

Integration of Environmental Compliance at the Savannah River Site – 13024

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ABSTRACT

The Savannah River Site (SRS) is a large federal installation hosting diverse missions and multiple organizations with competing regulatory needs. Accordingly, there was a need to integrate environmental compliance strategies to ensure the consistent flow of information between Department of Energy-Savannah River (DOE-SR), the regulatory agencies and other interested parties. In order to meet this objective, DOE and major SRS contractors and tenants have committed to a strategy of collaboratively working together to ensure that a consistent, integrated, and fully coordinated approach to environmental compliance and regulator relationships is maintained. DOE-SR and Savannah River Nuclear Solutions, LLC, the SRS management and operations contractor, have established an environmental compliance integration process that provides for the consistent flow down of requirements to projects, facilities, SRS contractors, and subcontractors as well as the upward flow of information to assist in the early identification and resolution of environmental regulatory issues and enhancement of compliance opportunities. In addition, this process strongly fosters teamwork to collaboratively resolve complex regulatory challenges, promote pollution prevention and waste minimization opportunities to advance site missions in a manner that balances near-term actions with the long-term site vision, while being protective of human health and the environment. Communication tools are being utilized, some with enhancements, to ensure appropriate information is communicated to all levels with environmental responsibility at SRS. SRS internal regulatory integration is accomplished through a variety of informational exchange forums (e.g., Challenges, Opportunities and Resolution (COR) Team, DOE's Joint Site Regulatory Integration Team, and the Senior Environmental Managers Council (SEMC)). SRS communications and problem-solving with the regulatory agencies have been enhanced through formation of an interagency "SRS Regulatory Integration Team (SRIT)". The SRIT is a partnership comprised of representatives from DOE-SR (with contractor support), EPA Region 4 and the South Carolina Department of Health and Environmental Control (SCDHEC) and is chartered to develop a consensus understanding of SRS regulatory issues and activities. These forums and a formal environmental compliance integration process improve timely cross-functional decision making, problem solving, information sharing, and issue resolution. The SRS internal process has been formally documented in an *Environmental Regulatory Integration Program Description*, which is linked to the SRS Environmental Policy and agreed upon by all major contractors, subcontractors and tenants.

INTRODUCTION

The Savannah River Site (SRS) is a key U.S. Department of Energy (DOE) industrial facility dedicated to national security, environmental stewardship, and clean energy. Located in South Carolina and bordering the Savannah River, SRS encompasses 310 square miles. A multitude of activities are performed at SRS including: the management of nuclear materials; the disposition of proliferable materials; the safe and secure storage, treatment and disposal of excess nuclear materials and waste; the remediation of legacy waste and contamination from the Cold War production era; the decommissioning of excess facilities; and the development and demonstration of cleanup and alternative energy technologies. In addition, a strategic planning initiative has been launched to develop broader missions for SRS to serve national and international needs in the areas of national security, environmental restoration, and clean energy.

SRS facilities are all operated by contractors with DOE oversight. In 2008, DOE implemented a change in contracting strategy at the Savannah River Site (SRS) from relying on a single operating contractor to multiple contractors with specialized missions, thus the site's organizational interface requirements also changed. Savannah River Nuclear Solutions (SRNS) is required by its Management and Operations (M&O) contract to assure its operations are compliant with environmental regulatory requirements and commitments. SRNS is also required to ensure a consistent, integrated, and fully coordinated approach to regulatory compliance and regulator relationships between all the various other contractors at SRS. In addition, three primary programs at SRS support the DOE mission: Environmental Management (EM) responsibilities for cleaning up the Cold War legacy and preparing for long-term stewardship including maintenance and environmental health; National Nuclear Security Administration (NNSA) Defense Programs; and the Defense Nuclear Nonproliferation Program. In an environment of drivers, missions, and organizations with competing regulatory priorities, there was a need to establish a regulatory integration strategy to ensure the consistent flow of information between Department of Energy-Savannah River (DOE-SR), site contractors, external regulatory agencies and other interested parties. SRNS, with strong support from other site contractors and tenants, along with DOE-SR worked collaboratively to develop and implement the SRS Regulatory Integration process.

In determining a model structure to use in a multi-contractor environment, the management concept of “partnering,” which has been used successfully in the construction industry throughout the United States, was recognized as a viable approach for use at SRS. Partnering is a management technique that brings divergent organizations together into a motivated team – committed to pull together for the mutual success of the project as well as the success of the individual organizations. Adapting the partnering concept to the environmental compliance program could provide environmental program managers with effective tools for team building – structured

methods to establish mutual goals and measures of success, to create open communications, and to rapidly resolve issues. The application of a similar concept has been previously demonstrated at SRS through implementation of a “Core Team” process in the environmental cleanup program which uses facilitated partnering techniques with regulatory agencies (EPA and SCDHEC) to improve communications which lead to more timely and cost effective cleanups. The use of partnering in support of the site-wide environmental program at SRS has brought key players together to work as a team to achieve mutually beneficial goals. The relationship is based on trust, dedication to common goals, and an understanding of each team member’s individual expectations and values. The common goal is to protect human health and the environment while reducing cleanup cost and time.

ENVIRONMENTAL REGULATORY INTEGRATION

An effective regulatory integration program requires a planned and orchestrated effort by employees associated with environmental compliance at SRS to commit to an organized effort of establishing an environment of mutual trust, open communication, cooperation and teamwork that allows everyone to win by achieving mutually agreed upon goals and objectives. Therefore the Environmental Regulatory Integration (ERI) Team is not limited to employees in a specific group or job function but consists of all DOE, contractor and tenant employees with the responsibility for environmental regulatory compliance and interaction with regulatory agencies and stakeholders. Accordingly, the following commonly-shared Mission, Vision, and Objective were developed for SRS regulatory integration

Mission

The mission of the DOE is to establish and execute a process through which it can work with site contractors to collaboratively work to resolve complex regulatory challenges and promote pollution prevention and waste minimization opportunities to advance the site mission in a manner that balances near-term actions with the long-term site vision, while being protective of human health and the environment

Vision

DOE at the SRS will be recognized as a leading environmental program in the DOE nation-wide complex for efficiently implementing programs, processes, and organization structures to support collaboration, cooperation, information sharing and coordinated action resulting in successful mission execution.

Goal and Objective

DOE and its various site contractors will develop consistent positions on environmental regulatory compliance matters when communicating with our stakeholders and regulators by establishing an effective collaborative process that addresses key areas of policy, management and execution.

INTEGRATION STRATEGY

In order to meet this objective, DOE is committed to a strategy of collaboratively working together to share information and ensure that a consistent, integrated, and fully coordinated approach to environmental compliance and regulator relationships is implemented. Accordingly, tenant organizations have established an environmental regulatory integration process that provides for: the consistent flow down of requirements to projects, facilities, SRS contractors and subcontractors; as well as the upward flow of information to assist in the early identification and resolution of environmental regulatory issues and optimization of compliance opportunities. Effective communications and early identification and resolution of issues involving policy, management, and execution as depicted in Figure 1, supports DOE-SR and its contractors in presenting a coherent and clear message to regulators, stakeholders and the public.

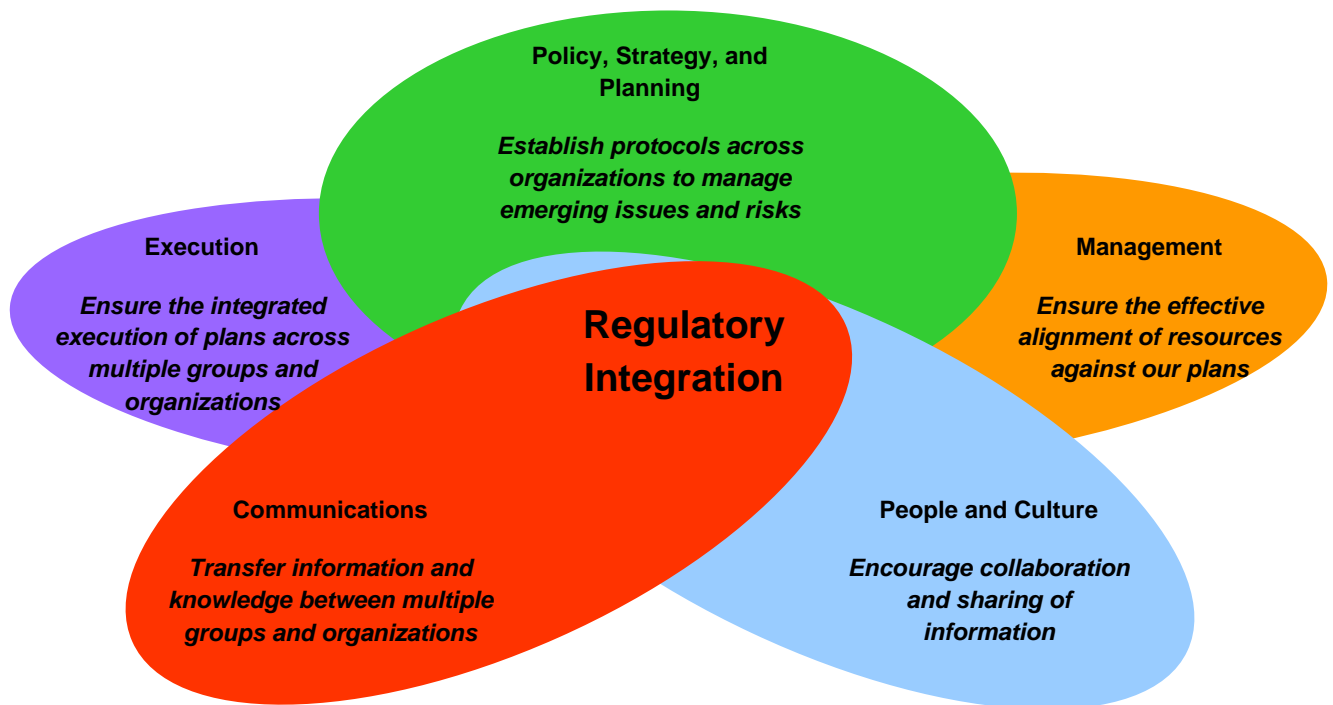


Figure 1 – Holistic Approach to Environmental Regulatory Integration

INTEGRATION PROCESS

The integration process is implemented through an emphasis on both organizational alignment and communications. The intent is to identify and resolve issues as early as possible. DOE staff, along with their responsible contractors methodically coordinate the interface process through communication forums at different levels of management to quickly address and resolve issues. Of course, this coordination must be accomplished pursuant to the interface management processes specified in each contract.

DOE and SRNS, via its M&O contract, administer an overarching environmental program to track SRS regulatory commitments, including those reflected in the SRS Federal Facility Agreement, the site-wide Resource Conservation and Recovery Act (RCRA) Permit, the site-wide NPDES Permit, settlement agreements, administrative orders, consent decrees, Memorandum of Agreement(s) (MOA), or other regulatory instruments with the SCDHEC and EPA. The SRNS Environmental Compliance & Area Completion Project (EC&ACP) performs this function.

Several forums have been established at SRS to aid in the development and implementation of consistent environmental regulatory strategies (see Figure 2). The DOE-SR Environmental Quality Management Division holds a biweekly meeting with all contractor counterparts to review all current and pending issues in all environmental media. Progress on compliance issues is tracked and integrated strategies for dealing with enforcement actions are developed. The second meeting in each month is reserved for “deep-dives” in a couple of specific topics.

The Challenges, Opportunities and Resolution (COR) Team, comprised of environmental representatives from contractor organizations and other entities performing work at SRS, considers how to appropriately address cross-cutting environmental issues (i.e., issues which affect several or all site entities). Challenges and opportunities that are identified at the project or program level can be presented to the COR for evaluation. Items of particular benefit or complexity that require a collaborative approach with site tenant organizations are also discussed during COR meetings. The COR evaluates each challenge and/or opportunity to determine what, if any, action is needed. The COR evaluation is based on scope of the issue (i.e., impacts multiple programs), complexity, cost, and schedule (i.e., project schedules, milestones or commitments) impacts. Some issues are resolved by the COR without any further evaluation. If the COR determines that additional evaluation is needed, it can refer the issue to the next level of management. For example, assignment of roles and responsibilities for ownership and maintenance of outfalls associated with the site National Pollutant Discharge Elimination System (NPDES) was referred to management for final resolution and concurrence.

The Senior Environmental Managers Council (SEMC) has been established to serve as this next level of cross organization management, as well as a communications forum for all major SRS

contractors. The SEMC is comprised of senior-level environmental managers from the major DOE contractors and tenant agencies at SRS. Each representative is authorized to participate in discussions and to make decisions on behalf of their organizations after appropriate briefing, consultation, and approval from their superiors regarding environmental commitments and issues. The SEMC utilizes a risk-based priority ranking system to identify and manage risk and opportunities. For example, potential enactment of new regulatory requirements that may require substantial funding and affect multiple site programs may be categorized as a high risk.

DOE has established the Site Joint Regulatory Integration Team which consists of senior representatives from the various DOE-SR program offices. This team routinely meets to discuss emerging environmental issues and develop common strategies for interactions with the regulatory agencies and stakeholders with regard to site wide-issues.

If an issue cannot be resolved in the SEMC or the SJRIT, it may be elevated to the Management Leadership Team (MLT) comprised of the senior managers from the respective contractor organizations and DOE senior management. At this point, the issue may be resolved by proceeding through the site established interface management process, which is a process for resolution of issues between two or more contractors. If appropriate for engagement with senior regulatory officials, the issue resolution or mitigation strategy may require referral to the SRS Regulatory Integration Team (SRIT).

The SRIT is a partnership established in 2008, which is comprised of representatives from DOE-SR (with contractor support), EPA Region 4 and SCDHEC and is charged with developing a consensus understanding of SRS regulatory issues and activities. This team was established using the partnering concept as a guide and a signed charter that includes mutual goals and values. The SRIT may commission task-specific teams comprised of subject-matter experts (SME) to evaluate the details of an issue with the intent to propose specific recommendations to the SRIT. In those situations where after good-faith discussions a consensus resolution cannot be reached, the issue can be elevated to the appropriate executive management level of the involved agencies.

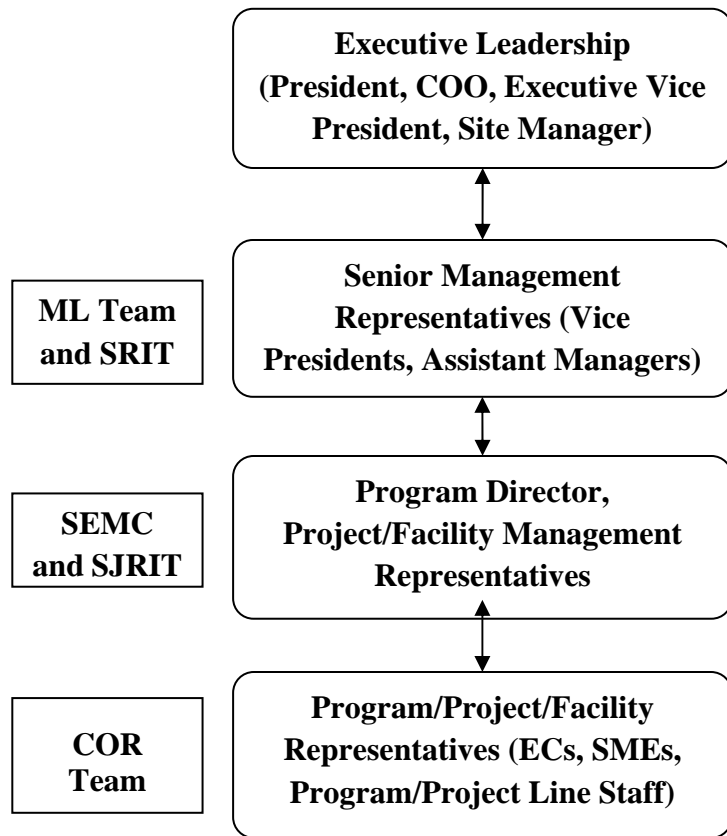


Figure 2 – Organizational Alignment & Key Communication Forums

ISSUE RESOLUTION

A problem that occurred early during the transition to a multi-contractor environment at SRS was “stove-piping” of issues. Stove-piping of issues occurs when an organization involved with a particular issue develops their own version/interpretation of the issue at the field or program level, and this version then gets “escalated” to the senior management level of their respective organization without any of the other organizations having had the opportunity to discuss the issue with the other party. In some cases, stove-piping occurred inadvertently when concerned personnel wanted to get an issue resolved as quickly as possible, or in other cases deliberately where organizations went into a “case-building” mode before revealing their position to the other organizations. In either situation, the result is that upper managers may receive a different version of what the issue and facts surrounding the issue may actually be. Additionally, a manager in one organization may receive the issue at a different time than his counterpart receives it in the other

organization(s) (if it is received at all by the other manager(s)). This creates an inequitable escalation. This also produces a “silo” effect where issues remain within individual organizations. The result is when an organization prematurely escalates an issue; the organization now must take a position on the issue at a high level that will be difficult to change. A mutual issue resolution process was needed to ensure all issues are first dealt with at the lowest level, and then, if no resolution is reached, are escalated equitably upwards *as a team* to the next level of management.

A key step in issue resolution is the development of the multi-organizational collaborative team from the affected stakeholders. This differs from day-to-day project organization because it identifies cross-organizational teams with leads that will be held accountable for resolution of issues pertinent to their area and/or organization. This approach serves to eliminate the “silo effect” by focusing on “team” approach to issues. The table below is an example team-based structure for the SRS environmental program.

Team-Based Structure for the Escalation of Issues

Level	Team Members
1	Facility Environmental Representatives, Applicable Subject Matter Experts, Environmental Line Management, Project Manager or Lead, DOE SR Staff
2	Environmental Program Director, Program Director/Facility Management
3	Environmental Senior Management Program/Facility Senior Management
4	Executive Leadership

To reinforce that as many issues as possible should be resolved at the lowest program level, the ladder has been “inverted” to place those who will be principally attacking the issue at the top of the chart—the project/facility personnel (Level 1). Senior level players are shown at the bottom of this ladder to emphasize that they should be consulted as the last resort at resolving the issue (Level 4). Their time is limited and focused on many other program areas, they will not have as much specific knowledge about the particular problem, and they will need background information to engage in problem resolution.

Not everyone in the program or project organization appears on this chart. Only those individuals who have clear decision-making authority for their respective teams in times of non-concurrence

are shown. The reason for this distinction is that this is a dispute resolution chart, not a day-to-day organizational framework.

Issue Escalation Process

The issue escalation process is designed to help environmental program participants resolve any disagreements as they arise. The intent of the process is to encourage and empower problem-solving at the field level. However, field personnel are encouraged to elevate the issues if they cannot resolve them in a timely manner. Other guidelines include:

- *Be Factual*—to reduce the deleterious effect of emotions and minimize the dominant effects of strong personalities, disagreeing parties are encouraged to develop and present facts to reinforce their position versus opinions when escalating the issue. That way the next level of management can make a business decision based on solid and objective information.
- *Escalate Equitably*—to ensure equitable escalation of the issue, disagreeing parties are encouraged to notify their peers from the other organization that they intend to escalate the issue so that the issue can be elevated within all affected organizations at the same time. This helps reduce the “silo effect” of escalating issues that could result in an issue reaching a very high level within an organization while still residing at the field level of another organization. This inequity could cause one organization to make a misinformed and hasty decision at a higher level that it would be difficult to reverse.
- *Timely Escalation*—ensures time-sensitive issues are escalated before adversely impacting environmental regulatory commitments, schedules and budgets.
- *Abide with the decision*—once an issue has been escalated and a decision rendered by the next level of management, those at lower levels should abide by the decision.

Required Escalation Information

To assist project personnel in understanding what information will be required to be passed on to the next level of management, a brief written description of the following information from escalating individuals should be developed. Ideally, a presentation of this information should be made from each side in the dispute to both senior managers at the next level of management in the same location. Information should include:

- *Basic description of the issue with supporting facts and desired outcomes*

- *Goals Affected*—this is to remind everyone that, despite the nature of the disagreement, we are still working toward site goals. Additionally, it gets parties in the disagreement focused on positive aspects of the relationship, which may likely help diffuse emotions surrounding the issue.
- *Specifications or Affected Requirements*—this is a critical piece of the information. A number of disputes arise in programs or projects because personnel either did not understand the requirements or specifications or did not read the requirements or specifications. Encouraging individuals to recite specific requirements or specifications affected by the dispute will often result in a resolution once individuals better understand the nature of the requirements. However, if an interpretation issue arises regarding what the requirement means, then that may be where the dispute is rooted, and the issue escalation process should continue.
- *Actions taken to date*—brief description describing what has been undertaken to resolve the issue, including summaries of previous meetings, correspondence, etc.
- *Proposed resolutions*—while program personnel may not have decision authority to resolve disputes on some issues, they are in positions to propose a solution.
- *Why resolution has failed to date*—a brief explanation on why there is still disagreement if all of the above has previously been undertaken and a proposed resolution outcome.
- *Timeline needed to resolve the issue*—a brief summary addressing temporal matters such as does it need to be resolved today, in a few days, next week, in a month, or in a few months?

Resolution Actions

Once an issue has been escalated and heard, the level of management that has received the issue has a number of options:

- Redirect the issue back to the escalating team or another team for further fact-finding or problem solving with a set date for reporting back.
- Resolve the issue immediately with the escalating team.
- Resolve the disagreement on their own.
- Agree to disagree and continue the escalation process to the next level of management.

If the issue is resolved, it is important that the team document the resolution and determine how the resolution will be communicated to the entire project team to ensure everyone is on the same page with the status of the issue.

ACCOMPLISHMENTS

Implementation of the various working groups has allowed for pro-active issue identification and development of integrated solutions, encouraged prompt communication of emerging site-wide issues and serves as the focal point for development and implementation of site-wide policies and programs. Overall these groups have enhanced the communication of issues, sharing of lessons learned and played an important role in ensuring consistent implementation of programs and directing resolution of designated site-wide issues. To institutionalize these processes, DOE-SR and SRNS established an SRS Environmental Regulatory Integration Program Description, which was reviewed and concurred upon by all SRS contractors. Further, the SRS Environmental Policy Statement was revised to specifically include an element committing all SRS entities to *“Collaboratively integrate SRS environmental compliance efforts to develop coordinated strategies, efficiently resolve issues, and speak with one coherent voice to regulatory agencies and stakeholders in accordance with the SRS Environmental Regulatory Integration Program Description.”* Major environmental integration accomplishments include:

- Establishment of the inter-agency SRIT has built and maintained a trusting, transparent, cooperative, proactive team committed to resolving regulatory issues avoided enforcement actions and promote opportunities to advance environmental stewardship. Implementation of the SRIT is an integral part of this initiative to establish a regulatory integration strategy that builds on our existing collaborative relationship with regulatory agencies.
- Successfully partnered with the regulatory agencies to develop and gain approval of regulatory documentation and streamlined processes required to complete American Recovery and Reinvestment Act (ARRA) funded projects.
- Successful partnerships between various site contractors, DOE-SR organizations and regulatory agencies to accelerate and gain approval of regulatory documentation, which included permit and FY 05 NDAA/Section 3116 required documents, needed to continue salt waste disposal and commence closure of radioactive liquid waste tanks at SRS.
- Establishment of a permitting prioritization system whereby all SRS DOE and contractor entities identify current and projected environmental permit needs and agree

on a site-wide prioritization of each permit action (i.e., low medium or high and by what date is the permit needed to achieve mission goals). These SRS priorities are reviewed and updated quarterly and shared with SCDHEC so they can plan and focus their permitting resources.

CONCLUSIONS

It is critical that diverse program managers determine early how they will address disagreements and disputes that will inevitably arise. The evaluation for the need of this process must include both internal and external organizations. Building an effective issue escalation process requires: (1) Identification of common goals and values, (2) Development of a collaborative organization chart, and (3) Implementation of a sound set of issue escalation principles. Following these steps will improve the chances of successfully achieving program goals and objectives. Customer and stakeholder satisfaction has been enhanced by upfront communications that allow for early problem identification and resolution. In addition, contractor and DOE teams work together on solutions thus focusing resources on attainment of site goals rather than protracted issue resolution. Further, effective site-wide integration of environmental compliance activities enables SRS to collectively speak with “one coherent voice” to its regulators.