directorates for the INL Site contractors conduct training analysis and design, develop, and evaluate environmental training. This environmental training gives personnel the opportunity to gain the experience, knowledge, skills, and abilities necessary to accomplish the following:

- Perform their jobs in a safe and environmentally responsible manner
- Comply with federal, state, and local environmental laws; regulations and permits; and INL requirements and policies
- Increase the awareness of environmental protection practices and pollution and prevention/waste minimization opportunities
- Take action in an emergency.

3.4.3 Communication

INL Site contractors implement comprehensive communication programs that distribute timely information to interested parties, such as the public, news media, regulatory agencies, and other government agencies. These programs provide communications about the environmental aspects of work activities, among other topics. Two examples are the Media and Community Relations Program and the Strategic Initiatives Program, which both distribute information about INL through public briefings, workshops, personal contacts, news releases, media tours, public tours, and news conferences. These programs also coordinate INL tours for schools, members of the public, special interest groups, and government and elected officials. Internal communications regarding environmental aspects are available via intranet sites, procedures, emails, posters, brochures, booklets, trainings, and personal interaction with environmental staff.

3.4.4 Operational Control

Environmental personnel meticulously evaluate each work activity to determine the appropriate level of environmental review required. This thorough assessment ensures all potential environmental impacts are identified and managed effectively. To mitigate these impacts, environmental personnel implement both administrative and engineering controls.

Administrative controls encompass the development and enforcement of procedures, policies, and BMPs designed to guide environmentally responsible behavior and compliance with regulations. These controls help standardize operations and ensure all personnel are aware of and adhere to environmental requirements.

Engineering controls involve the application of physical measures to prevent or minimize environmental harm. This includes the use of advanced protective equipment, containment systems, and barriers designed to control emissions, manage waste, and protect natural resources. By integrating these controls, INL Site contractors not only safeguard the environment but enhance operational efficiency as well.

Together, these comprehensive measures reflect the collective commitment of the INL Site contractors to environmental stewardship, as well as a proactive approach to managing and mitigating the environmental impact of all activities.

3.4.5 Document and Record Control

Environmental documents are meticulously prepared, reviewed, revised, and issued by INL Site contractors in accordance with stringent standards and procedures. This rigorous process ensures all documentation meets the highest levels of accuracy, relevance, and compliance with the regulatory requirements.

INL's document control system plays a crucial role in this process by maintaining the most current versions of all environmental documents. The system ensures all contractor documents are easily accessible, legible, and clearly dated, providing employees with the most up-to-date information necessary for work. This accessibility and precision support informed decision-making and consistent application of environmental policies and procedures across the organization.

By leveraging this robust document control system, INL Site contractors not only uphold their commitment to environmental excellence but also enhance operational efficiency and accountability. This systematic approach ensures all personnel have the necessary tools and information to perform their duties in an environmentally responsible manner, fostering a culture of continuous improvement and compliance.

3.5 Check

INL Site contractors internally monitor compliance with environmental laws and regulations through the Assurance Portfolio process in the Contractor Assurance System. The INL Site contractors conduct assurance activities through performance metrics, observations, and assessments. Issues, trends, or improvements identified through these activities are rolled into the INL issues management database, where corrective actions are assigned and tracked to completion. Contractor assurance activities in the environmental organization are documented in a management review.

Various regulators also perform external assessments. The Idaho DEQ conducts several inspections annually to verify INL Site contractors are complying with state permits. The EPA also participates in Federal Facility Act-driven inspections and, on a determined frequency, participates alongside Idaho DEQ in compliance evaluation inspections. Chapter 2, "Environmental Compliance Summary," provides the results of the annual external agency audits and inspections of INL's Environmental Program.

3.5.1 INL Site Contractors Environmental Operating Experience

In 2024, the INL contractor received a "Green" or “Excellent” score for their EMS when graded by DOE in the DOE EMS Site Information Database, demonstrating their dedication to environmental performance and operational excellence. Environmental operating experience and performance measurement are key elements of an EMS. Numerous best management practices, initiatives, and implementation challenges were identified and summarized, as outlined in the following sections.

Similarly, the ICP contractor also received a "Green" or “Excellent” score for their EMS in 2024 when graded by DOE in the DOE EMS Site Information Database. The strong commitment to the environment by the ICP contractors is evident in their strong environmental policy.

INL Site Contractors EMS Best Practices

INL Contractor EMS Best Practices

During the EMS audits, best practices and system strengths were identified as follows:

- The recently developed regulatory analysis web-based interface tool facilitates communicating regulation changes impacting INL and soliciting responses from Environmental Support and Services Division (ES&S) technical POCs.
- The Nuclear Science and Technology Division (NS&T) has developed a tool called VISTA to assist in managing laboratory space for matching experiment needs with available laboratory resources. This tool will facilitate minimizing waste and increasing research and development efficiency while minimizing the environmental impact. The name VISTA comes from “inVentory of INL equipment, laboratories, and experTise for reseArch.” It is currently being populated and tested. VISTA is not yet available for all researchers.
- A new web-based version of EMS objectives tracking and development will allow for a greater focus on environmental objectives sitewide.
- Risk messaging at the Advanced Test Reactor (ATR) Complex (e.g., posters, all employees, ATR Complex email blast) is truly innovating. The site created an easy way to communicate the “risk message” and to elevate the awareness of risk methodology.

These best practices demonstrate a strong commitment to environmental management and continuous improvement. These audits ensure compliance with environmental regulations, promote responsible practices, and help minimize environmental impact. By highlighting system strengths and weaknesses, EMS audits drive continuous improvement, foster a culture of environmental responsibility, and support the efficient use of resources. Ultimately, this process not only enhances operational efficiency and reduces risks but also demonstrates the organization’s commitment to environmental responsibility.

ICP Contractor EMS Best Practices

In 2024, an EMS ISO 14001 surveillance audit was conducted at both Fort St. Vrain (FSV) and ICP facilities by an independent auditor.

A total of seven system strengths were documented (six at the INL facility and one at FSV) during this audit. The system strengths identified during the audits are as follows:

- Recognition was exhibited of the desirability to determine when available technology is ready for economically and effectively processing nuclear waste. This also can contribute to minimizing the total environmental impact of processing the waste.
- Use of the Integrated Waste Tracking System (IWTS) for managing the treatment, movement, and onsite and offsite disposal of hazardous and radioactive waste was found to be very effective. It provides an easily accessible record of the history and content of every waste container. The use of IWTS is strengthened by continued assessments of the IWTS entries. These periodic assessments ensure the data in IWTS are current and complete. Each container has a bar code that enables instant access to the pertinent IWTS files. The IWTS contains the three-axes coordinates for all waste in the Idaho CERCLA Disposal Facility.

- A strong culture of continuous improvement exists. When suggestions are made, people listen and act on those suggestions instead of ignoring them. This also contributes to a good work culture because it instills comfortability and willingness to speak up about various topics and issues.
- The care and attention that is paid to the environment was noted throughout the audit. It is apparently clear that there is a culture where people feel comfortable enough to pause work if that means doing something positive for the environment or contributing positively to their EMS aspects.
- Throughout the audit, ICP was observed to conduct thorough and comprehensive planning, to have strong environmental controls in place, and to have an effective environmental support function that ensures all environmental considerations are identified and addressed for all ICP projects and activities. The latter exhibited a proactive working relationship with all IEC personnel.
- The Submarine 1st Generation Westinghouse (S1W) decontamination and decommissioning team is in the process of introducing a technology that will enable steel painted with paint-containing PCBs to be recycled with the contaminated paint being removed. The paint will be removed by sponge blasting and the contaminated paint will be properly disposed. The effective application of this technology will enable more steel to be economically recycled.
- Integration of FSV processes into the ICP EMS has resulted in a synergistic relationship, which has benefited both organizations.

The audit team concluded that based on the results of the audit and the system's demonstrated state of development and maturity, continued management system certification is recommended. Additionally, the integration of FSV with ICP is now complete and their certifications will be merged into future assessments.

INL Site Contractors EMS Accomplishments

INL Contractor EMS Accomplishments

The most noteworthy accomplishments and successes for the INL EMS in FY 2024 include the following:

- The INL contractor completed the environmental assessment for the High Temperature Testing Facility in record time and successfully met the compressed timeframe required by the vendor.
- The INL contractor received feedback from DOE that its performance in managing the planning, development, and publication of the FY 2023 Annual Site Environmental Report was exceptional. INL was able to provide all interim report deliverables to DOE on or ahead of the required contract due dates, and its efficient and highly organized approach to integrating the contributions of five organizations and to resolving comments from 13 DOE reviewers enabled public release of the final report two weeks before the deadline mandated by the governing DOE order.
- The Cultural Resources Management Office continued to work cooperatively with DOE and the Shoshone-Bannock Tribes on the eastern Idaho Precontact Context and submitted a draft for DOE review. The Precontact Context creates efficiencies associated with the evaluation of cultural sites and is highly supported by the Shoshone-Bannock Tribes. This multi-year effort fulfills the commitments in the 2023 Programmatic Agreement, enhances the INL contractor's relationship with the Shoshone-Bannock Tribes and other agencies (i.e., Bureau of Land Management and Bureau of Reclamation), reduces reporting and consultation timeframes, and will position the Cultural Resources Management Office to produce significant scientific contributions to the field of archaeology.
- During the trimester, the ES&S University Engagement team reviewed curricula from 51 universities, initiated contact with 18 institutions, and identified 14 preferred programs. During FY 2024, ES&S staff participated in 16 recruiting events nationwide. The organization has received nine qualified student applicants and four intern hires from targeted universities.
- The INL contractor's Waste Management Program supported critical preparation efforts that allowed the inaugural ATR-5 cask shipment, which contained irradiated hardware from the ATR canal to be sent to the Remote-Handled Low-Level Waste Disposal Facility, supporting Notable Outcome 2.3.A – ATR and Materials and Fuels Complex infrastructure investment for reliability improvement. Maintaining a disposition pathway for materials stored in the canal is essential for the continued operation of ATR.

These successes include achieving regulatory compliance, reducing waste, and minimizing the organization's carbon footprint. Moreover, the EMS initiatives often result in cost savings through improved resource efficiency and energy conservation. The proactive identification and management of environmental risks further contributes to a safer and

healthier workplace. Overall, the successful deployment of an EMS reflects the dedication of an organization to environmental stewardship by fostering a positive reputation and strengthening stakeholder trust.

ICP Contractor EMS Accomplishments

During FY 2024, the ICP contractor's most noteworthy accomplishments and successes include:

- Since operations began at the Integrated Waste Treatment Unit in April 2023, more than 225,000 of 900,000 gallons of radioactive sodium-bearing liquid waste have been converted into a more stable, granular solid for packaging in stainless-steel canisters and storage in concrete vaults.
- The Advanced Mixed Waste Treatment Project completed its 7,500th transuranic waste shipment to the Waste Isolation Pilot Plant, representing about 10.5 million loaded miles.
- The remaining Accelerated Retrieval Project structures and a storage building were removed from the Subsurface Disposal Area and the initiation of capping in this area has begun. This was a 2024 DOE Office of Environmental Management priority.
- Ten transfers of Peach Bottom spent nuclear fuel from Generation 1 to Generation 2 vaults were completed.
- During FY 2024, the INL Idaho Nuclear Technology and Engineering Center Percolation Ponds Wastewater Reuse Permit (M-130-07) was reissued and six RCRA permit modification requests were submitted to meet the current environmental conditions.

These successes are key in addressing EMS priorities and making progress toward safely and successfully achieving the milestones indicated in the Idaho Settlement Agreement.

INL Site Contractors EMS Implementation Challenges

INL Contractor EMS Implementation Challenges

During the EMS audits, an opportunity for improvement was identified regarding the document control and review processes. Although these processes were determined to be effective overall, the auditor noted the organization would benefit from implementing greater oversight of the document review process. This increased oversight is necessary to minimize the risk of aging reviews, which can lead to outdated or inaccurate information being referenced in critical documents. As a result, corrective actions were incorporated to enhance the monitoring and management of the document review process. By addressing this opportunity for improvement, the organization aims to ensure all documents remain current, accurate, and reflective of the latest regulations and best practices, thereby maintaining the integrity and reliability of the EMS.

Additionally, several opportunities for improvement were identified internally that could enhance the efficiency and effectiveness of EMS:

- Internal procedures were revised to better identify specific interested parties beyond DOE. This revision facilitated clearer communication with relevant personnel about the various entities that INL collaborates with or serves, in accordance with the applicable regulations and standards.
- The practice of referencing documents by date or revision number in internal documentation was re-evaluated, particularly the 2018 INL Agenda. By removing specific dates and revision numbers, the organization avoided the need for frequent updates to maintain accuracy, thus streamlining document management.

By addressing these opportunities for improvement, the INL contractor has strengthened its EMS, enhanced its regulatory compliance, fostered its environmental responsibility, and promoted more effective internal communication and collaboration.

ICP Contractor EMS Implementation Challenges

An initial assessment of the release of per- and polyfluoroalkyl substances (PFAS) to the environment began in early FY 2024, prior to PFAS being regulated as a hazardous substance under CERCLA. The scope of the investigation was predicated on the assumption that PFAS would be regulated under CERCLA, which occurred in July 2024. Since PFAS had not been regulated previously, a lack of historical information remains today that limits the ability to perform an effective records search to confirm or rule out PFAS use or releases to the environment.

INL Site Contractors EMS Lessons Learned

INL Site contractors participate in the DOE Corporate Operating Experience (OPEX) Program, which facilitates the exchange of lessons learned and best practices across the DOE complex to prevent adverse operating incidents. The DOE OPEXShare database acts as the central, web-based repository for corporate operating experience, lessons learned, and best practices throughout the DOE complex. This collaborative platform is accessible to both government and private users.

The program encourages a graded approach to tailoring local operating experience programs based on the nature of the work, hazards, and organizational complexities. OPEX summaries inform the DOE complex of additional DOE or external operating experiences that facilities could benefit from. These summaries can include compilations of informative articles and lessons learned based on operating experience.

INL Contractor Environmental Operating Experience

Throughout FY 2024, the articles and videos sourced from DOE OPEX proved to be invaluable. Although the INL contractor encountered only two environmental issues in FY 2024, the information shared by the broader DOE community through OPEXShare enabled INL contractor employees to effectively utilize mitigation strategies and disseminate relevant information within the INL community. This likely helped prevent issues that other sites in the complex faced. OPEX remains an invaluable resource for INL contractors and other sites, promoting seamless collaboration and sharing of crucial information. Table 3-1 shows the number of environmental operating experiences shared by the INL contractor in OPEX during 2024.

Table 3-1. INL contractor environmental operating experience for 2024.

Lessons Learned Shared	8
Best Practices	0
Internally Generated Lessons Learned	2
OPEX Articles Shared to INL Community	6
Videos Shared	1

ICP Environmental Operating Experience

The Just-In-Time Lessons Learned process was established within the DOE OPEXShare Lessons Learned database in FY 2004 and was quickly adopted by the ICP contractor as a method to quickly share information to ensure that lessons learned from one facility are shared with other facilities. The ICP Just-In-Time quad chart and Lessons Learned alerts process has undergone various iterations throughout subsequent ICP contracts and is an integral part of the safety culture.

The ICP contractor continues to benefit from the shared knowledge available through the OPEXShare database. The insights gained from OPEXShare articles shared from all over the complex have helped staff apply proactive steps and problem-solving measures through the sharing of these important lessons through planning meetings, safety meetings, and other activities. This regular communication with workers about workplace safety and health matters keeps the workforce well informed on proven methods across the complex. Table 3-2 shows the number of environmental operating experiences shared by the ICP contractor in OPEXShare in FY 2024.

Table 3-2. ICP contractor environmental operating experience for 2024.

Lessons Learned Shared	50
Quad Charts	21
Internally Generated Lessons Learned	8

3.6 Act

INL Site contractors establish, implement, and maintain an issues management program in accordance with an internal procedure for contractor assurance. This program deals with actual or potential conditions of nonconformity, such as Notices of Violation, nonconformities with regulation, and opportunities for improvement from internal assessments and audits. All employees have access to the issues management software and the authority to identify and document any conceived issue. Communication of these identified issues is performed through the management review process.

Environmental concerns, safety, and emergency preparedness issues are documented and submitted for management review throughout all operations.

EMS management review is conducted by INL Site contractors through a process that includes weekly, monthly, quarterly, and annual meetings with committees and councils. This management review identifies issues that carry the largest environmental risks and provides mitigations and hold points. EMS performance trends, audit findings, objectives and targets, improvements, and risks are documented through the Contractor Assurance System in a management review report that is sent to senior management. Through this process, senior management is aware of the largest environmental risks to the INL Site. Senior management evaluates the management review report and recommends actions to continually improve environmental performance.

3.7 Accomplishments, Awards, and Recognition

The INL contractor was named as a winner of the 2024 Electronic Product Environmental Assessment Tool (EPEAT) Purchaser Awards. The INL contractor has earned the prestigious annual award since 2015. Winners were recognized for their purchases from six EPEAT product categories: (1) computers and displays, (2) imaging equipment, (3) mobile phones, (4) servers, (5) televisions, and (6) photovoltaic modules.

3.8 References

31 USC § 501. 2024. “Office of Management and Budget.” Public Law 97-258. United States Code, Washington, DC.

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INL. 2024. “Annual Laboratory Plan.” INL/RPT-24-77692, April 2024. Idaho National Laboratory, Idaho Falls, ID, USA.

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Saddle Mountain in the Lemhi Range.