

**Report to the Senior Advisor to the Undersecretary of Science
United States Department of Energy**

**Prepared by the
Environmental Management Advisory Board**

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This report to the Senior Advisor to the Undersecretary of Science was prepared by the members of the Department of Energy Environmental Management Advisory Board Transition Subcommittee.

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In March 2019, then-Assistant Secretary for Environmental Management, Anne White, requested that the Department of Energy (DOE) Environmental Management Advisory Board (EMAB) evaluate seven lines of inquiry. This charge later gained the support of William (Ike) White, Senior Advisor to the Undersecretary of Science.

The charge specified the following:

As evidenced by the closures at Rocky Flats, Mound and Fernald, workforce and community collaboration proved central to the project success. Both were fundamental to site workers working themselves out of a job, and to securing and maintaining the support of local elected officials to close the site and transition it for another use.

As EM looks to close additional sites and complete cleanups at sites with ongoing missions, EM seeks EMAB advice on alternative methods and approaches that can be used to assist or ease the economic impacts to workers and communities. As part of its evaluation EMAB will investigate and identify success factors that could be applied to today's opportunities and challenges.

Proposed lines of inquiry for EMAB:

1. Establish opportunities to partner with state and local governments, local chambers of commerce, economic development organizations, and community members
2. Obtain state/local government and workers support for completing the cleanup mission
3. Identify and advance economic development efforts and facilitate future use planning
4. Design and implement worker transition programs, including reemployment assistance
5. Foster a cultural change from production to cleanup
6. Engage in meaningful discussion and develop productive relationship with the labor unions
7. Recognize and understand past efforts, OMB and Congressional direction on the topic

The Transition Subcommittee members evaluated each line of inquiry and offer the following report. For readability purposes, we reordered the lines of inquiry and placed the evaluation of #5 as the Foreword to the report as it is broadly applicable.

In addition, the Transition Subcommittee is offering proposals for two additional lines of inquiry that we believe future EMAB committees should investigate, an EM site transition roadmap, and lessons learned from the Department of Defense BRAC base closure process.

Finally, the EMAB, in endorsing this report, is recommending that DOE's Office of Environmental Management establish a transition office comprised of senior, seasoned staff that brief to senior EM executives. This office would help EM bring together national priorities with local interests, a core tenant of the cleanup program. The transition office, which would fit within EM's existing framework, would also help facilitate risk reduction, achieve cost savings, and safeguard that the correct people at the correct time are engaged in reducing the federal government's environmental liability while ensuring the federal property remains an asset for the local community.

It is our hope that these issues are broadly discussed within the agency and with EM's many partners.

Foreword: Fostering A Cultural Change from Cleanup to Reuse

A primary goal of the Environmental Management's (EM) cleanup program has been to achieve "meaningful and visible progress...[and] to create and motivate a culture of completion."¹ While the cost and schedule benefits for the EM program drive cleanup, cleanup activities, end-state decisions and future use determinations challenge and impact employees, Unions, local communities, businesses, and, often, political structures as it signifies an end to all or substantial portions of a historical DOE mission.

EM sites are integral to the economic, cultural and social fabric of the host communities. These sites have performed their missions for several decades and, in some cases, as long as seventy-five years. DOE is often the dominant employer, or only substantial employer, in the city, county and region; an end of a site mission often results in substantial impacts to the region not unlike the impacts due to military base closures under the Base Realignment and Closure (BRAC) process.

Change, especially change that disrupts a city, county or region's vitality and an individual employee's work identity, is often difficult. In response, many seek to maintain the status quo and delay changes they see as negative to their region's and individual interests. Such resistance, while normal and expected, has the potential to negatively impact implementation of the completion of the cleanup and process to reach completion, thereby reducing its potential effectiveness. Impacts from this resistance to change could improperly be attributed to faults in contracting and implementation, when, in reality, may stem from a reluctance to embrace the completion of cleanup, especially at a site with no large future federal mission beyond site monitoring.

The Why

The most critical aspect for addressing change in a positive manner is communicating the "why" for the change. Individuals and governments should be informed and engaged in a process that clarifies why this change is desired and the attendant benefits. Each party will need to grapple with the question of "what does this change mean to me?" Until that question is discussed and answered, individuals and organizations will find it difficult to fully support implementation of the cleanup goals.

More specifically, addressing the "why" likely involves more than just the benefits achieved through a specific DOE process such as contracting or defining an "end-state". The experiences at Rocky Flats, Mound and Fernald, for instance, have shown the impact of powerful core personal values involving patriotism, pride, and belief in the importance of their contributions. Employees may misinterpret the end of their job as a devaluing of their contributions, so action must be taken to discuss and understand those values and to promote the benefits of project completion. The benefits of the final cleanup as the successful completion of an employee's job contributions is a critical perspective.

The Transition & Elected Leaders

As a result of the tight nexus between the DOE site, the local economic and political structure, and the cultural and social fabric of the community, a concerted effort must be made to find a process for transitioning the community and the many large and small businesses and industries that have evolved to support the federal mission. Job security and impending career change is a critical negative concern

¹ Then-Assistant Secretary for Environmental Management, Anne White, May 2019, Senate Armed Services Subcommittee, Subcommittee on Strategic Forces (written testimony).

to address. Employees are rightfully concerned about their future ability to meet household and family expenses, and are potentially concerned about the challenges of a career change or a location change to stay in the same career field. The announcement of closure or end of a site can impact home values and the ability of the community to continue to support reinvestment in the local infrastructure as its tax base is impacted. It can cause a large exodus of uniquely experienced and trained workers. Further, many EM sites have a multi-generational workforce such that a federal job is expected, and sometimes even considered a right. Thus, there may be significant resentment to the idea that their job might end.

Addressing the potential negative aspects of cleanup completion must be undertaken before stakeholders can embrace and eventually support the necessary cultural change.² In many cases, these factors result in governments and private parties collaborating on the beneficial reuse of the site.

Similarly, project completion planning must also value elected officials who are charged with representing the interests of the many stakeholders. Elected leaders and political organizations respond to the interests and concerns of their constituents, so the aforementioned issues facing employees and businesses are also fundamental political concerns. Often, though not always, elected leaders address these issues at a more strategic level. Political considerations, like the many issues facing other stakeholders, must be addressed as early as possible so that elected leaders are not surprised or blindsided, and have a chance to impact the final decision. These leaders must likewise be afforded the opportunity to assist EM in addressing and mitigating the upcoming changes by becoming educated on the issues and process. They must be substantively involved in site transition.

Tribes or Pueblos, with status as sovereign nations, must also be included in the change process. Each Tribe has unique leadership structures or governance approaches, and may have decision timelines and protocols that are challenging when implementing cleanup planning, including end-state and future use visioning. Despite these challenges, any impacted Tribes must be engaged as early as possible with due consideration of their sovereign status.

Resistance & Communication

Resistance is a natural part of any transition and should be expected. The resistance should be seen as a benefit that shows where to focus our energies, and ignoring it does not make it go away but makes it stronger. Over time, stakeholders that start to accept the change process can help bring along those stakeholders who are still unsure, working toward a critical mass of those supporting implementation.

Perhaps the biggest challenge to overcome at some of the larger EM cleanup sites is the belief that the cleanup completion will not happen, or that it will not happen quickly enough to impact the particular employee, business, or elected leader. The most critical point of this transition is making certain that stakeholders understand that the cleanup mission with the defined end state will occur in a timeframe that requires the issues to be addressed now, and addressed with energy and focus.

Communication is foundational to supporting the transition and the necessary cultural change. Open, honest, and routine communication that shares progress and setbacks with regard to the cleanup and

² Mayor Dick Church from Miamisburg always identifies the years he fought the transition to a closure site and then how the City and region supported the transition and eventual closure of the site. These changes did not occur overnight and a key was the federal government support and process for the transition.

related issues is vital. Communication must be two-way for stakeholder feedback must be discussed, heard, valued and acted upon. Similarly, the stakeholders must have the same mindset to engage DOE. Honest acknowledgement of issues—even difficult issues and concerns—is more helpful than hollow statements or denying the end results will occur. And above all, DOE cannot regress to announce and defend policies.

Recommendation: Establish a Transition Office within EM

The numerous, diverse issues described in this report lead us to one inescapable recommendation: EM should establish a transition office. This office would help EM bring together national priorities with local interests, a core tenant of the cleanup program. The early focus on cultural change in support of the eventual transitions is an important enabler for mission success. The transition office, which would fit within EM's existing framework, would help facilitate risk reduction, achieve cost savings, and safeguard that the correct people at the correct time are engaged in reducing the federal government's environmental liability while ensuring the federal property remains an asset for the local community.

Specifically, to be most effective, we further recommend that the transition office have the following key attributes:

- Led by a seasoned EM manager with diverse headquarters and field site experience
- Brief to senior EM executives for visibility and awareness
- Have open communications with Site Managers, Deputy Assistant Secretaries, and the Environmental Management Consolidated Business Center
- Authorized to discuss issues involving end state transition with other offices within the DOE (i.e. Management, General Counsel, Congressional & Intergovernmental Affairs, Public Affairs, Legacy Management), as well as the Office of Management and Budget and Congress.

EM has embarked on a bold and challenging contracting approach to better achieve mission goals. A cultural change is needed to effect this change. This report addresses many of the salient issues.

EMAB Report on the Lines of Inquiry

The lines of inquiry have been reordered. They now follow this order:

1. Recognize and understand past efforts, OMB and Congressional direction on the topic
2. Establish opportunities to partner with state and local governments, local chambers of commerce, economic development organizations, and community members
3. Obtain state/local government and workers support for completing the cleanup mission
4. Design and implement worker transition programs, including reemployment assistance
5. Identify and advance economic development efforts and facilitate future use planning
6. Engage in meaningful discussion and develop productive relationship with the labor unions

As noted earlier, “Foster a cultural change from production to cleanup” is now discussed in the Foreword to this report.

Appendices

Appendix A: Proposals for Future EMAB Review

Appendix B: EM Site Transition Roadmap

Appendix C: Lessons Learned from Department of Defense (DoD) Office of Economic Adjustment (OEA)

EM Charge: Recognize and understand past efforts, OMB and Congressional direction on the topic

Goal: Secure political alignment amongst EM, Office of Management and Budget (OMB), Congress, federal and state regulatory agencies, the Governor, local governments, site workers and community representatives.

Background: EM's successes at Mound, Fernald, Rocky Flats, Oak Ridge (K-25) and Hanford (River Corridor) have rested on securing and maintaining political alignment for both the cleanup project and long-term use of the site or portion of the site. The strategies discussed in the other sections of this report, with the emphasis on defining the project end state and transition needs, are central to securing and sustaining political support. Each example took a long, sustained engagement and agreement with the parties listed above to be able reach political alignment.

Needs and/or opportunities: A shared vision amongst the parties is foundational to securing needed political alignment that is foundational to a successful cleanup.

Challenges: Securing a common vision for the cleanup and long-term use of the site amongst EM, Congress, OMB, and other federal and non-federal parties and agencies can prove enormously difficult. Past challenges have included the lack of a long-term federal investment in a site – e.g., OMB is reticent to support community transition programs unless specifically mandated – and adopting cleanup and long-term use visions that could increase program costs without yielding additional benefit to the cleanup program. Additional challenges include disagreement on cleanup goals, cleanup levels, redevelopment vision, and related issues.

DOE programs that are central to the project success: Environmental Management, Legacy Management, National Nuclear Security Administration, Office of Science, and Office of Management (specifically Real and Personal Property).

Non-DOE parties that are central to the project success: Federal and state regulatory agencies including the Environmental Protection Agency and the Department of Labor, the Defense Nuclear Facility Safety Board (DNFSB), cleanup contractor, Governors, local elected officials, tribal governments, workers (including but not limited to labor unions), and citizen organizations. The impact of each party – and the role each occupy – varies from site-to-site.

Analysis: Congress, through annual appropriations and program direction, wields substantial power and influence over the successful cleanup and closure of the EM cleanup program. Less understood, but equally impactful, is OMB's role in cleanup activities. The programs and strategies contained in this report must be endorsed by OMB.

Success factors include:

1. Developing a project completion vision is central to establishing and implementing a strategic project completion path. Both require the support of EM and non-EM parties.
2. EM's project baseline must have the support of Congress and OMB, as well as the non-federal parties. Such alignment brings certainty to the process, thereby reducing risk and cost variabilities that could emerge later in the project.
3. Developing the political strategy is iterative and demands substantive community involvement.

4. The vision and political support for the cleanup plan must be able to withstand political changes (elections, changes of parties in charge, etc.).
5. Key requirements that proved foundational to successful cleanup projects include steady funding from Congress, a shared focus on keeping the project on track, and consistent leadership in DOE Headquarters (both EM and the Secretary's office) and Congress. Only through that support, meeting milestones and operating safely can EM maintain regulatory and community support.
6. The regulatory agreement(s) must support cleanup vision.
7. EM field offices cannot be successful without the active support of DOE Headquarters.
8. Developing and maintaining political support includes having the support of both the authorizing and appropriations committees in an ongoing, not one-time effort.

As the Energy Communities Alliance explained in its 2005 report "The Politics of Cleanup," political support is foundational to being able to secure a cleanup that brings together the various interests, and to maintain that support over the long-term: "[S]uccess is also predicated on substantively incorporating the local community's values into the cleanup process as complex environmental cleanups are not solely legal, technical or economic decisions, but also speak to the ethics and values of the community."

By adopting this model – focusing on developing a shared vision, emphasizing the convergence of national priorities and local interests, and placing transition on par with risk reduction, amongst other elements – EM and its partners can achieve better project certainty and sidestep traps that have beset prior cleanup activities.

EM Charge: Establish opportunities to partner with state and local governments, local chambers of commerce, economic development organizations, and community members

Goal: Develop a shared vision for the EM site in partnership with the adjacent communities in order to accelerate cleanup, closure, and transition to future uses.

Background: The primary mechanism for EM to connect with local governments, chambers and economic development entities is through direct engagement. EM's direct engagement with local governments has formed the basis for cleanup at the sites for years. A secondary option EM utilizes is through Community Reuse Organizations (CROs). CROs were created by DOE in the early 1990's to facilitate the transfer of real and personal property at some sites and to provide EM the ability to support economic transition in alignment with community needs.

Using one of these groups, along with Site-Specific Advisory Boards (SSABs) and other stakeholders and tribes when considering cleanup completion and closure plans, has proven successful. For example, the CRO's or local governments or other entities could be the conveners for hiring consultant support when developing a community strategic plan or vision. The consultant's scope would include gathering a wide array of input, identifying key areas of interest (e.g., clean energy, manufacturing, wildlife preserve, etc.), identifying zoning and encumbrances.

The CRO and SSAB occupy different roles. CROs often include local businesses, elected leadership and community stakeholders, though membership varies from site-to-site. SSAB's are generally comprised of individuals that do not represent specific constituencies. CROs provide a forum that allows for multiple local inputs and helps support the message of the proposed action. CROs can provide a path of consensus or dissention, both of which are a part of the process.

Role of Local Governments: One point to be noted is the gap in the federal process, which does not provide for a formal role for local governments, and yet, local elected officials are most knowledgeable about the needs and concerns of their local citizens. This gap is important as there are times when local governments are not aligned with the CRO or SSAB, despite some local government representation on both. The Hanford site has a good model that gathers cities, counties and a port together to hear about activities taking place on site. The group develops aligned policy issues that they then coordinate with the local CRO. There are times when the community does not share the priorities of the other stakeholders and this is why they should be an independent voice at the federal table. In the end, it is local government and tribes that are left with the legacy of the federal cleanup efforts and it is important that they are equally a part of the proposals, process and solutions.

Role of State Governments: States play a unique role, as state agencies can help mitigate the economic impacts of site closure and reuse, while other state agencies regulate the extent and pace of cleanup activities. This dual role for state government must be understood and addressed in order to comply with the applicable regulations while securing the political support of state officials, notably the Governor.

Needs and/or opportunities: A shared vision amongst the parties is foundational to securing needed political alignment that's foundational to a successful cleanup.

Challenges: There are a number of challenges. Securing a common vision for the cleanup and long-term use of the site can be enormously difficult, especially when the local governments' voices are

muted. Additionally, EM and community leadership must be fully committed to this effort, must substantively involve local governments at the outset, and commitment to ongoing engagement and participation once plans are adopted.

Past challenges have also included a limited long-term federal investment in a site and adopting cleanup and long-term use visions that could increase program costs. However, if understood in the longer term, these investments often lead to better alignment between EM and its stakeholders, resulting in faster reduction of liabilities and greater support from local communities.

DOE programs that are central to the project success: Environmental Management, Legacy Management, National Nuclear Security Administration, Office of Science, and Office of Management (specifically Real and Personal Property).

Non-DOE parties that are central to the project success: Federal and state regulatory agencies (including the state labor department), cleanup contractors, Congress, Governors, local elected officials, tribes, workers (including but not limited to labor unions), and citizen organizations.

Analysis: There will be short- and long-term goals outlined in the various versions of these plans since some EM sites are at closure and some will remain operational but gradually could be transitioned.

Success factors include:

1. **Engagement:** Multiple options to gather input is necessary.
2. **Communication:** Ongoing outreach and education are needed to provide clarity and manage expectation for the duration of the process. It will be important to be clear that no final decisions or determinations are prematurely being made.
3. **Planning:** For the development of a community strategic plan, this level of planning is closer to a “master planning” process, followed by a formal land action by the city or county with support from the state government, as appropriate.
4. **Visioning:** The parties need to identify one or two target industries or uses, identify other federal missions that can leverage federal investments to support a new vision, and ensure the parties are thinking broadly and big enough.
5. **Recruitment/Retention:** Community support for recruiting new companies and retaining current ones with the goal of increasing job growth and private sector investment is important. This shift to new industries and jobs can help off-set losses and lead to true diversification.

EM Charge: Obtain state/local government and worker support for completing the cleanup mission

Goal: Accelerate cleanup decision-making and completion within the EM complex by obtaining support and clear direction from regulators, local governments and site workers. Essential to meeting this goal is convening high level policy meetings between Governors, state and federal regulators, and EM Assistant Secretary. Local elected officials must also be actively involved in planning and policy prioritization.

Background: In the past, challenges in setting cleanup standards and reaching final closure of sites have occurred because there was not a mutually agreed upon vision of what the site or completed portion of the site will be used for, because difficult political decisions had not been made and/or because workers feared losing their livelihood.

Needs and/or opportunities: Accelerating or completing cleanup of full or partial EM sites requires that difficult political decisions be made on future uses and timelines for achieving cleanup. Regulators need to set cleanup standards applicable to the future uses. Workers play a key role in meeting goals, regulatory standards and future objectives of cleanup, while at the same time working themselves out of jobs. Local governments need to be active in setting the visions for the future uses for assuring that they address local community planning and development goals.

Challenges: Regulators need senior political leaders (Governor, Attorneys General, Agency Directors etc.) to make regulatory decisions for final cleanup and then allow flexibility in regulatory applications. Communities with diverse stakeholders and Tribal Nations need to come together with a unified vision of the future uses of the sites. Decisions must be clearly articulated and consistently conveyed to attain timely progress in completion.

DOE programs that are central to the project success: Environmental Management, Legacy Management and National Nuclear Security Administration

Non-DOE parties that are central to the project success: Federal and state regulators, Governors, state and local elected officials, and site workers, labor unions, contractors, and community colleges.

Analysis: The approach to state and local government and worker support for cleanup completion must be multifaceted. It needs to include the following elements:³

1. Development and clear communication of the vision for cleanup completion and closure. That includes:
 - a. Involvement of a wide variety of stakeholders
 - b. Executive leadership. Flexibility in regulatory applications by federal, state and local regulatory staff is essential to deal with complex cleanup and closure issues. Senior and executive level participants from Governor's offices, state and federal regulatory agencies, EM and local government officials help facilitate mutually agreed to standards and vision for completion.
 - c. Direct meetings and communication between EM-1 and Governor's offices and continued conversations on the progress and challenges of completion. Inclusion of local

³ This analysis dovetails with the charge below, "Design and implement worker transition programs, including reemployment assistance"

- elected officials in dialogue regarding decisions and directions is likewise foundational to successful projects.
- d. Open communication across a wide spectrum of sources. Avoid decide, announce, defend determinations for completion.
 - e. Continuous reiteration of the vision and goals for cleanup and closure.
2. Bias for action
 - a. Risk driven decisions that are inclusive of other criteria such as work efficiency, skilled workforce, regulatory requirements
 - b. Agreed to prioritization list of cleanup elements with a process for escalation of emerging issues
 - c. An adaptable plan that leverages efficiencies in cleanup such as addressing co-located facilities, worker skill sets and equipment availability
 3. Contracting flexibility to promote efficient, timely and cost-effective cleanup and closure
 - a. Clear statement of work and work scope. (Depending on how this statement of work is framed, it could undermine contract flexibility.)
 - b. Incentives for completion of work early and underbudget. Generally, monetary compensation to all levels of the workforce (manager to field worker) when cleanup elements are satisfactorily met either early or underbudget or both. These incentives would be negotiated and agreed to in the contract and would apply to both bargaining and non-bargaining employees. These should include short- and long-term incentives (for example completion of an individual site or building, and completion of an area or full site.)
 - c. Immediate attention to challenges and problems.
 - d. The tools to address failure to meet contract obligations
 4. Contracting that allows for compensation of skilled workers that stay until completion of the project, coupled with systems to assist employees in finding future employment and training.
 - a. Monetary compensation based on completion of the scope of work and contract fee rewards.
 - b. Applicable for both bargaining and non-bargaining unit employees and included in the initial contract agreements.
 - c. Assistance with finding and preparing for future employment opportunities. (See next charge response for more on this.)
 5. Local economic development promotion
 - a. Work with State Commerce or trade agencies to develop facilities at or off-site as (or when) the final cleanup vision is developed reached. Obtain assistance in marketing site facilities/services that are viable for other industries, for example energy grids, laboratory facilities, skilled workforce, equipment etc.
 - b. Work with state and local business development and reuse agencies/programs to provide opportunities to attract new or expand existing business to the community taking advantage of the facilities/services noted above.
 - c. Highlight employment opportunities for any long-term surveillance, records management or maintenance activities prescribed in final cleanup and closure plans.

EM Charge: Design and implement worker transition programs, including reemployment assistance

Goal: Assist workers in planning and securing a future job while maintaining essential skills and a focus on EM mission completion in a safe and timely manner.

Background: In the past EM and its contractors have successfully assisted workers in finding new positions as sites closed or contracts transitioned. Success is linked to safety focus, clarity in job completion duties and end dates, assistance with finding job opportunities, and information, training and skill building.

Needs and/or opportunities: Communication is paramount to ease anxiety and provide clarity on job completion timeframes. Coaching assists employees in planning for their best future. Juxtaposition of employees with new opportunities in a variety of ways greatly increases match opportunities for future employment.

Challenges: Assistance for worker transition, as well as partnering with other assistance providers, requires resources and coordination. Providing clarity and consistent communication during site closure and accompanying upheaval is challenging. Maintaining staffing levels for critical skills while supporting individual career transition is important. Communication with Congress and other elected leaders is needed for support mission completion. Contractors need greater flexibility in managing the work force in order to control costs.

DOE programs that are central to the project success: Environmental Management, Legacy Management, National Nuclear Security Administration.

Non-DOE parties that are central to the project success: Contractors and their parent companies, federal, state, and local agencies, local and state job service centers, unions, local elected officials, universities and colleges, regional corporations, and workers. The impact of each party – and the role each occupy – varies from site-to-site.

Analysis: As soon as workers are aware that there may be a change in future mission that may affect their job, fear of the future can create anxiety that distracts workers from their current job and emphasis on safety. In the past, consistent communication has proven essential in reducing anxiety through a clear understanding of the job completion path. A date certain for each employee's job completion helps them to plan accordingly and decrease anxiety related to timing uncertainty. Coaching through the transition, skill-building, education, training, and job opportunity awareness are all highly effective elements of worker transition success.

Potential success strategies (incorporating past lessons learned) include:

1. Establish a robust communications and public relations team to message the workforce as well as the community.
2. Notify the workforce as soon as possible of any potential change in future site or area use.
3. Begin discussions early with unions about potential change in future site use, change in types of work needed, and potential phase out of jobs.

4. DOE and contractor should partner with unions and local/state job service centers early to prepare worker transition options. Strategies should endeavor to make the transitions as gradual as possible.
 - a. Train as many workers as possible to anticipated cleanup and closure skills.
 - b. Establish communications with regional corporations to gain information on needed skills as well as relay information on types of experience and disciplines that may be coming available.
 - c. Contractor should establish communications with affiliates and parent company to help match available employees to internal job openings. Temporary assignments to a parent or affiliate may lead to permanent employment.
 - d. For federal employees, DOE's presence on the Federal Executive Board, along with twenty-two other federal agencies, is an opportunity to market employees to other agencies. Some site employees could begin an extended detail to a target agency in hopes of gaining permanent employment.
 - e. DOE should ensure communications among sites and with Headquarters to match available employees to job openings. Again, temporary assignment to another site or Headquarters may lead to permanent employment.
 - f. Establish relationships with universities, colleges, trade schools, and job service centers for training in support of job opportunities.
5. Determine positions and skill sets needed for cleanup and closure.
6. As soon as the closure schedule is known, EM and its prime contractor should realign as many workers as possible to cleanup and closure activities.
7. As soon as possible after the closure schedule and realignment are accomplished, determine a projected end date for every worker. Notify all workers of their individual projected end dates as soon as possible, along with information about transition options and services. Ideally, the notification should occur at least six months prior to the projected end date. Create a clear line of sight for employee duties leading to closure, while simultaneously providing a means (such as an incentive) to keep employees until their projected end date.
8. Make closure coaches available to all employees to individually discuss
 - a. Development and advancement opportunities, internally and externally
 - b. Training opportunities that would set the employee up for future work elsewhere
9. Set up opportunities for employees:
 - a. Workshop on how to network, interview, negotiate salary, update resume, etc.
 - b. Workshop on retirement planning
 - c. Workshop on small business start-up
 - d. Training for new skills
 - e. Fairs to network and learn
 - i. Colleges for potential education advancement
 - ii. Contractor parent companies and affiliates
 - iii. Regional corporations
 - iv. Job fair
 - f. Website for job openings and resume postings
 - g. Contractor funding for training or education assistance
10. Establish incentive programs⁴:

⁴ This subsection also applies to the prior charge, "Obtain state/local government and worker support for completing the cleanup mission"

- a. For employees, if site cleanup and closure goals are achieved and the employee is still employed on award date. The program should be clearly communicated with transparent metrics and planned release dates.
- b. An annual incentive plan along the same lines could be established with unions if significant project work is completed on schedule.
- c. Once an end date is established, the employee could receive a bonus only if the employee stays until the completion date.

EM Charge: Identify and advance economic development efforts and facilitate future use planning

Goal: Expedite site cleanup by integrating redevelopment at EM facilities. This can include fostering tools designed to achieve greater interaction, cooperation and agreement with state and local government and economic development officials.

Background: Uneven coordination with state and local economic development and land use officials has led to delays and misunderstandings regarding cleanup levels and potential redevelopment opportunities at EM facilities. A key to the Mound cleanup is the redevelopment of the site for commercial and industrial uses. The focus on cleanup to facilitate the redevelopment led to the success of the cleanup and closure of the Mound facility.

Needs and/or opportunities: State and local economic development and land use planning officials are critical to both the creation and implementation of a successful redevelopment plan. Early identification of local community redevelopment needs and integration of these needs within EM responsibilities and limitations will help yield a shared future use vision.

Challenges: EM has a restriction on using funds for economic development, but cleanup that integrates reuse is permitted. A commitment to ongoing communications geared toward developing a shared goal is paramount to this effort. Existing EM resources must understand the different needs of each location and how they differ from site-to-site. It takes time for parties to fully understand each other's positions and to develop the trust necessary to move forward with a land use plan that can be successfully implemented. Participation by the highest levels of DOE management is necessary to demonstrate the agency's commitment to the process.

DOE programs that are central to project success: Environmental Management, Legacy Management, National Nuclear Security Administration, Office of Science, and Office of Management (specifically Real and Personal Property).

Non-DOE parties that are central to project success: State and local economic development offices, local land planning offices, Community Resource Organizations, and DOE contractors.

Analysis: Success hinges on continuous and open communication between EM and the appropriate state and local governments, economic redevelopment officials, and CROs. This effort involves determining exactly who is "in charge" at the local level. EM does not have the luxury of picking and choosing with whom it wishes to work, but must determine how best to interact with all entities that have a say (formal or otherwise) in the future use of the site. This effort requires background work by EM before formal engagement with state and local officials begins in order to get a clear picture of the playing field, the players and their relative authorities and responsibilities.

It is vitally important that EM not pre-determine the future land use. While the agency may have a clear idea of what is feasible based on site conditions or other factors, ultimately that is a decision that has to be reached jointly by EM and the affected community. The experience and expertise that the local agencies can bring to the table must be recognized and utilized by EM throughout the entire process of developing a site reuse plan. As such, it can be a lengthy and frustrating process for EM, but in the end, one which usually results in a better and more accepted approach.

Successful strategies include:

1. Identify the relevant state and local agencies, authority and leadership.
2. Establish the EM transition office (per this EMABs recommendation) to, among other responsibilities, interact with both the state and local entities and the public.
3. Develop a comprehensive communications/public relations strategy that serves as the vehicle for informing all parties of the issues surrounding site redevelopment.
4. Seek formal presentations from state and local entities on their respective authorities, responsibilities, potential state and local investment incentives, procedures and previous plans for site reuse.
5. Prepare a detailed draft schedule for development of the site reuse plan. This effort should include an analysis of any site conditions that influences site reuse and identifies serious obstacles that affect future uses.
6. Present relevant reports on the critical issues of site reuse including ongoing DOE needs, environmental restrictions and considerations, market analyses, and examples of issues and successes at other EM facilities. This effort may involve bringing in outside agencies or experts to discuss specific issues that could be particularly useful in working with local entities.
7. Utilize, as necessary, a redevelopment forum. This roundtable discussion comprised of affected local parties and outside experts focuses on a property summary and background, environmental summary, market overview, S.W.O.T analysis, and marketing recommendations.

As this process moves forward, EM should urge all participants to agree when the appropriate time to request and consider proposals for reuse should occur. Too early in the process and the parties run the risk of receiving exciting but completely infeasible proposals that might gain the support of local entities but be a complete non-starter for EM. Allowing the site education process to progress before receiving offers should lead to more informed consideration of all the offers received.

Additionally, once proposals are received, EM should drive the effort to reach consensus, if possible, on a collective future use vision. Throughout the process it has to be made clear that the ultimate decision resides with EM as the site owner; however, if the process has been open and inclusive the hope is that all or most of the parties will understand limitations and environmental realities and settle on a future use that best utilizes the property and recognizes EM's needs and limitations.

As noted elsewhere in this report, bringing a community together to determine a significant change in use for a facility that has likely been the largest employer is challenging. The emotions involved cannot be understated and significant amounts of patience is required if there is a desire to achieve a mutually acceptable result. Transparency in communications is paramount to both gaining the trust of local decision-makers as well as explaining the realities of future use opportunities.

EM Charge: Engage in meaningful discussion and develop productive relationships with the labor unions

Goal: Effectively communicate that cleanup completion and closure will occur, and develop and deploy mutually agreed upon goals and objectives between labor unions and management.

Background: Failure to achieve alignment of management and labor goals can and has led to project slowdowns and significant cost overruns.

Needs and/or opportunities: Accelerating cleanup completion and closure at EM sites requires excellent relations with the labor unions. Increasingly, labor unions and management are discovering that mutually beneficial outcomes are possible and preferable. Labor and management can function as a team with a common goal. Specific proactive maneuvers can enhance the likelihood of successful and expedited closure activities.

Challenges: Developing and maintaining good relations with labor unions requires a significant commitment to communications to discover and deploy mutually beneficial strategies. Good communication requires the consistent, dedicated, and ongoing presence of management personnel.

DOE programs that are central to the project success: Environmental Management, Legacy Management, National Nuclear Security Administration.

Non-DOE parties that are central the project success: Federal Mediation and Conciliation Service (FMCS), labor unions, contracting company managers

Analysis: Eight approaches are foundational to meeting the aforementioned goal.

Communicate: : Focus on communications in order to build trust and align the parties' goals. Informing and including the labor unions at the outset of the planning is imperative. It was noted in the Rocky Flats Closure Legacy (Part 2, 14-1 to 14-14) that "After having the specter of RIF {Reduction in Force} looming for nearly six years, most staff receiving RIF notices were visibly relieved to have the certainty of the separation notice and date." Without timely, accurate communication employee morale may decline and exacerbate plans for cleanup.

Listen: Listen to the labor unions. Communication is two-way, and that includes listening. Unions want their concerns heard and addressed, and to participate in decision making that affects their lives and work. Managers who sit in a closed office miss the opportunity to build the requisite team approach to meeting expedited timelines. In addition, labor unions can provide valuable input to management concerning best practices engineered to meet objectives.

Meet Regularly: Meet regularly with union representatives to address a range of issues central to the safe and timely project completion. Do not confine these meetings to a formal negotiation process or resolution session. Meet for coffee, meet for lunch, and meet in the project field. Do not summon the steward or business agent into a management office.

Availability: Managers should walk the job site on a regular basis, making themselves available to rank and file. Observe actions and reactions. Employee and personnel conflicts are not always related to

the operation. Work with the union representative to move employees that are creating disruptions. Be present.

Partnership: Emphasize that management and labor have a common goal – project success. Create an atmosphere of teaming, where workers are encouraged and rewarded for finding better ways to accomplish common goals. This approach encourages workers to adapt to new technology and new methods, and to participate in brainstorming designed to lead to better outcomes.

Openness to Innovation: Encourage and accept employee suggestions. Often, workers think of better ways to do a job. It is their profession and most workers take great pride in their work. Encourage employees to innovate and bring their ideas to managers or supervisors. Recognize superior efforts when they produce good results, but be cautious with bonuses in a strong union situation where extra pay for one worker could create a sense of inequality. Rather, look for ways to reward the entire team.

Ask for Advice: Never hesitate to ask a union leader for suggestions on how best to approach a job. Inclusion creates a sense of ownership and teamwork with the unions. Superior results can be obtained when the labor union has a sense of ownership.

Problem Solving: FMCS was created by Congress as an independent agency in 1947. Its primary responsibility is to promote sound and stable labor-management relations through a variety of mediation and conflict resolution services. Over its 60+ years of existence, the FMCS has evolved to assist parties resolving disputes, with services designed to meet three mutual goals: (quoting from FMCS brochure: <https://www.fmcs.gov/wp-content/uploads/2017/01/FMCS-Building-Relationships-09-View.pdf>)

1. **Improving the Labor-Management Relationship:** Mediators help the parties expand and improve the working relationship, the ability to resolve grievances and to deal effectively with pre- and post – negotiation problems
2. **Improving Organizational Effectiveness and Employment Security:** Mediators work with parties to enhance joint problem-solving and decision-making capabilities, overcome barriers to quality and productivity, manage change collaboratively, jointly address work design and enhance employee job satisfaction and employment security.
3. **Improving Community-Wide Labor-Management Relations:** This includes the effective operation of area and industry-wide labor management committees and can address the development of a community and/or industry through labor-management cooperation.

Appendix A: Proposals for Future EMAB Review

The EMAB Transition Subcommittee believes that EM should explore two additional items as EM seeks actionable recommendations on alternative methods and approaches to accelerating cleanup completion and closure. If directed to do so, EMAB is prepared to further analyze and report on the potential benefits of Firm-Fixed-Price contracting and the role of local governments.

Task 1. Firm-Fixed Price Contracting

The General Services Administration's Federal Acquisition Regulations Section 16.202-1 define "Firm-Fixed-Price" (FFP) contracting as follows:

A firm-fixed-price contract provides for a price that is not subject to any adjustment on the basis of the contractor's cost experience in performing the contract. This contract type places upon the contractor maximum risk and full responsibility for all costs and resulting profit or loss. It provides maximum incentive for the contractor to control costs and perform effectively and imposes a minimum administrative burden upon the contracting parties. The contracting officer may use a firm-fixed-price contract in conjunction with an award-fee incentive (see [16.404](#)) and performance or delivery incentives (see [16.402-2](#) and [16.402-3](#)) when the award fee or incentive is based solely on factors other than cost. The contract type remains firm-fixed-price when used with these incentives.

Increasingly branches of the Federal Government have turned to or are considering the utilization of FFP contracts. FFP's have been effectively deployed by the Department of Defense for decades. Over the last 18 months, the Nuclear Regulatory Commission approved FFP's for three merchant nuclear power plant decommissioning projects. Recently, the Environmental Protection Agency Superfund Task-Force called for the exploration of FFP's as a means to help control spiraling costs and expedite regulatory closure at Superfund sites across the United States.

The benefits of FFP contracting are as follows:

- Cost certainty is obtained as risk for cost overruns has been transferred to the contractor
- Contractor is financially incentivized to deliver end result ahead of schedule and under budget
- Reduction of management oversight costs are achieved
- Expedited return of the asset to the community is achieved

Task 2. Role of Local Governments in Cleanup Planning and Execution

As noted in this report, federal regulations do not require formal local government input as they do state and tribal governments, yet local elected officials are most knowledgeable about the needs and concerns of their local citizens. This gap is important as there are times when local governments are not aligned with the CRO or SSAB, despite some local government representation on both. The challenge of crystallizing local community voices into one primary message was also noted by the Office of Economic Adjustment as significant for Department of Defense site cleanup.

This relationship between local governments, CROs, and SSABs warrants a closer examination as it concerns cleanup and transition planning.

Appendix B: EM Site Transition Roadmap

The following is a recommended roadmap for Department of Energy (DOE) Environmental Management (EM), contractors, communities, economic developers and regulators as entire DOE sites or areas within sites may close. Some DOE sites have an overall continuing mission and this Roadmap may apply to only a portion of the site. Depending upon the circumstances, some steps may occur in a different order, may be iterative or may not be pertinent. For DOE sites that stored hazardous substances, the land transfer requirements of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 120(h) may apply.

Planning Phase		
General	Land Use	Worker Transition
<p>Communication: EM and the contractor establish a strong communications plan to consistently relay potential and actual changes in site/area mission and closure status.</p> <p>Central Planning: EM/contractor establish central planning and integration that includes the ‘end game’ of focused cleanup, communication and transition. Central planning/integration should focus on aligning schedule to end user opportunities and worker transition opportunities. Central planning should also define key completion activities and map skills to individual workers to assist in</p>	<ol style="list-style-type: none"> 1. Inventory: EM or a contractor establishes inventory/database of site/area baselines and assets. Consider making information available in an easily accessible, marketing format to highlight assets, such as the database maintained by the SC Department of Commerce at https://www.locatesc.com/. <ol style="list-style-type: none"> a. Map showing large available areas, contaminated areas, wetlands, existing surface and sub-surface structures b. Conveyances – rail, roads, water access (barge), port, transfer facilities, both onsite and connections to region c. Water supply – raw and potable d. Wastewater treatment capacity, onsite as well as local e. Power – onsite capacity and connection to grid f. Natural gas availability and capacity g. Existing building quality and capability h. Disclosure of site Environmental Baseline Survey conditions i. Current cleanup strategy with likely land use and re-development restrictions j. Any information on desired schedule for cleanup completion and transition to new use 2. Community Input: EM meets with community representatives (elected representatives, Tribal Nations, local governments) to share the desire to cleanup and reuse a site or portion of a site. If the future reuse plans need development, EM may wish to enter into agreement with a Community Reuse Organization (CRO) for community visioning. Some essential elements of the agreement would be: <ol style="list-style-type: none"> a. The CRO, or some hybrid of a CRO, would need to structure itself to dialogue with all community 	<p>Communication: EM/contractor communications notify workforce and any unions of potential change in site/area mission. This should be done as early as possible and consistently as more clarity is reached on transition schedule. This process should be iterative, for example, as workers transition from production to cleanup duties and then from cleanup duties to post closure jobs.</p> <p>Worker Transition: EM/contractor begin to establish worker transition strategies and to pursue them with unions and local job placement/training organizations.</p>

<p>defining worker end date.</p> <p>National Environmental Policy Act (NEPA): EM begins preparation of NEPA analysis that is broad enough to cover possible CRP reuse options.</p>	<p>stakeholders, Tribal Nations, local governments, state officials, and elected representatives and be able to speak to EM with one collective community voice.</p> <ul style="list-style-type: none"> b. EM may provide resources to the CRO to help the CRO organize and develop a consensus for redevelopment. The CRO would likely need to obtain economic development and environmental consulting assistance. c. The CRO establishes robust public relations and communications to help manage community discussion about preferred end state/future use. d. The CRO gets community input for preferred future use vision. This may be an iterative process. e. The CRO would produce a Community Redevelopment Plan (CRP) within an agreed upon time period. The purpose of the CRP is to create the conceptual framework and allow dialogue for developing the conceptual future use scenario. The CRP should include consideration of community interests, environmental conditions, cleanup costs and tradeoffs, economic market, workforce, and business interests. The CRO would work with cleanup experts to outline some realistic possibilities for future reuse (for example, wildlife refuge, park, industrial use and types, mixed use) based on known contamination levels as well as local and regional opportunities. The range of potential future use options should be as open as possible, yet realistic. For example, future use of heavily contaminated areas would likely be limited by use restrictions on land and groundwater, meaning exclusion of residential use. Also, abandoned underground utilities and structures may be “clean” according to regulatory requirements, but still be a barrier to desired re-development. The CRP could be focused on adaptive reuse, that is, a future use that is similar to past or present property use. The CRO narrative would need to manage overall expectations on timing for the cleanup/reuse/transition. The CRO also needs to communicate with EM during this process to ensure realistic options are being considered. This process may also be co-led by EM if desired. Communication between EM and the CRO needs to be continuous during the planning phase to ensure convergence on a realistic CRP. <p>3. Market Input: The CRO or EM solicits proposals for future reuse from potential end users. The proposals include</p>	
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	<p>their investment offers and should reflect community and collective reuse preferences as well as realistic limitations. The CRO may also wish to hold a redevelopment forum to kick start this process. The solicitation does not set expectations that end users will be selected, only that the process may involve end users' proposals moving forward as part of cleanup strategy.</p> <p>4. Collective Future Use Vision: The CRO submits the community reuse plan to EM for approval. EM should prepare an Environmental Impact Statement for the proposed reuse. EM obtains concurrence from regulators on whether any land transfer will occur under CERCLA 120(h)(3)(B), 120(h)(3)(C) or 120(h)(4) and creates a schedule for necessary regulator and Governor approvals. EM notifies Congressional committees if legislation is helpful in supporting a future reuse (such as wildlife preserve).</p> <p>5. Contract Alignment: Adjust contract to focus on reaching the preferred end state.</p>	
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Decision Making Phase

General	Land Use	Worker Transition
	<p>6. Schedule: CRO, EM, contractor, and regulators may form a team to work out an agreed upon joint schedule to finish cleanup and determine specific cleanup levels. Cleanup end states should be risk informed and fit for desired re-use as much as possible. If developers want a substantially higher reuse level, developers (or someone else) may pay for the higher cleanup level. Additional work could also include removal of clean underground utilities or structures. The joint schedule also needs to support end users need date for market viability and aim to transition (cleanup completion and land use turnover) in phases.</p> <p>7. Finalize schedule and cleanup levels with community involvement.</p> <p>8. The cleanup team (EM, Contractor, regulators, CRO) works to the joint schedule.</p> <p>9. EM completes requisite environmental work meeting regulatory requirements, and decides whether to initiate the land transfer process, and makes decisions on specific property conveyance requests. EM and regulators agree on any necessary deed restrictions.</p> <p>10. EM prepares all materials for a draft transfer agreement, including any regulatory and Governor approvals.</p>	<p>End Date: EM/contractor establish and communicate a projected end date for every worker as early as possible. Note that there are many complexities with contract benefits and unions.</p> <p>Transition Strategies: EM/contractor communicate worker transition strategies and opportunities in general and in discussions with individual workers.</p>

Implementation Phase

General	Land Use	Worker Transition
	11. EM completes the transfer and executes the quit-claim deed of transfer in whole or parcel by parcel. EM may also transfer land to another Federal agency to act as land agent.	

Appendix C: Lessons Learned from Department of Defense (DoD) Office of Economic Adjustment (OEA)

The Environmental Management Advisory Board Transition Subcommittee recognizes that large Department of Defense (DoD) site cleanup, closure, transition, and redevelopment has occurred under Base Realignment and Closure (BRAC). To assist communities and workers with the change in mission, DoD created the Office of Economic Adjustment (OEA). As Patrick O'Brien, OEA Director, and his staff explained to Transition Subcommittee members, the BRAC transition process contains several actions that would apply to EM transition.

1. As recommended in this report, similar to the DoD OEA, EM should develop a transition office.
2. DoD has enabling legislation which helps to ease funding to their OEA. Similar legislation would benefit EM.
3. DoD has completed a number of site closure cleanup work through a guaranteed fixed price contract. As recommended in this report, EM should explore this option.
4. EM is in a better position than General Services Administration (GSA) to assist with community transition. Specifically, GSA should delegate property disposal authority to DOE as has been done for past DoD Base Realignment and Closure. In fact, many DOE-designated Community Reuse Organizations (CROs) have spearheaded that work.
5. In order to take advantage of market interest, time is critical. A shorter time to develop the community transition plan ensures that commercial entities do not lose interest and minimizes the time for property to languish and fall into disrepair. A recommended time limit is 1-2 years.
6. The most practical land conveyance for DoD has been a no cost or some cost economic development conveyance. It has been a pitfall to attempt conveyance at fair market value because it is difficult to reach agreement on property value. (Some examples of why value agreement is difficult to achieve: (1) Property may have contamination, (2) property may have buildings not built to local codes or in disrepair, and (3) with the availability of new, significant pieces of land and changes in the local economy with site closure, property values may be in flux .)
7. DoD encourages community reuse plans to consider adaptive use—that is, a future property use that is similar to past or present parcel use. This approach encourages a realistic, beneficial reuse plan.
8. Insurance products can be useful in transferring property to a third party for cleanup.
9. The biggest areas of adversity often center on cleanup levels, land value, and community segments that do not work well together.
10. OEA has authority to grant funding to communities under Title 10 Section 2391; DOE does not have similar authorization.
11. DoD also considered at one time using Environmental Services Cooperative Agreement (ESCA), although that option was never fully realized. The ESCA transfers property and direct funding from DoD to the local redevelopment authority for property cleanup.