Association of State and Territorial

ASTSWMO

Solid Waste Management Officials

A Regulator's Guide To Base Realignment and Closure

DEVELOPED BY THE ASTSWMO BASE CLOSURE FOCUS GROUP

OCTOBER 2006

UPDATE 1: JANUARY 2009

UPDATE 2: APRIL 2010

State Regulator's

Guide To Base Realignment and Closure

Introduction

The Base Realignment and Closure (BRAC) process is the mechanism the federal government uses to improve the overall operational efficiency of the military by reorganizing its installation infrastructure. Since 1988, there have been five BRAC rounds, enabling the Department of Defense (DoD) to close designated military bases and to realign mission activities on others, resulting in substantial savings to DoD. As a result of these actions, hundreds of facilities have been either realigned or closed.

On November 9, 2005, Congress passed into law the recommendations of the BRAC Commission, which identified the fifth round of base closures (BRAC 2005). By statute, DoD must begin closing and realigning the installations by September 15, 2007 and complete the process by September 15, 2011. BRAC 2005 will result in the closure of 25 major installations and the realignment of 24 others. The realignment included not only closure, but also base downsizing along with substantial growth at many active installations.

In October 2003, ASTSWMO's Base Closure Focus Group prepared a white paper entitled "*Preparing for the Next Round of BRAC, Issues for Consideration from the State Perspective*." The paper identified concerns with the current BRAC process and what to expect in the next BRAC round and concluded the following:

- $ BRAC 2005 clean-ups will be more focused toward privatization and Performance Based Contracts, which likely means additional State regulatory oversight.
- $ DoD sites that are transferred via privatization must be Department of Defense and State Memorandum of Agreement (DSMOA) eligible.
- $ There must be dialogue in the near future to discuss new DoD policies associated with BRAC clean-ups.

In addition, the paper identified numerous areas for improvement of the BRAC process, including:

- $ Ensuring early State involvement, especially in the preliminary clean-up scoping and budgetary planning.
- $ Identifying lead agency/regulatory roles and responsibilities early in the process, and establishing realistic and enforceable schedules.
- $ Ensuring DoD recognition and compliance with State clean-up statues, regulations and enforcement authorities.

Through ASTSWMO's discussions with DoD and military components, the direction for the next round of BRAC will be for DoD to: 1) sell property at fair market value; 2)

integrate redevelopment and clean-up as much as possible; 3) utilize Brownfields-like processes; and 4) expedite clean-up or transfer clean-up to the new property owner.

In December 1997, DoD produced a *Base Reuse Implementation Manual (BRIM).* Its purpose included providing guidance for those carrying out the regulations for revitalizing base closure communities and community assistance.

On March 1, 2006, DoD issued a *"Base Realignment and Redevelopment Manual" (BRRM),* which supersedes the BRIM and prescribes the procedures DoD will follow to reuse and redevelop bases. The 146 page manual is a "cookbook" of procedures associated with BRAC, including working with communities and States to facilitate transition and base redevelopment, real property disposal, and complying with laws pertaining to cleanup of hazardous substances and petroleum products.

ASTSWMO's Base Closure Focus Group has identified procedures in the BRRM that could adversely impact State's oversight responsibilities. Because the BRRM was finalized without an opportunity for States to provide review and comment, the Focus Group has developed this manual to:

1) Identify changes to the BRAC process as outlined in the BRRM; and
2) Assist State and Territorial (States) regulators in working with DoD, local redevelopment authorities and communities in assuring protective, expeditious cleanup and property transfer.

Index

I. The Environmental Condition of Property (ECP) Process

For transferable property at BRAC 2005 installations, DoD will employ Environmental Condition of Property (ECP) reports instead of preparing an Environmental Baseline Survey (EBS) as was done in the previous four rounds. The ECP document is a logical first step in the closure of these military installations and will incorporate existing environmental data accumulated by DoD during the active life of the military installation. The ECP will be uploaded to the Internet, where it is readily available to prospective purchasers and anyone else with an interest in the installation.

For regulators, ECPs will bring a change in how surplus property is evaluated. The ECP incorporates existing data and identifies data gaps. In some cases, investigations will be conducted to close the data gaps. The DoD describes the ECP as a living document, which reflects their best understanding of the available environmental information about a given location.

Prospective purchasers will find the ECP process to be similar to their experience with purchasing non-military industrial sites. Available information on the environmental conditions will be provided, but it will be up to the purchaser to determine the accuracy of the information and resolve any remaining data gaps. Although the purchaser will receive, at some time, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) covenant, they may have the burden of proof to establish that newly discovered contamination is the military's responsibility.

Through the Installation Restoration Program (IRP), DoD should have records of historic spills and hazardous material and waste management units at their active installations. Reports of investigation and cleanup work at the active installations will become part of the ECP. However, when bases close, process units may become waste management units and environmental problems with such facilities can escape the ECP. Examples of new areas of concern could include an electroplating shop that formerly occupied the basement of a commissary, a former firing range in the PX or 800 tons of pesticide buried in the ground (actual examples from Army EBS employee interviews).

Purposes of the Environmental Condition of Property

The BRRM identifies the following primary purposes of the ECP:

- $ Provide the Military Department with information it may use to make disposal decisions regarding the property.
- $ Provide the public with information relative to the environmental condition of the property.
- $ Assist in community planning for the reuse of the BRAC property.
- $ Assist federal agencies during the property screening process.
- $ Provide information for prospective buyers.
- $ Assist prospective new owners in meeting the requirements under EPA's "All Appropriate Inquiry" regulations.

- $ Provide information about completed remedial and corrective actions at the property.
- $ Assist in determining appropriate responsibilities, asset valuation, and liabilities with other parties to a transaction.

Regulator Role in the Environmental Condition of Property Process

Under the current BRRM, the completed ECP will be forwarded to regulators only for information purposes. Regulators will not be involved with the development of the ECP, and their approval of the ECP will not be requested. EPA has informed DoD their ECPs will not fulfill the 40 CFR § 120(h)(4) requirements for identifying uncontaminated parcels.

Even if not invited, regulators should promote participation in the ECP process through development of an ECP Team (see Focus Group recommended ECP process on page 8). If DoD ignores the regulator comments, States should consider the use of their DSMOA dispute resolution process to achieve mutual agreement. In addition, if regulator concerns are not incorporated in the ECP, they will be, at least theoretically, captured by the prospective purchaser's due diligence search and will thereby provide a more complete picture of the base's environmental condition.

Relationship to "All Appropriate Inquiries" Requirements

All Appropriate Inquiries (AAI) is an evaluation of real estate by a prospective purchaser, to determine the property's environmental condition and potential liability for environmental contamination. The 2002 Brownfields Amendments to CERCLA required EPA to promulgate regulations establishing standards for all appropriate inquiries. The interim standards for AAI, established by Congress, can be met by conducting a Phase I Environmental Site Assessment using *American Society for Testing and Materials (ASTM) E1527-00.* The final AAI regulations, which become effective on November 1, 2006, require use of an upgraded ASTM standard (E1527-05). Prospective purchasers who meet the AAI requirement may qualify for the innocent landowner, bona fide prospective purchaser or contiguous property owner exemptions from CERCLA liability.

An environmental professional, as defined in the ASTM standard, must conduct an AAI. The AAI must include, among other things:

- $ Interviews with past and present owners, operators and occupants;
- $ Reviews of federal, state, tribal and local government records; and
- $ Visual inspections of the installation and adjoining properties.

One of the intended purposes of the ECP is to assist prospective purchasers in meeting their AAI obligations. The ECP is essentially a compendium of file information. Interviews with installation staff that are aware of past and present operations of the various facilities on the base are not required in an ECP. These interviews, however, are critical to the AAI, and may be difficult to obtain unless the AAI is conducted prior to base closure and the transfer of civilian and military staff. Interviews were the weak link

in some of the pre-2005 military EBS documents and the ECP process may aggravate the problem.

Although the ECP is compatible with AAI, it falls short of providing all the necessary information. Prospective purchasers will have to perform the actions described above on their own. DoD cannot perform a purchaser's due diligence work for them.

Recommendations

The preparation of ECPs is, by DoD design, less resource intensive than the EBS. By not conducting the interviews required by the EBS, DoD is likely to miss many areas of contamination at a closing base. This could result in a considerable savings of time and money for DoD, at least initially. If a property owner later discovers contamination on former military base property, the new owner may have to prove to DoD the contamination resulted from DoD activities.

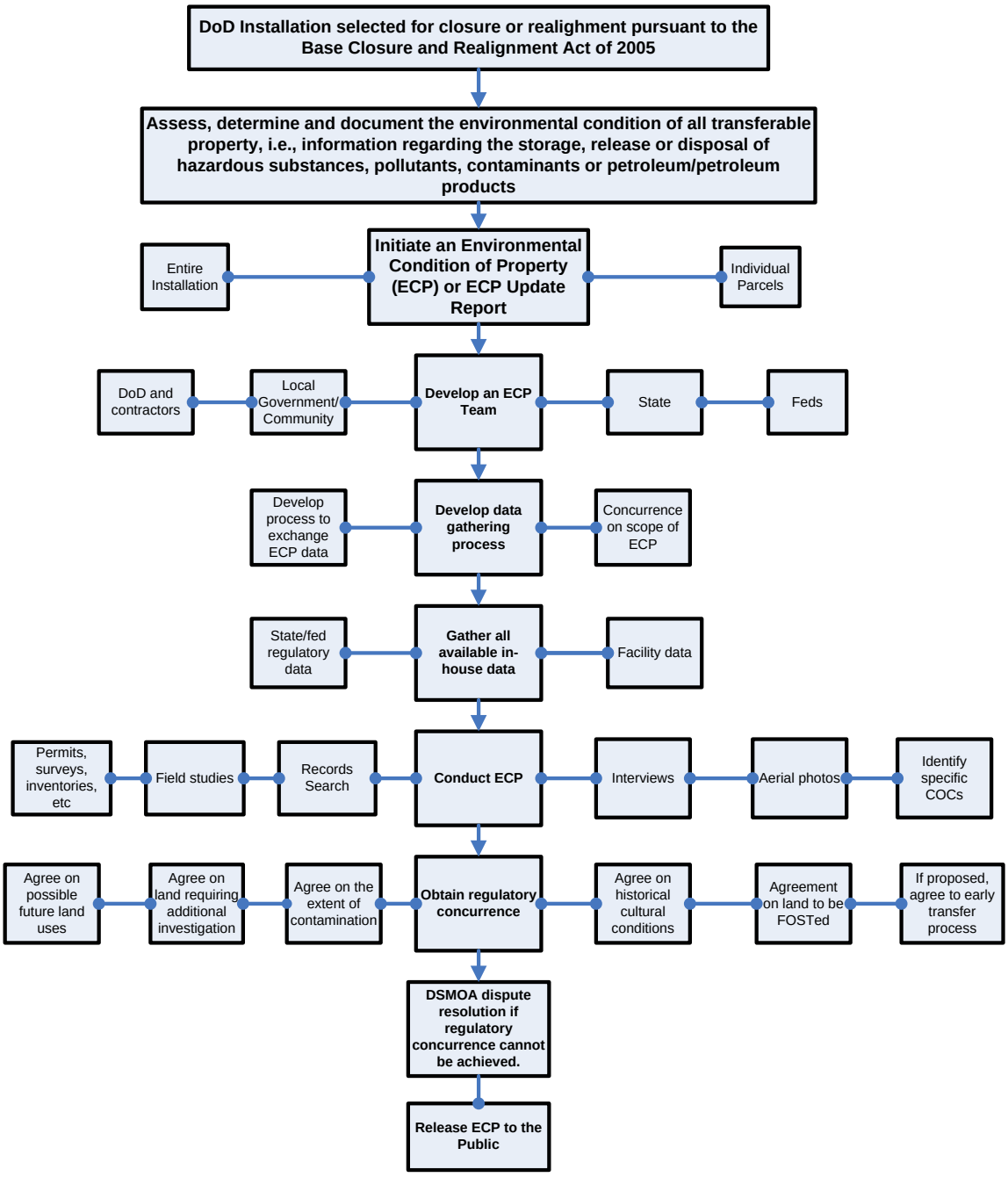
States should promote development of an ECP Team (see below) and participate in the development of the ECP; States should provide comments to the ECP, whether or not their comments are requested. If State regulators do not agree with the conclusions of the ECP, they may want to use their DSMOA dispute resolution process to assist in reaching concurrence with the ECP.

The military component should conduct their extensive interviews with past and present base employees in order to accurately identify areas of contamination that are not recorded in their files.

Purchasers should:

1. Conduct meaningful interviews with civilian and military personnel before the base closes, in accordance with AAI requirements;
2. Determine past uses of facilities at the base. Even though the property owner did not change over the life of the installation, uses of individual sites may have changed many times; and
3. Recognize ECP limitations and complete the AAI and due diligence processes prior to taking ownership of DoD properties.

ASTSWMO's Recommended Environmental Condition of Property Process



II. Impacts at Realigned (Growth) Facilities

Nature of the Problem

A number of facilities will experience a gain (growth) in numbers of troops as a result of base realignments. This growth may challenge a community's capacity to absorb an influx of personnel and may place excessive demands on off-base community services and facilities. Potential considerations for installation growth communities include infrastructure capacity and condition, land use planning elements, local transportation capabilities, local education capacity, and housing availability and quality. Scarcity of off-base housing and school overcrowding are concerns of both the community and the military. It will be the responsibility of the community and DoD to maintain and improve the quality of life for local residents, including the new military personnel and their dependents.

Economic Incentives

One result of the base realignment, with its influx of additional personnel, is an opportunity for the local economy to diversify. This will allow for the creation of new businesses, jobs, expanding the local tax base, and additional community needs associated with new public facilities. Family members of new military personnel may also enter the job market, thereby expanding the local workforce. Some States may offer transportation and infrastructure funding to foster implementation of the installation's growth management plan.

To address the growth in the schools, school districts may qualify for additional aid to respond to the need for new schools, textbooks, and transportation, among others. The Federal Impact Aid Program provides funding assistance to school districts affected by the realignment and its burden of increased students. Community leaders, along with the community and the military, must work together to identify and leverage available local, State, and federal resources for growth management to realize positive results.

Impact Considerations

As a result of the increase in military personnel, civilian personnel, and their families, gaining facilities will have to accommodate for increases in physical security, property maintenance, infrastructure improvements such as utilities, telecommunications, water and sewage demands, solid waste disposal, traffic (need for additional road construction/traffic lights, among others), schools, medical and dental services, and availability of quality housing. Off-base communities may also have to address many of these same needs, in addition to fire and police protection, and employment for military dependents. These issues will need to be addressed to provide for a seamless transition of new personnel into the community.

Growth Management

Federal agencies such as the Office of Economic Adjustment (OEA) can support the local community by helping them establish a growth management organization to assist with redevelopment planning. They may also provide technical and financial assistance to the community to help them assess their population adsorption capacity and develop and implement an action plan to address off-base impacts. The community may form a local redevelopment authority (LRA), working with OEA, to implement all or part of the redevelopment plan (see "Local Redevelopment Authorities" below). They may also form a local growth management organization with advisory committees comprised of representatives from local and State government, the private sector, education providers, and utility providers.

The community, on the other hand, may choose an outside party from the private sector to develop a growth management plan. Undertaking growth management, in partnership with the military installation, can prepare communities for growth through sharing of information and expectations, creating a trusting foundation for growth. Community leaders can work with the local community to anticipate additional services that may be needed, and can work with community groups such as the Chamber of Commerce, the local school board, utility providers, and local community organizations, as well as the state government. These public and private community leaders should assess issues such as housing availability, utilities, services, and public education.

Along with properly managing the growth and ancillary business opportunities that arise, is the need to provide education to local businesses about these opportunities. This can be accomplished through a partnership between the Chamber of Commerce and local community leaders. This education could address access to new markets, new product development, and initiatives to increase competitiveness, technology transfer, manufacturing networks, and information on foreign markets.

Developing a strong partnership between the local community, the military installation, regulatory agencies, and State and federal assistance programs early in the process will ensure success. When the U.S. Army Engineer School was realigned to Fort Leonard Wood, Missouri in 1989, a lack of proper planning left the community unprepared to handle the influx of additional soldiers and family. The community suffered from poor infrastructure and substandard housing, insufficient classroom space and not enough roads to handle the additional cars.

Environmental Impacts

Proposed BRAC actions can have significant impacts on the environment. Gaining facilities will also be forced to consider the increased intensity or expanding use of training ranges and the related environmental impacts such as erosion control, habitat destruction, effluent and emissions limitations (wastewater treatment plants, power plants, and incinerators), among others. These actions may impact wetlands, threatened and endangered species, air and water quality, and overall land use. Under BRAC, there

is a six-year implementation period for facilities undergoing closure. However, actions related to disposal of BRAC properties, such as transfer of unneeded properties and environmental cleanup can extend beyond the six-year implementation period. In addition to BRAC, there are other federal laws governing the transfer of contaminated federal property to private parties. These include the Federal Property and Administrative Services Act of 1949 (Federal Property Act), CERCLA, and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Another key component of the BRAC process is the National Environmental Policy Act, (NEPA), which applies to the realignment-related actions at receiving facilities. NEPA is a federal statute that requires DoD to identify and analyze the potential environmental impacts of certain proposed federal actions and alternatives before those actions are initiated. It is the unifying process that provides for a comprehensive integration of the environmental compliance requirements associated with federal actions. NEPA requires a thorough analysis of the environmental baseline conditions at a receiving installation. A key decision document under NEPA is the Environmental Assessment (EA), which identifies the environmental effects and significance of a proposed action, such as realignment, and the need to prepare an Environmental Impact Statement (EIS). The EIS, in turn, is a more detailed evaluation that addresses the effects and potential consequences of the realignment on the environment. However, where significant environmental impacts are known or can be presumed, an EA is not considered to be necessary.

The IRP is used to identify and characterize contamination at military installations, and its goal for BRAC is to complete all disposal actions with no restrictions on future use of the property. However, these properties can be obtained by other governmental agencies with encumbrances placed on their future use. The Environmental Conditions and Consequences section of the BRAC NEPA documents describes current environmental conditions of the site, and any potential effects resulting from the realignment. Also discussed is the presence of hazardous and toxic materials at the site and any affected buildings. It also addresses ranges, munitions and explosives of concern (MEC), underground storage tanks (UST), asbestos, radon, lead-based paint[1], and polychlorinated biphenyls (PCB).

Environmental concerns existing prior to the realignment will continue to be addressed during and after the realignment process is completed. DoD has a continuing obligation to clean up all installations regardless of whether the installation is undergoing or has gone through realignment. For example the Army has worked closely with the Commonwealth of Virginia and Fairfax County for several years to address the environmental issues currently preventing completion of a parkway through a former proving ground. The Army will continue the process until an agreeable solution is found.

1 The federal government does not view lead contaminated soil from lead based paint as a CERCLA release. Rather lead based paint is only addressed by the federal government under HUD Title X, the Residential Lead-Based Paint Hazard Reduction Act, a portion of the Housing and Community Development Act of 1992 (42 U.S.C. 4851).

In some instances, existing environmental concerns may limit the use of properties. For instance, land use controls (LUCs) may limit or prohibit certain actions, such as use of onsite groundwater, pending completion of remediation activities. Establishing and maintaining the LUCs is the responsibility of the DoD. The DoD is also responsible for evaluating the effects of human health and the environment of any proposed land use changes for areas covered by the LUCs.

Other constraints include the presence of MEC, which would restrict many uses of a property because of the potential safety hazards, and areas such as former landfills that would preclude any ground disturbance. At MEC sites, and other sites with DoD-type contaminants, such as radiation contamination, land use controls may ultimately be employed in lieu of complete remediation.

Recommendations

Establishing strong leadership and creating effective partnerships between the military installation, the local community, and the various regulatory agencies is fundamental for success.

Becoming knowledgeable in the various federal, State, and local regulations will ensure that the community's voice is heard. Forming partnerships and working closely with these agencies will help identify issues of concern, allowing for early resolution

Early planning is critical to a successful transfer. Soliciting the involvement of the OEA and establishing a growth management organization can facilitate the overall process.

Early assessment of existing and future infrastructure demands is critical to proper planning.

III. Base Redevelopment Planning Process

BRAC Cleanup Teams (BCTs)

During BRAC rounds I-IV, BRAC Cleanup Teams (BCTs) were formed to facilitate cleanup. BCTs consist of staff from EPA, DoD and the applicable State. The EPA representative on the BCT is the Remedial Project Manager and the State representative is typically the Project Manager. The DoD representative is the Base Environmental Coordinator (BEC), who in the past was physically present at the installation to oversee day-to-day activities. However, at installations where the cleanup has been privatized using performance based contracting, or where there have been organizational changes, the BEC is not on-site. At BRAC rounds I-IV facilities that are still undergoing remediation, the BCTs typically are still in existence and should remain until the cleanup is complete.

According to the BRRM, BCTs will not be created at the BRAC 2005 installations. At many installations, working relationships are already established between DoD personnel and federal and State regulators. This is the case at facilities where the EPA Remedial Project Manager, DoD personnel and state personnel already work together on cleanup decisions. Section 8.5.6 of the BRRM states, "Existing procedures and relationships related to regulatory oversight should be maintained for closing installations when they facilitate cleanup and redevelopment, and until the property is transferred to the new owner." These working relationships do facilitate cleanup, and therefore should continue throughout the BRAC process to address cleanup and property transfer issues.

Local Redevelopment Authorities

In 1999, Congress amended the Community Environmental Response Facilitation Act of 1992 (CERFA) to accelerate the transfer of federal property to private parties. This legislation, commonly referred to as No-Cost Economic Development Conveyance or No-Cost EDC, permits property to be transferred to an LRA without consideration, provided the property is used for the creation of jobs and that any proceeds from the sale of property is reinvested in economic redevelopment.

An LRA may be formed as soon as the realignment or closure date of the installation is finalized. An LRA can be any authority or instrumentality established by State or local government and recognized by the Secretary of Defense as the entity responsible for developing the redevelopment plan with respect to the installation and/or for directing implementation of the plan. They represent the local community and become the primary voice for base reuse issues. The LRA develops a land reuse plan, which is the basis for future land use assumptions of the affected property. The land use plan develops reasonably anticipated future land use while taking into account factors such as the current land use, zoning classifications and restrictions, property characteristics, and surrounding land areas. DoD must consider these land use assumptions, in conjunction with regulatory agencies, when selecting appropriate cleanup standards. DoD through its Office of Economic Adjustment officially recognizes only one LRA for each base closure

or realignment. LRAs are separate and independent from BCT and Restoration Advisory Boards (RAB) although their land use plans are the basis for planning and coordination by these organizations.

Figure 2-1 on page 2-6 of the BRRM describes principal activities and milestones associated with the overall base reuse process (see figure on page 15). The LRA's reuse planning activities and the military's screening activities can generally be grouped and described in terms of the number of months following the date of approval.

- **First 6 Months**. DoD will determine which parts of the base are "excess" properties (not needed by DoD) or "surplus" property that can be transferred or used by another federal agency.
- **6 to 12 Months**. The LRA undertakes outreach to solicit possible interest in the base from State and local governments, representatives of the homeless, and other interested parties.
- **12 to 18 Months**. The LRA prepares a redevelopment plan, incorporating environmental considerations such as cleanup activities, natural resource concerns (e.g. endangered or threatened species and habitat) and cultural/historical requirements. This plan identifies the LRA's overall reuse strategy for the base. The LRA and the community, through public comment, must ensure that the plan adequately balances local community and economic development needs with those of the homeless.
- **Approximately 18 to 24 Months**. The LRA's completed redevelopment plan is submitted to the applicable military department. The military component also notifies sponsoring federal agencies of property that may become available for public benefit conveyances. This "screening" for public benefit users should be based upon the community redevelopment plan.
- **About 24 –33 Months**. The affected military component will complete its environmental impact analysis no later than 12 months after receiving the LRA's redevelopment plan. This analysis normally uses the LRA's plan as the basis for the proposed action and describes any alternatives considered. During the disposal and reuse decision phase, final DoD disposal decisions will resolve any competing requests for the property, consistent with the LRA's redevelopment plan. Once disposal decisions are made, the military component initiates final disposal actions in accordance with its disposal plan.

According to the BRRM, functions of LRAs include the following*:*

- Form, be recognized by the DoD, and receive economic adjustment planning assistance.
- Solicit, identify and consider various interested parties and uses of installation properties.
- Conduct outreach activities that focus on community needs, including homeless assistance needs.
- If useful, request interim leases of available installation facilities.
- Identify its own interests in available surplus property.

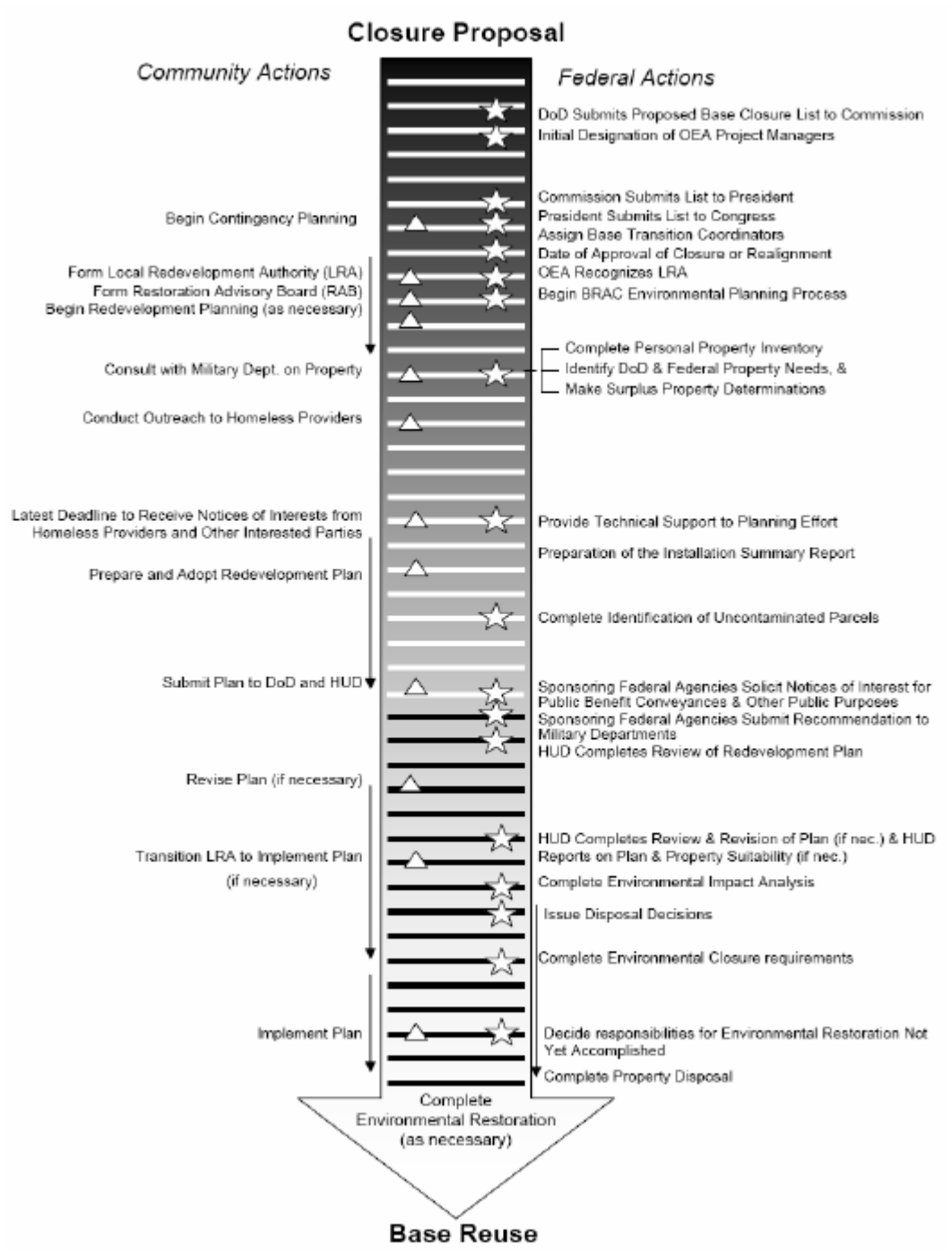
- $ Develop a comprehensive land-use plan.
- $ Conduct market research and marketing activities to attract prospective property users.
- $ Prepare a comprehensive redevelopment plan and other essential reuse-related planning documents.

The National Governor's Association stipulates three options for State involvement in the LRAs:

- $ The State can send a representative to the LRA to serve as a resource;

- $ The State can help organize an LRA and provide it the necessary authority; and

- $ The State can become the LRA (particularly in rural areas that lack resources or manpower).


Closure Proposal
Community Actions
Federal Actions
DoD Submits Proposed Base Closure List to Commission
Initial Designation of OEA Project Managers
Commission Submits List to President
President Submits List to Congress
Assign Base Transition Coordinators
Date of Approval of Closure or Realignment
OEA Recognizes LRA
Begin BRAC Environmental Planning Process
Begin Contingency Planning
Form Local Redevelopment Authority (LRA)
Form Restoration Advisory Board (RAB)
Begin Redevelopment Planning (as necessary)
Complete Personal Property Inventory
Identify DoD & Federal Property Needs, &
Make Surplus Property Determinations
Consult with Military Dept. on Property
Conduct Outreach to Homeless Providers
Latest Deadline to Receive Notices of Interests from Homeless Providers and Other Interested Parties
Provide Technical Support to Planning Effort
Preparation of the Installation Summary Report
Prepare and Adopt Redevelopment Plan
Complete Identification of Uncontaminated Parcels
Submit Plan to DoD and HUD
Sponsoring Federal Agencies Solicit Notices of Interest for Public Benefit Conveyances & Other Public Purposes
Sponsoring Federal Agencies Submit Recommendation to Military Departments
HUD Completes Review of Redevelopment Plan
Revise Plan (if necessary)
HUD Completes Review & Revision of Plan (if nec.) & HUD Reports on Plan & Property Suitability (if nec.)
Transition LRA to Implement Plan (if necessary)
Complete Environmental Impact Analysis
Issue Disposal Decisions
Complete Environmental Closure requirements
Implement Plan
Decide responsibilities for Environmental Restoration Not Yet Accomplished
Complete Property Disposal
Complete Environmental Restoration (as necessary)
Base Reuse

Restoration Advisory Boards (RABs)

RABs are important in providing the public an opportunity to participate in the environmental restoration process at DoD sites across the county. RABs provide a continuous forum through which members of affected communities can provide input to an installation's ongoing environmental restoration activities. The purpose of a RAB is to provide an opportunity for stakeholder involvement at the numerous installations across the country undergoing environmental restoration. There are approximately 310 active RABs operating at DoD sites across the nation.

Integrating the roles of BCTs, LRAs and RAB

In some cases, a RAB may be established at the installation prior to base closure. In addition, a BCT may be formed for the specific purpose of addressing a host of base closure issues, including environmental cleanup responsibilities. The LRA is responsible for future site redevelopment efforts and deals primarily with deed transfer to a third party developer and site reuse issues.

Remediation to Previous Land Use

Section 8.5.1 of the BRRM states, "DoD cleanup decisions based upon the type of current use of the property are preferred. Response actions at levels that will support new and less restricted uses of property are a business decision to be made by the new owner of the property with any additional costs the borne by new owner."

Recommendations

It is essential that communications be established between the RAB and/or BCT and the LRA in order to avoid overlap of cleanup activities, conflicting priorities and duplication of effort. While RABs and BCTs will be primarily concerned with site remediation issues, the LRA and third party developers will be primarily concerned with redevelopment issues and factors such as job creation, zoning considerations and local community issues. Early coordination of these potentially conflicting parties may avoid unnecessary delays and adverse project impacts. It is also important to establish whether site ownership remains with DoD or whether it transfers to the LRA and at what point this occurs.

Credible future land uses need to be considered by DoD when setting cleanup goals for BRAC property. There should be no assumption that the current land use of a parcel will remain unchanged. Property that is currently in an industrial or commercial area may change to residential use in the future. Therefore, any evaluation of clean up to restricted use must include the future liabilities associated with the performance of additional cleanup should land use change, in accordance with Section 120(h) of CERCLA, as amended. In addition, any policy that supports restricted uses must also address the full range of issues involving land use controls including the implementability and enforceability of the control and the funding to maintain these controls in perpetuity

IV. Property Disposal/Property Transfer

Section 5 of the BRRM addresses real property transfer by DoD. The focus is on transferring property, and not the environmental condition of that property. DoD's first steps of property disposal will be to evaluate whether there are any reversionary rights, property subject to the public trust doctrine, and interest by other federal agencies. Once these transfer avenues have been exhausted, DoD will identify the surplus property available for the homeless, LRA's, State and local governments, and other interested parties. After the surplus property determination is made, the responsible military department shall: provide information on the surplus property to HUD and the LRA, or where no recognized LRA exists, to the governor of the state; and publish information about the surplus property in the Federal Register and in a newspaper of general circulation in the communities near the surplus property.

DoD may use various transfer mechanisms to dispose of surplus property, including but not limited to, a public benefit conveyance, a conservation conveyance, public sales, an economic development conveyance, and a negotiated sale. Section 5 of the BRRM briefly touches upon the covenant deferral process, also known as the early transfer process, discussed in detail below; however is woefully inadequate in addressing details of required remediation where the surplus property is contaminated. It is important for States to recognize that much of the property to be transferred may not be available for unrestricted use due to environmental contamination, so appropriate LUCs must be put in place. To reach these determinations and safely transfer surplus property, DoD may use any one of the following processes for site evaluation and remediation, and to, ultimately, transfer the property.

Finding of Suitability to Transfer (FOST) Process

DoD has guidance on the environmental review process to reach a finding of suitability to transfer (FOST) for real property made available under the BRAC process. DoD's FOST guidance provides a framework for documenting the conclusion that real property made available through the BRAC process is environmentally suitable for transfer by deed under Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

DoD developed the "Fast Track to FOST – A Guide to Determining if Property is Environmentally Suitable for Transfer" found at the following site:

https://www.denix.osd.mil/denix/Public/Library/Cleanup/CleanupOfc/Documents/BRAC/fostfast_index.html

Per the guidance, steps of the FOST process include notifying the regulatory agencies of DoD's intention to transfer the property, evaluating the condition of the property, determining the suitability for transfer and preparing a draft FOST, notifying the regulatory agencies of the intent to sign a FOST along with public notice, and finalization of the FOST. There is no specific statutory process required to complete a FOST

Recommendations

DoD's BRRM states that "the FOST will be forwarded to the State and, if an NPL site, to EPA, for review and comment. While resolving adverse comments is desirable, such resolution is not required for transfer." States must be convinced that BRAC sites are environmentally suitable for transfer. It is substantially easier to remediate environmental contamination prior to a property being transferred to private entities, especially if the property is targeted for development.

It is imperative that States concur with FOST determinations prior to finalization. It is important to clearly comment on any State concerns that the FOST does not address, so that the concerns are noted and part of the record. States may want to consider various forms of dispute resolution in resolving disagreements associated with FOSTs. As an alternative, or in addition to, the State should have an open and clear line of communication with the new owner so that they understand the potential risks and liability regarding the property.

Finding of Suitability to Lease (FOSL) Process

A FOSL is the document that conveys the result of the evaluation process used to determine that DoD property is environmentally suitable to lease. A fact sheet developed by DoD describing the FOSL process is available on the Internet. It is called "Fact Sheet – Field Guide to FOSL" and can be found at the following site:

https://www.denix.osd.mil/denix/Public/Library/Cleanup/CleanupOfc/Documents/BRAC/fostfast_factsht.html

The statutory requirement DoD must meet when leasing property is found under CERCLA section 120(h)(5). This section requires notification to the State under certain conditions. Where property owned by the federal government had hazardous substances or petroleum products stored for one year or greater, and was known to be have been released or disposed of, the federal owner may lease that property after termination of the governmental operations. The State in which the property is located must be notified before entering into the lease.

Recommendations

As in the case of a FOST, the BRRM also states, "while resolving adverse comments from regulators is desirable, such resolution is not required for leases." Again, States must be convinced that BRAC sites are environmentally suitable for lease. It is easier to remediate environmental contamination prior to a property being leased to private entities.

As with FOSTs, States should concur with FOSL determinations prior to finalization. States may want to consider various forms of dispute resolution in resolving disagreements associated with FOSLs.

Finding of Suitability for Early Transfer (FOSET) Process

Section 5.6.3 of the BRRM states "In furtherance of the goal of rapidly putting property back into productive uses by new owners, the Military Department should identify early in the property disposal planning process all property that appears to be suitable for an "early transfer" conveyance by using the process authorized in CERCLA for deferral of the normal deed covenant that all actions needed to protect human health and the environment have been taken." CERCLA section 120 (h)(3)(C) (42 U.S.C. § 9620 (h)(3)(C)) was amended in September 1996, to allow federal agencies to transfer property by deferring the covenant warranting that all necessary cleanup actions had been taken. This covenant, among other things, must indicate that all remedial action necessary to protect human health and the environment with respect to any hazardous substances remaining on the property has been taken. The 1996 CERCLA amendments, in appropriate circumstances as described below, allows deferral of this covenant. Such a deferral, known as an "early transfer," is allowed when the Governor of the State where the property is located concurs with the deferral request for property not listed on the NPL. For NPL property, the EPA must provide the deferral with the concurrence of the Governor. The early transfer process can be a very successful tool to transfer property because it accelerates remediation, and advances economic development of an area.

For the EPA Administrator and/or the Governor to approve an early transfer, the following findings pursuant to Section 120(h)(3)(C) of CERCLA must be made:

- List any necessary restrictions on the use of the property to ensure the protection of human health and the environment. This is usually accomplished through an economic development conveyance mechanism, such as a property deed.
- Ensure required remedial investigations, response actions and oversight activities will not be disrupted by the intended land use
- Provide that all necessary response actions will be taken, schedules for investigation and completion of response actions are promulgated and that response actions will comply with regulatory agency requirements
- Submit a budget request to cover the projected costs of investigation and remedial response actions, subject to congressional appropriations.

When property is transferred pursuant to the early transfer process, the property recipient assumes title to the property prior to completion of remediation activities. One of two cleanup options under which could occur:

- DoD transfers the property to an LRA or private purchaser but retains responsibility for all cleanup actions.
- DoD transfers all cleanup responsibility to the LRA or new property owner for a consideration.

"Privatization" may be used in different contexts, however; in general it refers to the remediation of federally contaminated property by a private entity. This can occur after ownership transfer (under early transfers), or prior to ownership transfer (under performance based contracts). As a regulator, it's important to identify specific responsibilities and recognize that regardless of the entity conducting remediation or surrounding agreements (that may attempt to transfer remediation responsibility or liability), the DoD component is always ultimately responsible for the condition of the property.

If responsibility for cleanup actions is transferred to the new property holder, DoD will pay for estimated cleanup costs upon transfer. Or, DoD may elect to sell the property at a greatly reduced sum in consideration for the additional cost of cleanup required by the new property owner and the State regulatory agency. In this case, regulatory approval of cleanup activities would fall upon the transferee and is referred to as privatized early transfer. However, it should be noted that even though the new property owner assumes responsibility for the cleanup actions, CERCLA liability remains with DoD. Areas of additional contamination discovered after the property transfer would still be the responsibility of DoD.

It should be noted that transfer of a DoD property to another party might also involve non-CERCLA issues that a regulatory agency should be cognizant of such as petroleum, oils and lubricants (POL); Unexploded Ordnance (UXO); and cultural and natural resources.

Early transfer of DoD property will normally be done through an LRA. The LRA represents the impacted local community and is responsible for developing the Base Reuse Plan as well as its implementation once the local community and the DoD OEA approve it. DoD's BRRM provides common guidelines to the DoD for the establishment of working teams to implement the base reuse plan. The negotiation and execution of numerous documents/agreements are usually involved in an early transfer. Partnering agreements are encouraged with LRAs, local government agencies, redevelopment agencies and DoD installations.

A sample of the types of documents/agreements that support an early transfer is discussed below. These documents/agreements should provide the CERCLA-required assurances. Several of the agreements contain enforcement provisions in the event of a breach of the agreement, and the actions in the event of a failure in the process. Overall and ultimate responsibility for implementation and maintenance of the remedy rests with the DoD component, as generally specified in CERCLA 120(h)(3)(A) and acknowledged in agreements described below.

Environmental Services Cooperative Agreement (ESCA)

As part of the early transfer process, an ESCA is negotiated between the DoD component and the new owner. It is helpful to have all parties involved in relevant aspects of the negotiation discussion as early as possible. The ESCA describes the geographic area in

which work will be performed, and establishes, among other things, the terms and conditions necessary to obtain regulatory closure, including execution of any long-term operation and maintenance obligations and environmental liability insurance for the property. The ESCA provides a dollar amount to be paid by the DoD component to the new owner in specified installments or a lump sum for remediation of the property.

Specific sections in the ESCA provide assurances that the DoD component remains responsible for specific conditions and failure of any and all remedies, and that the new owner will complete the requirements for regulatory closure, which means issuance of appropriate closure approval letter(s) from applicable regulatory agencies, and execution of any long-term obligations.

Federal Facilities Agreement (NPL sites) or Federal Facilities Site Remediation Agreement (non-NPL sites)

These agreements should be amended to include the description of the "early transfer" property and the remaining DoD component responsibility, such as retained and delegated obligations. This agreement should include a description of the investigation and remediation process through site certification and necessary operation and maintenance programs, an explanation of the roles and responsibilities of the parties, and provisions for the applicable regulatory agencies' approval, cost recovery, and enforceability.

The agreement should also recognize that the DoD component's obligations include overall and ultimate responsibility for remediation, and that these obligations apply to the entire installation, including transferred parcels and that the DoD component will meet and confer to resolve any DoD component obligations arising from noncompliance with the agreement.

Agreement on Consent (NPL sites) or a State-specific Enforceable Agreement (non-NPL sites)

These are enforceable agreements with the applicable regulatory agencies. Depending upon the circumstances surrounding the transfer and remediation, other parties may be included in the agreement negotiation and execution. The purpose of these agreements is to establish a process and timetable for new owner's completion of the remedial actions. This agreement includes a description of the investigation and remediation process through site certification and implementation of operation and maintenance plans, an explanation of the roles and responsibilities of the parties, and provisions for the applicable regulatory agency's approval, cost recovery, and enforceability. These agreements also obligate the new owners to implement and pay for site remediation, and regulatory oversight.

RCRA Hazardous Waste Facility Permit

Section 8.6.2 of the BRRM states, "The Military Component may need to close or transfer a hazardous waste treatment, storage, or disposal facility at an installation." In addition the section states, " The property disposal office should attempt to negotiate modifications to the permit as necessary to remove as much of the base closure property as possible from the permit to help facilitate future property transfer." If the property to be transferred is part of RCRA Hazardous Waste Facility Permit, then either an amendment or modification to the permit must be completed prior to transfer, and the new owner may have to take on the requirements of the permit.

Environmental Insurance Coverage

A portion of the total remediation amount negotiated in the ESCA is typically used to pay a premium for environmental insurance coverage. This usually includes a form of a Pollution Legal Liability Select Policy, a Cleanup Cost Cap Program Policy, and a Contractor's Operations and Professional Services Policy.

The Pollution Legal Liability Policy is a general liability policy, which includes coverage of cleanup of certain unknown pre-existing and new conditions, including unexploded ordnance and general liability to third parties. The Cleanup Cost Cap Program Policy will only cover cleanup costs that exceed the anticipated maximum costs for the responsibility under the ESCA.

Financial Assurance Instruments

Financial assurance mechanisms should be required in one of the enforceable agreements to ensure that long-term obligations, such as operation and maintenance plans or land use controls, will be met. In certain situations, a Performance and Indemnification Agreement may also be negotiated to provide, among other things, that the new owner shall perform the long-term obligations under the enforceable agreement. Financial assurances to meet these obligations may be provided in the forms of a completion bond and a monitoring bond or some kind of state-accepted trust fund that will exist until the applicable regulatory agency determines that all long-term obligations have been completed.

DoD Warranty

When remedial actions have been completed or when the approved remedy for the site has been implemented and is operating properly and successfully, the DoD component shall provide a warranty document to the transferee which states that all remedial actions have been taken in satisfaction of the requirement in CERCLA section 120(h)(3)(A)(ii)(I). This warranty, amending the deed, will be recorded by the DoD component.

Recommendations

The "Early Transfer" process can be a very successful tool to transfer property because it accelerates remediation, and advances economic development of an area. It also removes the DoD component as an impediment to cleanup to state standards, because the new owner agrees, in the Consent Agreement, to cleanup to state standards. The downside is that the DoD component is no longer the owner of the property. Therefore, under a worst-case scenario, it may be difficult to make the DoD component return to complete remediation where they are no longer owners.

Fed-to-Fed Transfers

As per Section 5.3 of the BRRM, the various military services must issue notices of availability of property to other federal agencies prior to other entities. If another federal agency is interested in acquiring the property, it will be required to pay fair market value, agree to accept custody of the property when offered, and agree to accept the property in "as-is" condition. In addition, the military service transferring the property will not agree to retain continuing liability for the environmental condition of the property post-transfer or otherwise "indemnify" the receiving agency. The criteria used to determine appropriateness of the transfer includes that the new federal use is consistent with the highest and best use of the property, the transfer will not have an adverse impact on the transfer of any remaining portion of the installation, the fair market value is received, the transfer will be in the best interest of the federal government, and the transfer addresses applicable environmental responsibilities to the satisfaction of the transferring military service, in accordance with the "as-is" transfer policy.

One concern of these fed-to-fed transfers is that if the property needs to be remediated, the receiving federal agency may not have the expertise or desire to complete the remediation or cooperate with the regulators

V. LAWS GOVERNING CLEANUP AND TRANSFER

The BRRM's Appendix A TABLE A-1 *Public Laws, Federal Regulations, and Other Authorities* provides a summary of various laws, regulations, and other authorities that direct BRAC efforts. This table identifies various laws, regulations and other authorities associated with BRAC clean up and property transfer. However, this table is not all inclusive, a complete list of DoD's proposed various laws, regulations, and other authorities that direct BRAC efforts can be found in Appendix A of the BRRM. In addition, States may have their own laws, regulations or other authorities that may be contrary to this table.

Law/Regulation/Authority	Summary of Key Provisions	Responsible Party
Environmental Cleanup		
Comprehensive Environmental Response, Compensation and Liability Act of 1980(CERCLA), 42 U.S.C. § 9601et seq.	Requires the conduct of any needed response actions to clean up contamination, threatening risks to human health and the environment posed by past releases of hazardous substances Section 120(h) governs the identification of uncontaminated parcels and covenant requirements for deed transfers of contaminated parcels.	DoD Components are execution agents under the Defense Environmental Restoration program; EPA and state oversight enforcement agencies (consultation and approval requirements)
Law/Regulation/Authority	**Summary of Key Provisions**	**Responsible Party**
Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq.	Requires the establishment of management systems for hazardous waste, nonhazardous solid waste, and underground storage tanks. Provides corrective action authority for cleanup of solid waste management units	EPA with delegation of the base RCRA program and the Hazardous and Solid Waste Amendments program to state agencies (permit requirements)
Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387;	Establishes controls on point source and nonpoint source discharges to surface waters under the National Pollutant Discharge Elimination System. Establishes permitting requirements for construction activities in waterways and wetlands.	Army Corps of Engineers and EPA
Clean Air Act (CAA), 42 U.S.C. § 7401 et seq.	Mandates improvements to air quality through establishment of National Ambient Air Quality Standards; nonattainment requirements; technology and risk standards for air toxics; permit requirements for sources of air emissions; state implementation plans for complying with standards; and conformity determinations for Federal agency actions except base closure final disposals	EPA with partial delegation to state agencies

Safe Drinking Water Act (SDWA), 42 U.S.C. §§ 300f–300j- 26	Defines substances for which EPA must set drinking water standards. Authorizes establishment of underground injection controls on wells used for waste disposal	EPA
Toxic Substances Control Act (TSCA), 15 U.S.C. §§ 2601–2671	Provides for the specific regulation of PCBs and asbestos. Requires maintenance of an inventory of manufactured chemicals and filing of a premanufacture notification for chemicals not in the inventory	EPA
Asbestos Hazard Emergency Response Act (AHERA), 15 U.S.C. §§ 2641–2655; 40 CFR Part 763	Amends TSCA to govern inspection of asbestos containing materials in schools and completion of appropriate response and abatement activities	EPA
Lead-Based Paint Poisoning Prevention Act (LBPPPA), 42 U.S.C. §§ 4801–4846	Requires establishment of procedures for eliminating immediate hazards related to lead-based paint and for notifying purchasers of the presence of lead-based paint. Eliminates use of lead-based paint	Department of Housing and Urban Development and Department of Health and Human Services
Residential Lead-Based Paint Hazard Reduction Act (RLBPHRA), Title X of Pub. L. 102-550	Governs transfers of pre-1978 Federal property for residential use. Requires inspection and notification for post-1960 structures. Requires inspection and abatement for pre-1960 housing	DoD (inspection and notification)
Law/Regulation/Authority	**Summary of Key Provisions**	**Responsible Party**
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. § 136 et seq.	Establishes a registration program for pesticide and other substances. Governs disposal of pesticides and pesticide containers	EPA
Endangered Species Act (ESA), 16 U.S.C. §§ 1531–1544	Requires protection of threatened or endangered species by prohibiting activities and facilities that would have an adverse effect on them	U.S. Fish and Wildlife Service
Marine Mammal Protection Act (MMPA), 16 U.S.C. §§ 1361-1421	Governs activities that may affect or harass marine mammals	The Department of Commerce and the U.S. Fish and Wildlife Service.
Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 703–712	Governs activities that may affect or threaten migratory birds or their habitats	The Department of Interior
Executive Order 12088	Establishes a process for ensuring Federal agency compliance with Federal, state, and local pollution control requirements. Outlines a process for resolving disputes between EPA and Federal agencies, specifying the Office of Management and Budget as dispute resolution	Presidential Order involving EPA, DoD Department of State and the Office of Management and Budget.

	agent.	
Executive Order 12372 (as amended by Executive Order 12416)	Requires Federal agencies to provide opportunities for consultation by elected officials of state and local governments	DoD in consultation with community
Executive Order 12580	Addresses delegation of certain duties and powers assigned to the President in CERCLA to heads of Federal agencies	Presidential Order delegating authority to the Secretary of Defense
Property Transfer		
National Environmental Policy Act (NEPA) 42 U.S.C. § 4321 et seq.	Provides a process to help Federal officials make decisions that are based on an understanding of environmental consequences. Requires DoD Components to analyze potential environmental impacts of proposed actions and alternatives for base disposal decisions	President's Council on environmental Quality; NEPA process execution by DoD Components
Defense Base Closure and Realignment Act of 1990 (DBCRA 90), Pub. L. 101-510, 10 U.S.C. § 2687 note	Provides a process designed to result in timely closure and realignment of military installations	Secretary of Defense, with delegated authority to DoD Components (base closure and conversion implementation)
Law/Regulation/Authority	**Summary of Key Provisions**	**Responsible Party**
32 CFR Part 174, Revitalizing Base Closure Communities and Addressing Impacts of Realignment	Establishes policy and assigns responsibilities to implement base closures and realignments, including disposal of real and personal property	Secretary of Defense, with delegated authority to the DoD Components (base closure and conversion implementation)
32 CFR Parts 176, Revitalizing Base Closure Communities - Community Redevelopment and Homeless Assistance	Implements the Base Closure Community Redevelopment and Homeless Assistance Act, as amended (10 U.S.C. 2687 note), which instituted a new community-based process for addressing the needs of the homeless at base closure and realignment sites	Secretary of Defense, with delegated authority to DoD Components (base closure and conversion implementation)
Defense Authorization Amendments and Base Closure and Realignment Act of 1988 *(HCRA* 88), Pub. L. 100-526, 10 D.S.C. 2687 note	Provides procedures to facilitate the closure and realignment of obsolete or unnecessary military installations (BRAC 88). Calls for completion of all BRAC 88 actions by 30 September 1995	Secretary of Defense, with delegated authority to DoD Components (base closure and conversion implementation)
National Defense Authorization Act for Fiscal Years 1992 and 1993 (NDAA 92/93), Pub. L. 102-190 §§	Requires draft final RI/FSs for BRAC 88 bases on the NPL be submitted to EPA by 4 December 1993 and draft final RI/FSs for BRAC 91 bases on the NPL must be submitted to EPA by 4 December 1994. Allows for a 6-month extension under certain conditions. Amends DBCRA 90 to clarify requirements of	DoD components

334(a), 2821, 2827	the Commission and to establish the BRAC account as the sole source of environmental restoration funding	
National Defense Authorization Act for Fiscal Year 1993 (NDAA 93), Pub. L. 102-484	Makes funds available to the Economic Development Administration (EDA) for economic adjustment assistance with respect to base closures	Secretary of Defense
National Defense Authorization Act for Fiscal Year 1994 (NDAA 94), Pub. L. 103-160, Title XXIX, §§ 2901–2930; 32 CFR Parts 174, 175	Amends BCRA 88, DBCRA 90, 10 U.S.C. § 2667, 10 U.S.C. § 2391(b), FPASA, and NDAA 92/93; amendments are specific to personal property, real property screening, McKinney Act compliance, leasing, contracting with communities or small/disadvantaged businesses, transferring property at less than fair market value, and economic adjustment assistance. Contains provisions for base transition coordinators, CERCLA § 120(h)(4) compliance, and NEPA compliance	Secretary of Defense with delegated authorities to DoD Components (base closure and conversion implementation)
National Defense Authorization Act for Fiscal Year 1995 (NDAA 95), Pub. L. 103-337	Provides assistance for public participation in DoD environmental restoration activities. Includes clarifying and technical amendments to BCRA 88 and DBCRA 90	Secretary of Defense with delegated authorities to DoD Components (base closure and conversion implementation)
National Defense Authorization Act for Fiscal Year 2005 (Sections 2400 of Public Law 108-375, as amended)	Establishes a new process to streamline real property transactions. Eliminates delays in the assignment of real property to Federal sponsoring agencies for public benefit conveyances	Secretary of Defense with delegated authorities to DoD Components (base closure and conversion implementation)
Law/Regulation/Authority	**Summary of Key Provisions**	**Responsible Party**
Act of May 19, 1948, 16 U.S.C. § 667b-d	Provides for transfer of federal property to state agencies or the Department of the Interior for wildlife conservation purposes	General Services Administration
10 U.S.C. § 2391 (Military Base Reuse Studies and Community Planning Assistance)	Authorizes the Secretary of Defense to make grants to state and local governments, and regional organizations, to assist them in planning community adjustments in response to base closures	DoD through a variety of federal assistance programs
National Historic Preservation Act (NHPA), 16 U.S.C. § 470	Establishes a program for the preservation of additional historic properties throughout the nation. Establishes a process to identify conflicts between historic preservation concerns (e.g., properties included or eligible for the National Register of Historic Places) and Federal undertakings	Advisory council on Historic Preservation, State historic Preservation Officers, and the Department of the Interior.

Performance Based Contracts

Performance-based contracts (PBC) are a contracting vehicle, which differs from the traditional approach to remediation contracting in that the endpoint (attainment of cleanup goals/regulatory concurrence) is prescribed, but the path that the contractor follows to attain that endpoint is left up to the contractor. Traditionally, remediation contracts have not only prescribed the endpoint, but also specified the direction that the contractors would follow to achieve it. PBC works to reduce the risk to the DoD by executing restoration cleanup projects with fixed objectives for a fixed price. Under this PBC approach, performance risk is transferred to the contractor. By doing this, DoD believes that the contractor will be motivated to complete the remediation/site closeout in the timeliest and cost effective manner.

The use of PBC for environmental remediation can be an effective tool in remediating DoD sites, an effective process to expedite clean up, and helpful in establishing definitive out-year costs for Congress. However, for the PBC process to achieve success, there must be a collaborative process that engages both DoD and the State project managers from the beginning through site closeout.

To support the application of PBC within the USAF, AFCEE has a PBC web site http://www.afcee.brooks.af.mil/products/pbc/

For more details on PBC's, please refer to the ASTSWMO *Base Closure Focus Group Performance-Based Remediation Contracts White Paper and Compendium of State Lessons Learned*, dated November 2004. Contact ASTSWMO at daniar@sso.org for a copy of the document.

Land Use Controls/ Engineering Controls/Uniform Environmental Covenants Act

The nature of an early transfer is that the property to be transferred is not remediated. When waste is left in place, a land use restriction/control should be required upon the property to protect public health and the environment. Land Use restrictions/controls are legal and administrative mechanisms (such as deed notices or legal documents). For example, land use restrictions/controls (e.g. deed restrictions) would be used to prevent owners from disturbing a cap over soil contamination or using contaminated groundwater.

Engineering Controls (ECs) are physical measures designed to deny access or limit contamination from leaving the site. Engineering controls can be fencing, semi-permeable subsurface barriers, surface water run-off controls, etc. An example would be a Resource Conservation and Recovery Act (RCRA) authorized cap over a site that prevented the site end user from using or interfering with groundwater recovery efforts.

Ideally, prior to transfer to a new owner, the State should require that the land use be restricted through an enforceable land use covenant that is recorded against the property and runs with the land. A release or modification may be recorded once it has been

established that the risk to public health and the environment has been eliminated or reduced. Where a State does not have the authority to enter into a land use covenant, deed restrictions and notices may be the next best option.

With the increased reliance on LUCs as an integral part of the remedy at a site, it is critical that mechanisms exist to ensure implementation, monitoring, and enforcement of the use restrictions in perpetuity. The Uniform Environmental Covenants Act (UECA) is a useful starting tool for States to work from to develop legislation requiring environmental covenants. UECA is a uniform law that was approved by the National Conference of Commissioners on Uniform State Laws in 2003, and establishes requirements for an environmental covenant to control the future use of property when waste remains in place. An environmental covenant is a legal device, which restricts activities on sites where some contamination remains in place. The environmental covenants created under UECA would be based upon traditional property law principles and would be recorded in the local land records and thereby bind successive owners of the property State and local governments would have clear rights to enforce the land use restrictions throughout the life of the land use restriction and through real estate transactions or legal actions. Benefits and policy decisions for States to consider prior to adoption of UECA are listed below:

Benefits of UECA

Provides a mechanism to restrict land use for States where none currently exist

A land use restriction mechanism is critical to maintain the integrity of the remedy where ICs are used. Since ICs are being used more frequently as an integral part of the remedy, it is very important each State has a mechanism to maintain, monitor and enforce them.

Runs with the land and in perpetuity (must be recorded).

This is necessary because the IC must be tied to the land being restricted and provides clear notice to any parties interested in the land and/or its possible uses.

Is enforceable by the relevant environmental regulators, the property owner, any other holders, and third party holders

It may be of benefit to have as many entities as interested be able to enforce against potential covenant violations.

The covenant may be amended or terminated

This is an important aspect of a covenant that runs with the land. There needs to be a mechanism to amend or terminate a covenant where there is a change to, or no more risk to, public health or the environment. However, the amendment or termination should only be made after the state has approved the change. (See discussion under Policy Discussion Section)

- $ Requires that parties with an interest in the land (mortgagors, lessees, etc) receive a copy of the covenant. Also requires notice to the local government in whose jurisdiction land subject to the covenant is located.

- $ Precludes a valid environmental covenant from being inadvertently extinguished by various common law property doctrines, adverse possession, tax lien foreclosures, and marketable title statutes.

Includes an optional section that requires the State regulatory agency for environmental protection to establish and maintain a registry that contains all environmental covenants and any amendment or termination of those covenants

This is an important and powerful tracking and notification tool for environmental covenants recorded on property. It seems to make the most sense to have the State regulatory agency responsible for this.

Policy Decisions that UECA Raises for State Environmental Managers

Environmental cleanup decision-maker approves covenant (i.e. Department of Energy (DOE), DoD, EPA or State)

The UECA is drafted to involve the State or federal agency that approves the environmental response project that requires a covenant as part of the remedy. This is a great concern to many States for a variety of reasons. This concept has the potential to diminish State authority over the creation of covenants even though they are created pursuant to state law. In many situations the State's remediation requirements are more stringent than those of the federal government, however, the federal government may be the lead regulator at the site. Further, at fund-lead NPL sites, the NCP requires States to ensure that ICs at such sites "are in place, reliable, and will remain in place." Yet, under the UECA provisions, the State would have no role in the covenant process at CERCLA sites other than to maintain the registry.

The federal government has openly recognized in numerous documents that where ICs are implemented at a site, they will generally be implemented under State law. Further, federal agencies like DoD and EPA have made it clear that they expect States to shoulder the primary role in maintaining, monitoring, and enforcing covenants. Therefore, it is critical to the success of the remedy implementing institutional controls that the State has some approval role in the covenant. States must be a party to the covenant to ensure implementation, monitoring and enforcement of covenants to protect public health and the environment.

No administrative enforcement is available, only judicial

The UECA offers only judicial enforcement. It would be much less burdensome and more efficient to allow the State administrative enforcement options as well as judicial.

Amendment or termination requires consent of all parties, including original grantor, or through judicial proceeding; state approval is not necessarily required

The UECA lists the parameters by which a covenant may terminate. There are concerns surrounding a number of the parameters offered. One regards the specification of duration or termination at the time of a specified occurrence. There is a risk in having an automatic termination period spelled out in the covenant. The covenant is supposed to run with the land in perpetuity and should only be amended or terminated when the risk to human health and the environment is changed or eliminated.

This determination should be made by the State at the time the request for an amendment or termination is made. To try to make a determination of risk in the future would call for a lot of speculation of numerous variables, and would undoubtedly be the basis of extensive negotiation (i.e., arguing and wasting time) between regulators and the responsible parties (RPs). The covenant should not be able to be amended or terminated without affirmative action taken by the State.

Another concern is the requirement that all parties that originally signed the covenant approve of a termination or modification, essentially creating a right of property. The burden of this requirement severely outweighs the possible benefit to the parties. One scenario is that 40 years after the recordation a new owner remediates to a residential use level. The new owner must find the original owners, and persuade them to agree to a termination. Not even going into the burden of locating the original parties, once located, they may refuse for a variety of reasons that have nothing to do with the reality of the situation or the present-day risk. In the worst case, they could use this approval requirement as extortion. Why should an innocent party seeking to redevelop a site have to pay the entity responsible for contaminating that site for the privilege of cleaning up that entity's residual contamination? In essence, this aspect of the UECA creates a property right in pollution.

No mention of payment / cost recovery for the additional State burdens

The UECA fails to mention anything about the cost of the covenant. Regardless of the parties involved, a covenant inherently has a cost associated with implementation, monitoring, and enforcement. These costs must be estimated and accounted for as early in the remediation process as possible, but absolutely prior to recordation. The covenant is an integral part of the remedy and without costs to support the implementation, monitoring and enforcement thereof; there is more opportunity for land use violations, which constitutes a remedy failure. It is also important to identify the anticipated costs early in the remediation process since the RP is selecting ICs as part, or all, of the remedy

most likely due to great cost savings, yet neglecting to include future costs for implementation, monitoring, and enforcement of the covenant.

UECA requires that the State regulatory agency for environmental protection establish and maintain a registry that contains all environmental covenants and any amendment or termination of those covenants. This system also carries a cost that should be shouldered by the RPs, those specifically benefiting from having the covenant as part of the remedy.

The interest held under the UECA is property interest and there must be a "holder" (defined as grantee)

This interest can be terminated by exercise of eminent domain**.**

No trigger for when a covenant is required, resulting in potential ARAR disputes

The UECA does not specify when a covenant is required. This allows flexibility in deciding what sites and remediation (defined in the UECA as "environmental response projects") will necessitate a covenant. This flexibility is not helpful to state regulators. If a remedy calls for ICs, and a covenant is needed to restrict the use of the land, then that should be a mandatory requirement as part of the remedy. Statutes that are written with some flexibility (a trigger, but written with the permissive "may") have caused problems where DoD and EPA refused to recognize the legislation requiring covenants as Applicable or Relevant and Appropriate Requirements (ARARs). The UECA has no trigger at all, so there is a great concern that the federal government would refuse to view the legislation as an ARAR. To have the statute more easily accepted as an ARAR, it should be drafted stating that the covenant is a requirement that must be recorded after specific events are triggered, and avoid any permissive language in statute or regulation.

There is also the issue that agencies fail to create ICs even when they know they should, so a trigger is also a mandate to the agency that creating the IC is part of its job, and is not discretionary.

For non-NCP sites, like privately owned Brownfield sites, no public participation will be required (unless that is the policy of the regulatory agency overseeing the remediation)

This is a policy issue specific to each state, but something to keep in mind while drafting the covenant legislation. The UECA is silent on public participation.

Amendment or Termination

The State should be able to amend or terminate a covenant based upon its discretion, through a determination that the restrictions are no longer warranted based upon the risk present or additional remediation that has taken place. If the State is not in agreement with the owner, there should be an administrative process available for an owner of property to apply for an amendment or termination.

Administrative Process

There should also be an administrative process available for enforcement and amendment and termination of the covenant.

Recommendation

UECA establishes a process and tools that could be of value to States. While wholesale adoption may not by appropriate and or helpful to all States, our members may still find it of value thru tailoring it to fit their circumstances.

VI. Munitions and Explosives of Concern (MEC)

It is not anticipated that, due to the installations slated for closure, discarded military munitions and explosives of concern will play a major part of BRAC 2005. However, at those BRAC sites where it is a concern, there are recent developments in the regulatory oversight of MEC remediation. In addition, EPA, DoD and State regulators have mutually developed a MEC hazard assessment guidance document. Finally, DoD has developed a MEC prioritization protocol that ranks MEC sites according to risk.

Munitions Response Committee

In 2001, DoD, EPA and State representatives (through ASTSWMO) initiated the Munitions Response Committee (MRC). Its primary goal is to "…coordinate, identify and synchronize efforts among the Office of the Secretary of Defense (OSD), the Military Services, the EPA, Native Americans and Alaskan Natives, and the states to ensure munitions responses (for locations on other than operational ranges) are conducted in a manner that protects public health and the environment while allowing the military to fulfill its mission."

One of the primary desired outcomes of the MRC was to develop collaborative decision-making processes that are acceptable to all parties. When agreed to, these collaborative processes will:

- $ Afford, subject to the processes developed for dispute resolution and reservations of rights, the states the opportunity to review and approve adequacy of munitions response actions.
- $ Be endorsed for universal adoption by the federal agencies, tribal representatives and the State organizations represented on this committee.

Instead of negotiation as to which environmental authorities regulate MEC cleanup (RCRA vs. CERCLA), this process intends to evenly distribute between DoD, State and federal regulators and federal land managers most aspects of MEC cleanup decision-making. This process has been described in a matrix that will be distributed to all States.

In addition, the MRC has developed several "white papers" that will assist State regulators in many aspects of the MEC process.

Munitions and Explosives of Concern Hazard Assessment (MEC-HA)

In the spring of 2004, EPA convened a work group with other federal agencies, States and tribal participants to develop a hazard assessment methodology for munitions response sites. The methodology is intended to be used in the CERCLA process to help project teams evaluate explosive safety hazards, as well as removal and remedial action alternatives to address those hazards**.**

Munitions Response Site Prioritization Protocol

In the 2002 National Defense Authorization Act, DoD was required to 1) create an inventory of defense sites known or suspected of containing UXO, 2) assign a relative priority for response activities to each site, 3) establish a program category to track munition response costs, and 4) prepare a report to Congress on DoD's plan to address munitions. In October 2005, DoD published the Munitions Response Site Prioritization Protocol as a tool to prioritize response activities at it over 3,300 sites suspected of containing UXO.

Recommendations

The intent of the MRC is to provide assistance to DoD, EPA, federal land managers and State project managers throughout the MEC process (from inventory to site close-out). Through these white papers, during specific activities in the MEC process there will be an expectation as to roles and responsibilities of all parties. While currently under development, the MRC also hopes to develop a "matrix" of roles and responsibilities that will be used by project managers. This matrix provides each step of the MEC process, under both RCRA and CERCLA and provides how collaborative decisions will be made. It is recommended that State regulators obtain copies of these products from the MRC and incorporate them into all activities associated with MEC identification, investigation, remediation, and long-term operations and management.

The MEC-HA will be a valuable tool in understanding hazards associated with MEC at BRAC sites. States should have an active role with EPA and DoD in providing input into the assessment. While the MEC-HA may not be the "end-all" in regarding to evaluating explosive safety hazards, its ranking system will provide States with a valuable understanding when making remedial decisions.

The Munitions Response Site Prioritization Protocol's Final Rule establishes a "munitions response team," that is responsible for obtaining proper information to be factored into the protocol and participating throughout the scoring of the protocol structure. That team should consist of DoD, State regulators, EPA, other federal agencies, tribal governments and local governments. States are urged to participate as a member of the munitions response team as State regulators may better understand numerous factors that are inputs into the protocol than DoD. In addition, many inputs into the protocol are subjective, and will require discussion and resolution between team members from all layers of government. Finally, many sites suspected of containing UXO have limited environmental data. Limited data should result in additional study of the site, and not a lower priority ranking.

VII. Radiological Constituents

State and Territorial (States) Federal Facilities Managers typically manage the closure and cleanup of military facilities. These Managers look for common BRAC contaminants of concern (COCs), such as solvents, asbestos, lead and munitions, and generally have a background in CERLCA and RCRA. However, it is possible that military activities have resulted in radiological contamination, and these regulators do not have training in health physics or radiation protection.

This chapter provides an introductory resource to State Federal Facilities Managers in evaluating the potential for radioactive contamination to be present at a BRAC site. If radioactive contamination is suspected, State Managers are encouraged to coordinate with their radiation control program or a health physics consultant in characterizing this potential and assessing any radiological data that is produced in environmental investigations. Contact information for State radiation control programs, certified health physicists and other resources can be found at the following web sites:

- Contact information for State radiation control programs:
http://nrc-stp.ornl.gov/asdirectory.html

- Conference of Radiation Control Program Directors:
http://www.crcpd.org/

- Health Physics Society:
http://www.hps.org/

- American Academy of Health Physics:
http://www.hps1.org/aahp/
http://www.hps1.org/aahp/members/members.htm

Radiation Basics

An unstable or radioactive nucleus will release excess energy by emitting particles or electromagnetic radiation. The common forms of radiation that may be emitted include: alpha (α) particles, beta (β) particles, and gamma (γ) radiation or photons. Nuclei that produce nuclear radiation are considered radioactive.

An alpha particle is relatively massive compared to a beta particle and it has a +2 charge, which causes it to strongly interact with electrons as it passes thru matter. Alpha particles do not travel far in air and are stopped by the dead external layers of skin causing no damage to the skin. Internal exposure to alpha particles can be very damaging to internal organs due to their high kinetic energy and its deposition in a short range. Beta particles are highly energized electrons with a single negative (-1) charge, or positrons (+1), that travel a short distance in air. Some beta particles have enough energy to penetrate the live thickness of skin, and if sufficient activity is present, can cause acute damage. Beta radiation can affect the lens of the eye causing cataracts at very high doses. Internal

exposure from beta particles can cause damage to internal organs of the body. Gamma rays are very penetrating and can be damaging to internal organs from outside the body.

A radioactive nucleus (radionuclide) may go through a single to many steps or decay transitions until the nucleus reaches stability. This series of steps is called a decay chain. Individual nuclei decay at different rates. The time it takes for one half of a given population of nuclei to decay is called a half-life. Half-lives of different radionuclides can vary from very short times on the order of microseconds (1×10^{-6} sec or millionths of a second) to billions of years. The shorter the half-life the more radioactive the material, and faster the radionuclide decays away. A radionuclide with a long half-life will take a long time to decay away, but will be less radioactive.

Unlike common chemical measurements that are based on mass or chemical reactivity, measurements of radioactivity are based on detection of radiations emitted from a substance (e.g., water, soil, air filter, etc.). The "activity" of a particular media is a measure of how often a particle or photon is emitted from the substance per unit time. Each time a nucleus emits a particle or photon, the nucleus has decayed or disintegrated. The rate (disintegrations in a unit of time) at which nuclei decay is how radioactivity or activity is measured. In the U.S. it is often customary to still use the old unit for activity, the curie (Ci).

The international or "SI" unit of radioactivity is the becquerel (Bq), which is equal to a single disintegration per second (dps). There are 3.7×10^{10} dps (or Bq) in a curie. Activity of sources is typically stated in micro- or millicuries, □Ci or mCi respectively. Environmental samples are often reported as activity in a unit mass or activity in a unit volume. Soil and sediment samples may be reported as picocuries per gram (pCi/gram), where a pCi = 1×10^{-12} Ci. (a millionth of a millionth Ci). Liquid samples may be reported as pCi/L and air samples may be reported as pCi/m^3.

Radionuclides of Concern at BRAC Sites

Like other environmental investigations, the key in knowing what to look for is often found in the operational history of the site. For example, if you know the base maintained aircraft, you might look for radium-226 contamination in the landfill, as radium was used for luminescent dials in aircraft instrumentation. Similarly, modern military compasses and gun sights use hydrogen-3 (or tritium) to create the self-luminescent device.

If radiological contamination is known or suspected at a site, an investigation should be performed by someone knowledgeable and experienced with the use of radioactive materials in the military, and detection methodologies for the characterization, assessment and cleanup of these materials. The military base's Radiation Safety Officer (RSO), military branch's radiologic protection organization, and/or the Defense Reutilization Marketing Offices (DRMO) are good sources of information on the historic use of radioactive materials at the facility. A DRMO is responsible for the disposal of all surplus materials and should have removed radioactive instruments, sources or

components as part of the demilitarization process. The table below lists activities that should trigger an investigative thought process, and lists radionuclides that are associated with that activity.

Activity / Occurrence	**Radionuclide**	**Where to Look**
Laboratory	Radium-226 / beryllium or plutonium-238 / beryllium neutron sources, cesium-137, cobalt-60 or strontium-90 calibration sources, tritium or carbon-14 tracers	Laboratories, benches and chemical storage, landfills
Hospital / Infirmary	Sr-90 (eye applicator), iridium-192, Ra-226, Cs-137 or Co-60 (sealed sources), Co-57 calibration / flood sources	Landfill, sewer lines (may have been lost and accidentally flushed), old incinerator
Firing Ranges	Depleted uranium (DU), (aluminum pistons may indicate use of DU)	Firing ranges, look for oxidized metal fragments of yellow color
Burial sites	Ra-226, Sr-90, DU	Old disposal pits, stand-pipes and landfills
Armor plates (e.g for tanks), penetrators and aircraft counterweights	DU	Vehicle / aircraft assembly or maintenance areas, ordinance storage, landfills
Sand Blasting	Technologically Enhanced Naturally Occurring Radioactive Material (TENORM)	Paint or metal sand blasting areas, landfill disposal of blasting waste
Welding rods	Thorium-232	Slag piles, floors of repair shops, scrap metal recycle areas
Manufacture, use, repair or replacement of pre-1970 self-luminescent instrument gauges and dashboard dials, watches, clocks, compasses and gun sights	Ra-226	Landfills, equipment surplus, scrap parts and solvent dumping areas
Self-luminescent exit signs in buildings, watches, compasses, gunners quadrants, aim device, gun sights	Tritium	In standing buildings, landfills with building rubble, artillery equipment

Activity / Occurrence	Radionuclide	Where to Look
Smoke detectors	Americium-241 and Ra-226	In standing buildings, maintenance shops and landfills
Aircraft parts	Magnesium / Th-232 alloys	Assembly and maintenance facilities, landfills
Radar and other electron tubes	Ra-226, Co-60, Cs-137, nickle-63, krypton-85, Promethium-147 and tritium	Instrument and electronic maintenance shops, landfills
Deck markers	Sr-90, Ra-226	Surplus equipment storage, landfills
Arsenals	DU	Machine shops, ordinance storage and testing, landfills
Gas Chromatographs	Ni-63, tritium	Surplus equipment storage, landfills
Vehicle or aircraft maintenance	Ra-226, DU and MgTh	Repair areas in buildings
Airborne and soil contamination	Ra-226, DU	Roofs, gutters, downspout and outfalls

Several examples of finding radionuclides at military facilities have been noted in the past. At one Air Force base, radium dials/gauges were found disposed of inside a 12" to 24" steel/metal pipe. The pipe was embedded in place, similar to a well casing. The top of the pipe was sealed either by a screw on or welded cap. At an ammunition plant, test firing of depleted uranium (DU) rounds resulted in a cleanup of mixed waste (lead and uranium) that had to address both EPA and Nuclear Regulatory Commission (NRC) standards. Lastly, at a site associated with the early development of fuel for the Nuclear Navy, high enriched uranium (HEU) was found in waste (rags, cuttings, protective clothing, etc.) buried in trenches on site. This particular site was operating under a NRC (initially AEC) license, and ceased waste burial practices in the early to mid-1970's, There was no signage associated with these trenches and very little documentation of inventory, placement or location of the trenches.

In addition to letting historical operations guide your investigation, simple observation is also helpful. Radiological signage is an obvious indicator, Other, more subtle keys, like shielded walls in certain rooms may indicate previous radionuclide usage, as the thicker walls provide shielding from radiation exposure. Sheet lead incorporated into walls may indicate potential radioactive or x-ray source use. If unbound radioactive materials were used in facilities, one must also consider radiological contamination may have been painted over.

Regulatory Framework

The cleanup of BRAC sites is usually performed under CERCLA or RCRA authority (or both). When radionuclides are preset, it is possible that the Atomic Energy Act (AEA) might also come into play, either through the NRC or through a State's radiation control

program. Oftentimes, the NRC relinquishes their authority under the AEA, and the State becomes an Agreement State (AS) to implement an equivalent program. However, States cannot license federal facilities that are under exclusive federal sovereignty, such as a Formerly Utilized Sites Remedial Action Program (FUSRAP) site that has been transferred to private ownership. Generally, if the radioactive material on a federal site is licensed by NRC, it is highly unlikely that NRC will relinquish its authority to regulate.

It should be determined whether the site obtained any radioactive materials licenses from NRC or the AS. If so, it is likely that there will be an extra regulatory cleanup hurdle, as the site will need to be decommissioned in accordance with the NRC's license termination rules. In other cases, the license may have already been terminated in the past. Such license records will contain valuable information about what radionuclides were present, where they were used, how license was terminated, and where the materials were disposed of. In addition, there may be new licensing requirements if radioactive materials remain on the property and/or if the residual dose after the cleanup exceeds NRC's 25 millirem per year standard.

There are both federal and State drinking water standards for alpha radiation, beta radiation, tritium, uranium and radium, which may apply to radiological site cleanups. Soil Applicable, or Relevant and Appropriate Requirements (ARARs) may also be considered from the Uranium Mill Tailing reg's (40 CFR Part 192); for example, the 5 pCi/g cleanup standard for Ra-226 in the first 6 inches of surface soil. State Managers should consult EPA guidance on the use of these standards as appropriate.

Integration of EPA and NRC - Agreement State Approaches

If a DOD contractor has operated on a BRAC property under an NRC or AS license and the license has or will be terminated, the MOU between NRC and EPA (found at http://www.epa.gov/superfund/health/contaminants/radiation/mou.htm) should be reviewed and the respective endpoints, approaches, and methods reconciled. This is especially relevant when evaluating groundwater because EPA has specific dose limits for groundwater, whereas NRC does not.

NRC uses radiation dose to assess cleanup endpoints, while EPA uses risk to assess endpoints. EPA cleanup endpoints under CERCLA tend to be a little more conservative than NRC endpoints. Following the MOU principles should help reduce conflict between the two approaches. Given the uncertainty in dose assessment and risk assessment, the practical differences are often minor. It is suggested however that the formal public participation process of CERCLA be used to help assure community acceptance.

Oversight of Radiation Cleanups

The paradigm presented for BRAC sites is that the DOD is the responsible party that hires contractors to characterize and remediate the site. Once the contracts are written and work scopes identified and work starts, DOD oversight will likely vary from one

installation to another. Ideally DOD should oversee the project competently or else hire a neutral oversight contractor to do it instead. This oversight should include basic sampling protocol and analysis, quality assurance, data handling quality assurance, proper statistical treatment, and accurate reporting and related items.

What remains for the State regulator is to assure that the administrative process and the Record of Decision (ROD) are performed in an informed manner compliant with environmental regulations. The State regulator should also perform enough fundamental oversight of sampling procedures and basic protocol to assure that DOD oversight is adequate in this regard. For example, the State could request the chain-of-custody records for a specific sampling event and trace the samples and data forward into reports. The State could also review reported data, and back track to see if the data are valid and all chain-of-custody and quality assurance/quality control (QA/QC) procedures were followed back to the sampling event.

The State regulator's oversight is particularly relevant in that radiological analysis accuracy and precision is directly related to the sample matrix (i.e., smear wipe, soil, water or air sample) and prep, any needed radiochemistry and analytical method (e.g., alpha spec, fluorimetry, KPA or ICP-MS for uranium), and length of time the sample is counted on the detection instrument (e.g., alpha or gamma spec, proportional or liquid scintillation counter, etc.). If detection limits are unacceptably high, often the laboratory can make improvement, albeit at the expense to the client, by lengthening count times. Sometimes other complications arise that confound laboratory analyses that are beyond control (e.g., natural U or Th series present when looking of elevated U or Th). QA records should be available for review upon request in any regard. The simple act of such a request can shore up a responsible party's approach whether one actually reviews the QA package or not. Often a three party agreement between the State, DOD and other federal agency can be developed to address all these issues.

Overall Considerations about Radiation Cleanups

In that all U.S. commercial radioactive waste disposal sites are licensed under AS programs, characterization plans and waste handling must accommodate the waste acceptance criteria (WAC) for the receiving disposal site. This includes meeting federal Department of Transportation regulations.

The disposal of very low activity contaminated waste in RCRA D or C facilities is potentially contentious. NRC, and compatible AS regulations, have provisions in 10 CFR Part 20, section 20.2002, where generators can do a dose assessment for "alternate" low-level radioactive (LLRW) disposal. If the public dose is below a few mrem per year, NRC or an AS may approve the alternate disposal. However, despite a risk analysis demonstrating protectiveness of public health and safety, the proposal may still encounter public resistance. Public participation and transparency on cleanup criteria and waste disposal approaches cannot be overemphasized. The public perception is no level of radiation is safe, thus there is no safe level of residual radioactivity. Leaving buried

radioactive waste in place on a site that will be reused raises similar issues. Long-term institutional controls may be needed in some cases.

The old AEC and NRC regulations allowed a licensee to dispose of certain amounts of low-level radioactive waste onsite until circa-1980. However, what is known and what is unknown from historical records is often blurred, and investigators are often left with having to perform robust statistical building and site sampling to reduce uncertainties. A rigorous data quality objective document should be cooperatively developed to ensure all parties are satisfied with the scheme to identify COCs and the acceptable sampling approach to quantify knowledge of residual activity. An example of acceptable knowledge is when the potentially responsible party (PRP) has records of particular radiological items used and disposed of onsite. If the PRP can provide records that disposed items are from a particular manufacturer, and can provide source term specifications, it may be possible to deterministically quantify the radioactivity and potential public dose if left in place. This approach, when possible, can cut sampling cost and provide a more confident statement for a ROD than a statistically driven sampling approach and dose / risk assessment. If source terms are known with certainty, a relatively small focused sampling plan might then be done to verify the information.

When performing small or large scale radiological cleanups, one is often concerned with buildings, equipment and external environs (e.g., soil and ground water) that may be contaminated. This raises the issue of how to assess and deal with surface vs. volume contamination. Reg Guide 1.86 provides generally acceptable criteria for release of surface contaminated facilities and equipment. Regarding general survey methods and how to approach complex decommissioning sites, the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) (NRC's NUREG-1575) should be reviewed and considered for applicability.

See the NRC's reference library for both Reg Guide 1.86 and the MARSSIM manual.
http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/active/
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1575/

APPENDIX A – Early Property Transfer at NPL Sites

In 1996, Congress required changes to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) allowing federal property contaminated with hazardous wastes to be transferred before cleanup is completed with certain requirements. These changes allow real property held by a federal agency to be transferred by deed prior to cleanup.[2] The deeded transfer is with conditions and requires the concurrence of the Governor of the State or Territory (States).

If the property is listed on the National Priority List (NPL), the following conditions are required to be met prior to transfer:

- An affirmative finding that the property is suitable for transfer.
- The federal agency provides public notice of the transfer.
- The transfer will not delay any necessary response actions.
- Necessary response actions will be taken.
- Budget requirements have been satisfied to ensure completion of response actions.
- Restrictions are in place to ensure the use of the property is protective of human health and the environment.

The purpose of transferring property early is to help communities benefit from an expeditious cleanup and redevelopment effort. This allows new businesses to open sooner and new jobs to be created. In principle early property transfer is designed to get property back into reuse earlier and help reduce the economic impact that losing an active military facility has in a community. The principle of early transfer can also streamline or fast track the process of redevelopment by matching cleanup with reuse plans without duplication of effort by the services or future owner of the property. This process can save time and taxpayer money if the cleanup is transferred to a third party for completion of cleanup work.

This Appendix supplements the Association of State and Territorial Solid Waste Management Offical's (ASTSWMO's) *Regulator's Guide to Base Realignment and Closure (BRAC)*, January 2009, and addresses the unique requirements for early transfer of NPL sites. It is the intent of this paper to help States better understand the documentation required for early transfer of NPL sites and the relationship between the States, U.S. Environmental Protection Agency (EPA), Department of Defense (DoD) and the recipient of the property as part of these transactions. Case studies of privatized early property transfers will also be presented.

[2] CERCLA §120(h)(3)(c) [42 U.S.C. § 9620 (h)(3)(C)]

Despite numerous successful early property transfers, there remain many concerns with the overall process including the protectiveness of public health and the environment, cleanup completeness and financial assurances. Early-transferred property may require extensive land use controls (LUCs) and a means to implement and enforce them, in order to adequately protect site workers and visitors until site remediation is complete.

If the cleanup of Early-transferred property will be privatized, States need to ensure there will be a mechanism to enable their continued oversight of the cleanup. A separate funding agreement with the Local Redevelopment Authority (LRA) will probably be required because of the unlikelihood the military component will directly fund State oversight. Oversight of privatized cleanups is not Defense State Memorandum of Agreement (DSMOA)-eligible. The time and cost involved with oversight of a privatized cleanup may be higher than for military cleanups because closer coordination (e.g., more reviews) may be needed to facilitate a faster cleanup schedule. Also, with privatized cleanups, there is a temptation for the contractor to excessively streamline the cleanup (i.e., cut corners), and closer oversight may be needed to prevent these efficiencies from negatively impacting the cleanup.

An Overview of Early Transfer at NPL Sites

CERCLA requires that real property owned by the federal government on which hazardous substances are known to have been released, disposed or stored for one year or more, be remediated prior to the property being transferred by deed to a private, public or non-federal governmental entity. CERCLA (Section 120(h)(3)(A)(ii)(I)) also requires that the deed conveying the property contain a covenant warranting that all remedial action necessary to protect human health and the environment has been taken prior to the transfer.

In 1996, CERCLA was amended *(Fiscal Year 1997 Defense Authorization Act)* by adding Section 120 (h)(3)(c) commonly referred to as the early transfer authority (ETA) provision which allows the deed transfer of federal real property prior to the cleanup being completed and the deferral of the Section 120(h)(3)(A)(ii)(I) covenant requirements based on a finding that the conditions of CERCLA 120(h)(3)(C) have been met. Early transfer and covenant deferral must first receive concurrence from the EPA Administrator and the State's governor if the federal real property is listed on the NPL. Early transfers of federal property not listed on the NPL require only the concurrence of the State's governor.

Prior to the addition of the ETA provision to CERCLA, the role of State environmental agencies was focused on oversight of the environmental remediation program. Federal landholding agencies were only required to make a demonstration to the EPA Administrator that an approved remedial action had been constructed and was operating properly and successfully prior to the deed transfer of the property. Under the ETA provisions of CERCLA, State authorities have been expanded because the Governor's concurrence is required prior to early transfer.

Requirements for Early Transfer of NPL Sites

In order for a federal property to be transferred under ETA, the property must meet four legal criteria. DoD must demonstrate to the State Governor and the EPA Administrator that these criteria have been met.

The purpose of satisfying the four criteria is to ensure protection of human health and the environment. Typically DoD compiles a documentation package, referred to as the CERCLA Covenant Deferral Request (CDR) package, to demonstrate that these criteria have been satisfied. DoD must demonstrate the following:

- The property must be suitable for the intended use and the intended use must be protective of human health and the environment. If contamination remains on the property and use limitations are necessary, EPA and the state regulatory agency must be in agreement that those use limitations are protective. In addition, the recipient of the property must be aware of these use limitations and should ensure the use is consistent with the limitations.

- There must be a deed or other agreement for property transfer in place and it must include the following assurances:

    - Any land use restrictions required for protection of human health and the environment will be implemented.

    - Land use restrictions will be implemented to ensure that required remedial and oversight activities will not be disrupted.

    - All necessary response actions will be taken in accordance with the schedule approved by the appropriate regulatory agency.

    - Financial ability to complete the cleanup. DoD will submit a budget request to the Office of Management and Budget that adequately addresses schedules for the completion of all necessary response actions. This budget request will be subject to Congressional authorizations and appropriations.

- Published a notice in the local newspaper of the proposed transfer and provided the public a minimum of thirty (30) days to comment on the suitability of the property for early transfer

- The early transfer will not substantially delay any necessary response actions on the property. The benefits of early transfer do not outweigh the necessity of timely environmental cleanup activities.

According to EPA's Early Transfer Authority Guidance, EPA should only consider the deferral of a covenant request when the CDR includes the following:

- A legal description of the real property for the CERCLA covenant is requested to be deferred.

- A description of the nature and extent of contamination that will not be remediated prior to transfer.

- A description of the intended use of the property and an analysis of whether the intended use is reasonably expected to result in exposure to CERCLA hazardous substances where response actions have not been completed.

- Results from a CERCLA risk assessment, taking into consideration reasonably anticipated future land use.

- Response action and operation and maintenance requirements for any on-going or planned response actions, including a milestone date for selection and completion of the action.

- Contents of the deed/transfer agreement must include the following:

    - A copy of the notice to be included in the deed;

    - A copy of the covenant warranting that any additional response actions necessary after the transfer will be conducted by the United States;

    - A copy of the clause that reserves the right of the United States to have access to the property if any response actions after the transfer are needed;

    - Response action assurances included in the deed or other transfer agreement such as an interim site management plan that provide for any necessary restrictions on the property, restrictions on the use of the property to ensure that response actions will not be disrupted, all necessary response actions will be taken and identify the schedules, and that there is adequate funding to complete the response action;

- A response to comments received during the public comment period; and

- Transferee response action assurances and agreements.

The transferee response action assurances and agreements are necessary when the transferee agrees to conduct response actions on the property. DoD should include in the deed provisions notification to the transferee of the requirement for, and status of, an Interagency Agreement (IAG) with EPA, or other enforceable agreement or order requiring cleanup of the site.

When the transferee agrees to fund and conduct the cleanup as condition of the transfer, DoD should provide documentation to EPA demonstrating that the transferee has or will become legally obligated to conduct the required response actions in accordance with the IAG or other enforceable agreement.

When DoD is no longer going to be involved in the cleanup, DoD typically will not fund the state regulators' oversight of the cleanup under the Department of Defense and State Memorandum of Agreement (DSMOA). Therefore, it is necessary to have an agreement in place between the state and the transferee to have these oversight costs funded.

When the final CDR is complete, it is submitted to the EPA Regional office and State environmental regulatory agency. Property cannot be transferred by deed until the CERCLA covenant is explicitly deferred by EPA and the State.

Tools to Assist States in Early Property Transfer

States may find the following tools helpful during the early transfer process:

- Administrative Order on Consent (AOC): The purpose of the AOC is to establish a process and timetable for completion of the response and corrective actions required for the transferred property. The AOC includes a description of the investigation and remediation process through site certification and implementation of operation and maintenance plans, an explanation of the roles and responsibilities of the parties, and provisions for the State's approval, cost recovery, funding for long term oversight and enforceability. The AOC obligates the transferee to implement all necessary response and corrective action as required to achieve Federal and State CERCLA regulatory closure.

- Federal Facility Agreement (FFA): The general purposes of the FFA are to:

    - Ensure that environmental impacts associated with past and present activities at the site are thoroughly investigated and appropriate remedial action is taken as necessary to protect the public health, welfare and the environment;

    - Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA, the National Contingency Plan, Superfund guidance and policy, Resource Conservation and Recovery Action (RCRA) guidance and policy, and appropriate State law;

    - Facilitate cooperation, exchange of information and participation of all parties in such action; and

    - Ensure adequate assessment of potential injury to natural resources, and the prompt notification, cooperation and coordination with the Federal and

State Natural Resource Trustees necessary to guarantee the implementation of response actions achieving appropriate cleanup levels.

- Land Use Covenant (LUC): LUCs restricting property use and activities should be executed at the time of transfer. LUCs prohibit uses which disturb or interfere with investigation, remedial actions, or oversight activities. In cases where contamination will remain in place, LUCs provide for continued protection of human health and the environment.

Funding & Coordination

One of the most significant issues faced by States is lack of funding during the planning and negotiation phase of early property transfers. Currently, the DSMOA does not provide for funding of State oversight of transfer-related activities such as review of the Environmental Condition of Property (ECP) report and the Community Environmental Response Facilitation Act (CERFA) document. Additionally, State regulatory agency staff must engage federal agencies, military service branches, local entities, and other stakeholders in coordination and issue-resolution meetings over a period of time that will take several months or longer. A possible, though not ideal solution, is to secure agreement from the local entity to reimburse the state for these activities after the local entity receives funding from the service branch transferring the property.

State regulatory agencies are also an important resource for local entities that must come up with their cleanup cost estimates. These agencies have often gone through the transfer of other federal properties, and can assist the local entities in ensuring their cost estimates account for all remediation activities they will be required to complete under a State Consent Agreement.

It is critical for state regulatory agencies to begin participating in the transfer process as early as possible. This helps ensure that state requirements are included, or at the very least considered, when deciding on remediation goals, environmental use controls, and other aspects of the transfer.