

**Process for Transition of  
Uranium Mill Tailings  
Radiation Control Act  
Title II Disposal Sites to the  
U.S. Department of Energy  
Office of Legacy Management  
for Long-Term Surveillance  
and Maintenance**

**March 2012**



**U.S. DEPARTMENT OF  
ENERGY**

Legacy  
Management

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## Abbreviations

ACL	alternate concentration limit
BLM	U.S. Bureau of Land Management
CAD	computer-aided design
CFR	<i>Code of Federal Regulations</i>
DOE	U.S. Department of Energy
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
FIMS	Facilities Information Management System
GEMS	Geospatial Environmental Mapping System
GIS	geographic information system
ICs	institutional controls
LM	Office of Legacy Management
LMS	Legacy Management Support
LTS&M	long-term surveillance and maintenance
LTSP	long-term surveillance plan
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
RRS	Request for Realty Services
SEEPPro	Site Environmental Evaluation for Projects (database)
SME	subject matter expert
UMTRCA	Uranium Mill Tailings Radiation Control Act
USACE	U.S. Army Corps of Engineers
USC	<i>United States Code</i>

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## **1.0 Purpose**

This document presents guidance for implementing the process that the U.S. Department of Energy (DOE) Office of Legacy Management (LM) will use for assuming perpetual responsibility for a closed uranium mill tailings site. The transition process specifically addresses sites regulated under Title II of the Uranium Mill Tailings Radiation Control Act (UMTRCA) but is applicable in principle to the transition of sites under other regulatory structures, such as the Formerly Utilized Sites Remedial Action Program.

## **2.0 Introduction**

UMTRCA established that a government agency will provide perpetual care for closed uranium and thorium ore-processing sites that were operating under a specific license in 1978 or were licensed thereafter. Transition from a private licensee to LM invokes a process to ensure that LM has no technical concerns with regulatory findings that:

- The disposal cell was constructed in accordance with applicable regulatory requirements and approved plans and specifications;
- The site, including groundwater and any surface water, is in compliance with applicable regulatory requirements or agreements;
- The remedies are sound and are implemented to regulatory standards that ensure the site is and will remain protective of human health and the environment;
- The LM real property position is defensible and protective and establishes enforceable control of land uses that may result in unacceptable risk;
- Post-closure maintenance needs are of a routine nature, and no major interventions are foreseen that transfer health or cost risks to LM; and
- Site records, data, and other knowledge are adequate to address any questions about design, construction, radiological and groundwater conditions, and surveillance and maintenance patterns and trends.

“Transition” refers to the process of preparing to assume responsibility for a reclaimed uranium ore-processing mill site from a U.S. Nuclear Regulatory Commission (NRC) licensee. The process begins approximately 2 years before the anticipated date of termination of the specific mill license, and the goal is to complete LM preparations as the NRC is ready to concur that reclamation is final.

## **3.0 Transition Process**

The transition process involves:

- Meeting with licensee and regulator representatives to plan the transition process.
- Capturing and managing site knowledge and information.

- Developing a technical basis to concur with site closure, consisting of the following elements:
  - Reviewing reclamation plans, as-built drawings, and verification documentation.
  - Reviewing groundwater flow and contaminant fate and transport modeling parameters and predictions.
  - Determining adequacy of the proposed long-term groundwater monitoring program, as appropriate.
  - Reviewing historical groundwater monitoring data against established site standards and model predictions.
  - Reviewing applicable state, tribal, or local regulatory requirements identified in the above-mentioned plans and documents.
  - Verifying the physical conditions of a site through a site visit.
- Ensuring conformance with applicable laws, regulations, and DOE orders, guidance, and policy.
- Evaluating real property requirements against existing conditions.
  - Determine if institutional controls (ICs) will be adequate and to assess opportunities for reuse.
  - Assess opportunities for reuse.
- Compiling transition actions into a site-specific action list (“punchlist,” using the Title II Transition Checklist and Site Transition Framework as guidance, Attachments 5 and 6) and tracking progress through regular communication with the licensee and regulator.
- Consulting with NRC and the agreement states on site transfer boundaries, deficiencies, regulatory compliance, and the long-term care fee.
- Developing a long-term surveillance plan (LTSP), webpage, fact sheet, and conducting appropriate stakeholder outreach and support.

The transition process typically begins when a licensee has completed reclamation of surface materials and has a groundwater remedy under regulatory review. The licensee will notify the regulator or LM of intent to transition the site. LM then starts the process which generally requires about 2 years to complete. The transition process schedule (Project Schedule, GANTT Chart, Attachment 1) shows the relative timing of transition activities, sequential dependencies, and estimated durations for individual tasks. Not all elements of this process will apply to the transfer of every Title II site. The actual transition process for a site will vary depending on specific site conditions.

Transition activities are initiated by agreement among the licensee, the regulators, and LM that license termination can be achieved at the end of the transition period. All parties monitor site conditions and the regulatory closure process to determine when transition activities should begin. LM monitors site status through communication with licensees and state regulators as applicable and regular meetings with NRC.

LM and the Legacy Management Support (LMS) contractor site leads will coordinate a kick-off meeting to initiate transition activities. All parties to the transition will be invited to the kickoff meeting (to include licensee, regulators, and real property support). This will be the initial meeting of the transition project team. The team will typically consist of personnel with skills and expertise in site construction and long-term stewardship practices, real property, environmental compliance, hydrology and geology, records and geospatial data management, public affairs, and project management.

Transition activities will not begin until several conditions are considered and understood.

- **Physical construction is complete.** The regulator should have concurred in completion of surface (e.g., tailings and soils) reclamation. LM will review the physical closure and may participate in regulator inspections. Any concerns raised by LM should be accepted for resolution by the regulator and the licensee, and resolution should be achievable within the transition period. Pending regulator concurrence in construction completion, along with site knowledge, may be judged sufficient to satisfy this criterion. Risk of schedule slippage resulting from construction problems should be judged to be low.
- **Groundwater compliance should be achieved.** This often entails application of alternate concentration limits (ACLs) following a prolonged groundwater corrective action program conducted by the licensee. The designated class of use for the aquifer underlying and surrounding the site often determines the applicable groundwater protection standards. Final site boundaries cannot be established until groundwater modeling of the contaminate plume is complete and accepted by the regulator. Typically, the greatest modeled extent of groundwater contamination must be contained within the site boundary.<sup>1</sup> LM will review site hydrology and groundwater conditions. LM will evaluate the modeling to enable future validation of the model and to increase confidence that future groundwater conditions will not deteriorate and will result in non-compliance with established standards or corrective action.

Groundwater issues may take years to resolve. Long lead-time activities include additional modeling and regulator reviews and concurrence. Therefore, real property transition activities should not be initiated unless regulatory closure can be scheduled with some certainty.

- **Site boundaries are finalized.** Once the predicted extent of groundwater contamination has been determined and accepted by the regulator, site boundaries can then be established for long-term custody and care. Boundaries include both ownership and ICs boundaries. Other considerations for establishing the site boundary include buffer areas for engineered structures, proximity of other recognized boundaries such as road rights-of-way and section lines, topography, and other site conditions such as the likelihood of unauthorized access. The regulator should request written LM concurrence in the final boundaries proposed by the licensee in accordance with the *License Termination/Site Transfer Protocol Between the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission* (DOE and NRC 1998).

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<sup>1</sup> Regulations allow protective measures other than ownership of land overlying contaminated groundwater if site operations started before 1978, when UMTRCA was enacted.

## 3.1 Principal Transition Activity Tracks

Although the transition process entails activities by project management and numerous support groups, most transition activities occur along four principal and often parallel tracks.

The tracks are:

- Project management,
- Regulatory closure,
- Real property, and
- Environmental and geospatial data acquisition and archiving.

A composite of the tracks is presented on Figure 1. The individual tracks are presented in the following sections that describe the activities in greater detail.

## 3.2 Principal Parties

### 3.2.1 Regulator

NRC is authorized to control civilian use of radioactive materials. NRC may delegate these responsibilities to a state that establishes a program conforming to NRC requirements (referred to as an “agreement state”). NRC or an agreement state issues a specific license for production of uranium and possession of source and waste materials.

In agreement states, NRC has granted the state regulator authority to issue, oversee, and terminate byproduct materials licenses. NRC retains the authority to determine whether agreement states are in regulatory compliance with federal requirements. The transition process is coordinated between NRC and the agreement state following Procedure SA-900, *Termination of Uranium Milling Licenses in Agreement States* (NRC 2002b).

Following the site transition, NRC continues to regulate byproduct radioactive material under a general license issued to DOE. The DOE general license for the long-term care of Title II sites is codified at Title 10 *Code of Federal Regulations* Part 40.28 (10 CFR 40.28) “General License for Custody and Long-Term Care of Uranium or Thorium By-Product Materials Disposal Sites,” and requirements are also established at 10 CFR 40 Appendix A.

### 3.2.2 Licensee

NRC or an agreement state issues a specific license to a company to process uranium ore and possess the associated source and waste materials. The radioactive waste is regulated as 11e.(2) byproduct material under the Atomic Energy Act of 1954 (Title 42 *United States Code* Section 2011, et seq. [42 USC 2011]). The licensee operates the mill under the specific license until site reclamation is complete and the specific license is terminated.



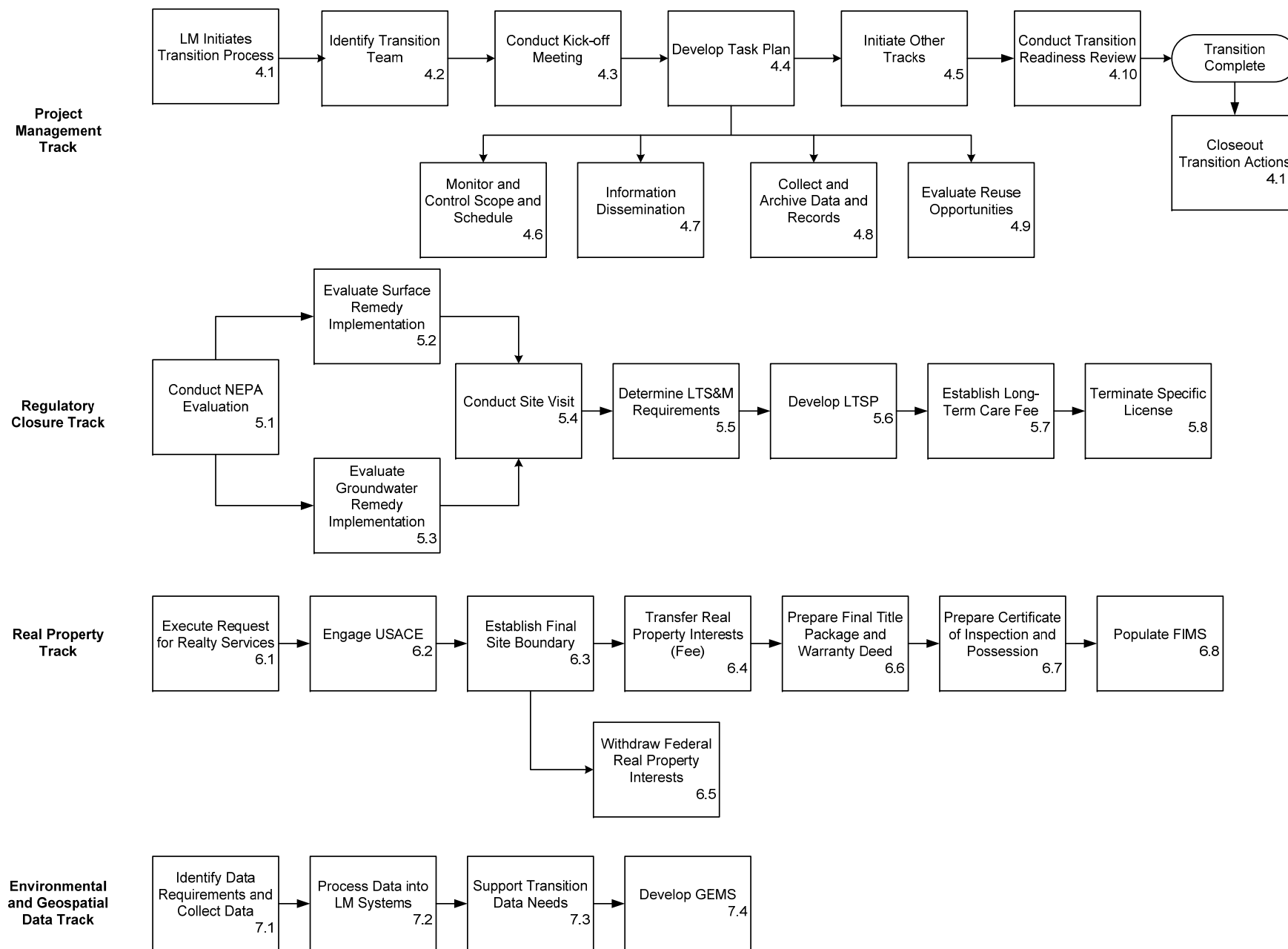


Figure 1. Composite Transition Process Flowchart

### **3.2.3 Long-Term Custodian**

The long-term custodian is responsible for maintaining a reclaimed uranium mill site to protect public health and the environment. DOE is designated by law and regulations as the long-term custodian of reclaimed UMTRCA Title II mill sites. DOE has assigned responsibility for this action to LM. The regulations indicate that a host state may assume these responsibilities, or the responsibilities may be assumed by another federal agency as designated by the President. NRC issues a general license to DOE as the long-term custodian.

### **3.2.4 U.S. Army Corps of Engineers**

DOE has retained the U.S. Army Corps of Engineers (USACE) to complete all transactions necessary to acquire fee land and mineral estates from the licensee. Under a memorandum of understanding, DOE contracts with USACE to interact with the licensee to gather the requisite information that will enable USACE to review the title documents, render a title opinion, and prepare a warranty deed for transfer of the fee land to DOE.

### **3.2.5 U.S. Bureau of Land Management**

Many of the Title II disposal sites have both privately held and federal land and minerals within the transfer boundary. Typically, the U.S. Bureau of Land Management (BLM) has jurisdiction over the federal lands within the transfer boundaries of the Title II sites. DOE must apply to BLM for permanent withdrawal of the federal lands and minerals from BLM's inventory of public land and request the land to be placed under the jurisdiction of DOE.

### **3.2.6 Other Stakeholders**

Numerous other parties may have an interest in the transition of the sites. These parties can include local government agencies, such as city and county governments, the host state, tribal agencies, and the general populace near the site.<sup>2</sup> Most sites will have existing real property interests, such as utility easements and rights-of-way that will carry over after transition. Adjoining landowners may have specific concerns, such as grazing and other potential reuses of the transferred land.

## **3.3 Communication Between LM and Other Parties**

The LM staff will define the protocols and lines of communication among the LM/LMS transition team, the licensee, the site regulator, and other parties to the transition. Generally, LM will communicate directly with the regulator and licensee leads to coordinate transition activities. LM realty officers will be the primary contact with USACE and BLM regarding fee land transfer and other real property actions, such as federal withdrawals. As directed by LM, the LMS contractor staff will communicate directly with counterparts in the licensee or regulator organizations to address technical or real property issues. LM site managers will facilitate or

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<sup>2</sup> Four Title II sites: Uravan, CO, Disposal Site; Church Rock, NM, Disposal Site; Grants, NM, Disposal Site (Homestake); and Canon City, CO, Disposal Site (Cotter) are listed on the National Priorities List and are regulated by the Environmental Protection Agency (EPA) as Superfund Sites. At the time of transition, NRC and the EPA will determine the regulatory roles for each agency.

concur in initial contact with the licensee, regulator organizations, and other parties to the transition and direct the LMS contractor staff to continue to work directly with technical or real property counterparts or other parties. LMS site leads will be available to confer regularly with LM site managers.

LM and NRC staff will meet quarterly to discuss regulatory issues for UMTRCA sites that are in transition or already assigned to LM for long-term stewardship. LMS contractor staff may provide support to track the status of NRC and DOE actions and commitments on an instrument referred to as a call log. Equivalent meetings are conducted with agreement state staffs or other parties integral to the transition on an as-needed basis.

### **3.4 Statutory and Regulatory Basis**

Transition activities are based on complying with license requirements for site ownership and control at 10 CFR 40.28 and 10 CFR 40 Appendix A. Also applicable is UMTRCA (42 USC 7901 et seq.). Reclamation standards are at 40 CFR 192, “Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.”

According to the objectives of DOE Order 450.1A, *Environmental Protection Program*, or current guidance, DOE sites must implement sound stewardship practices protective of the air, water, land and other natural and cultural resources potentially affected by their operations. DOE Order 450.1A requires DOE sites to have an environmental management system (EMS) to implement these practices. The LM EMS incorporates federal mandates specified in Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* and DOE Order 430.2B, *Departmental Energy Renewable Energy and Transportation Management*.

### **3.5 Transition Protocols, Procedures, and Guidance**

The following are the primary protocols, procedures and guidance documents relative to UMTRCA Title II transitions:

- License Termination/Site Transfer Protocol Between the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission (DOE and NRC 1998)
- Procedure SA-900, Termination of Uranium Milling Licenses in Agreement States (NRC 2002b)
- Guidance for Implementing the Long-Term Surveillance Program for UMTRCA Title I and Title II Disposal Sites (DOE 2001)
- NUREG 1620, Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978 (NRC 2003)
- NUREG 1623, Design of Erosion Protection for Long-Term Stabilization (NRC 2002a)

## 4.0 Project Management Track

The purpose of the activities in the project management track is to manage the site transition process according to an approved task plan<sup>3</sup>, to ensure interaction and information sharing among the parties to the transition, and to manage the support functions and activities to culminate in a successful transition. With the exception of the kick-off meeting, the activities in this track may occur continually, periodically, or on an as-needed basis. Activities that occur throughout the transition include task planning, monitoring of task budget and schedule, information exchange, periodic transition team meetings, and issues and actions tracking.

The first three actions in the transition process are shown on the Project Management Track (Figure 2). The other boxes on this flowchart do not reflect a linear process but are provided to indicate the functions that are required either continually or on an as-needed basis to maintain project schedule and budget.

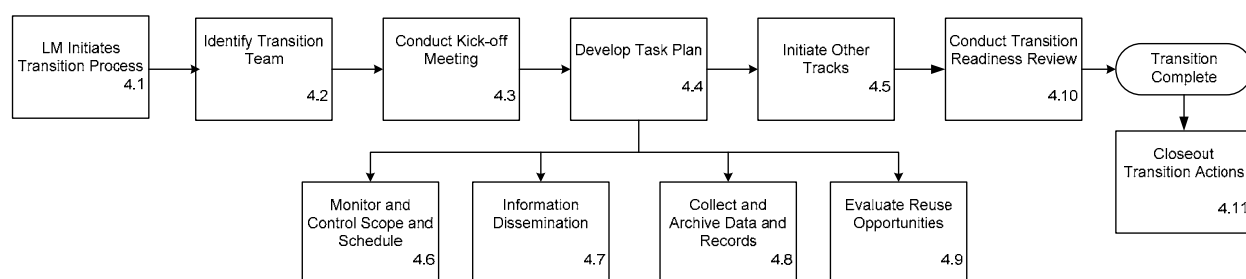


Figure 2. Project Management Track Flowchart

### 4.1 LM Initiates Transition Process

In conversations with the licensee and the regulator, LM will determine a projected transition date and will initiate the transition process no less than 2 years prior to the projected date. Transition dates are an estimate as to the calendar year in which site transition is anticipated to occur. DOE has found that projected transition dates will often slip later in the projected year or into following years. This slippage and the associated causes will be tracked using the established tracking tools discussed in Section 9, “Project Management and Control Tools.”

### 4.2 Identify Transition Team

The LM site manager and the LMS site lead begins the process by identifying the LM and LMS contractor support staff (technical, real property, records, environmental data, etc.) to serve on the team. The transition team will consist of the LM site manager, the LMS site lead, and the LMS support staff. The LMS site lead will identify needed expertise and resources and will work within the contractor organization to provide resources when needed. Each member of the LMS support staff will be a subject matter expert (SME) in his or her area of expertise and will be accountable for the actions in his or her area of responsibility.

<sup>3</sup> DOE generates task plans for multiple years. The plans are managed using approved change control processes. Changes reflect refinement of scope, schedule, and budget as more site information becomes available.

### **4.3 Conduct Kick-off Meeting**

Approximately 2 years before the projected transition date, the LM site manager will set up a kick-off meeting among the internal transition team and all of the appropriate parties to the transition. The purpose of this meeting is to introduce the parties and to establish roles and responsibilities and lines of communication. At this meeting, the team will review the steps common to all transfers and identify issues that may need additional attention or that may impede the transition. The LMS staff will use the Title II Transition Checklist, described in Section 9.5 (Attachment 6), to determine transition issues that should be included on the Site-Specific Punchlist, described in Section 9.3 (Attachment 4). The items on the punchlist will be tracked to completion.

### **4.4 Refine Task Plan**

The LM site manager will provide direction that will be incorporated into a site transition task plan. The site transition task plan defines the scope, schedule, and budget for known transition activities, and will be incorporated into an approved LMS Task Order. The task plan will address all anticipated resource needs and will state assumptions that define limits to the project scope. The task plan will also be incorporated into the life-cycle baseline. This includes proposing changes to the transition dates as reported in the *LM Site Management Guide* (“Blue Book”) (DOE 2010, Rev. 9), which reflects anticipated transition dates for sites coming into LM.

### **4.5 Initiate Other Tracks**

At this point in the transition process, each support group will be aware of transition issues and will address the actions and information needed in the groups’ areas of expertise to result in a successful transition.

### **4.6 Monitor and Control Scope and Schedule**

Once the task plan is established, the LMS site lead will implement several functions to ensure adequate monitoring and control of project scope and schedule. The LMS project manager and LMS site lead will provide project management oversight and document project activities in conformance with LM procedures. The LM site managers and LMS site leads will monitor the task plan and make adjustments for new information and changing conditions that may impact project scope, schedule, and budget. The LM work authorization process will be followed to adjust the scope, schedule, budget and technical baseline. During the course of the transition, performance against the task plan will be continually monitored and reported.

During the transition process, additional issues or concerns commonly arise and delay the transition past the projected transition date. Upon receiving direction from LM, the LMS site lead will generate proposed changes and requested updates to the task plan and life-cycle baseline. Transition schedule changes may result from information acquired by the LMS contractor or LM staff. Baseline changes will be implemented in conformance with LM procedures. Baseline changes will be processed as soon as new information becomes available, and the LMS contractor will review the baseline for updates to the project baseline and Blue Book. All baseline and Blue Book revisions must be approved by LM prior to being made.

As unanticipated issues arise, the LM site managers and LMS site leads may identify additional resource needs such as legal counsel or other specific SMEs.

#### **4.7 Ensure Ongoing Team Communication**

The LMS Title II transition team will hold regular meetings to review the status of project activities, share developments, and ensure that the approach to transition is consistent across the various sites. At these meetings, LMS staff will review the status of site activities, coordinate activities among functional organizations, resolve issues, and confirm project performance and quality.

LM and LMS contractor transition meetings typically will be scheduled to occur before the quarterly meetings between LM and NRC staff. The LMS staff may support LM in drafting agendas for discussions with the other parties to the transfer and for the regular discussions between LM and NRC. At any time, LM site managers may request regular or unscheduled meetings with LMS staff or SMEs for status review or to resolve specific issues or concerns. If possible, to maintain awareness of all transition concerns, the LMS site lead should attend all meetings with LMS support staff that pertain to Title II site transitions.

The LMS site lead will provide the LM and LMS staff with regular status reports on all Title II site transition work. Each LMS site lead will maintain a site-specific punchlist to track individual actions, responsibilities, and due dates. The tools used to track the status of Title II activities are further described in Section 9 and are provided in Attachments 3 and 4. Significant activities and task plan performance summaries are presented in monthly task order reports.

In coordination with the LM Public Affairs Office, as appropriate, the LM site managers and LMS site leads will ensure that stakeholder questions and concerns are addressed in a timely manner. When transition is complete, the LMS staff will ensure that a fact sheet is created and available to the public and that appropriate documentation is available to the public on the LM website.

#### **4.8 Collect and Archive Data and Records**

LM must acquire complete site information to evaluate the remedy and to ensure that future site stewards have access to necessary site information in order to address possible future changes in site conditions. This will be one of the initial tasks after transition planning and prior to most functional team support. Specifics of data collection should be discussed at the kickoff meeting. Some of the licensees provide principal documents to LM as decisions are made by the regulator. Other documents are available on the NRC's on-line document access system. NRC assigns the docket number for each site, which is useful in locating and retrieving the documents from the NRC records management system.

LM has developed a general list of documents that are required for transition and preparation of the LTSP (Section 8). LM cannot commence work on the LTSP until sufficient documentation has been acquired from the NRC and licensee.

The LMS site lead will ensure that all records and information exchange occurs prior to the transfer. This includes all technical data needed to understand site conditions, all environmental

monitoring data required for trending contaminant concentrations and addressing groundwater concerns, and all as-built and land data needed to create an accurate database for mapping. This should include the licensee groundwater flow and contaminant fate and transport models so that modeling predictions can be recreated and validated against monitoring results.

Access to information is accomplished using the Records Management organization to provide document management services. Records Management representatives can provide an index of holdings for a given site. Principal site documents (e.g., reclamation/design plans and completion reports, ACL applications, groundwater corrective action plans and reports, and associated regulator concurrences) will be archived and selected key documents posted to a common location on the LM intranet for access by LM and LMS contractor staff.

## **4.9 Evaluate Reuse Opportunities**

Reuse staff will be included in the transition team to begin evaluating each site for potential reuse. Approximately 2 years prior to the scheduled site transition, the LM/LMS reuse team will begin evaluation of the transitioning site. The reuse team will work with the LM site managers and LMS site leads to ensure understanding of the final site conditions and to discuss viable reuse options. If reuse potential does not exist, this will be documented and no further action will be taken during transition. If reuse potential does exist, LMS technical staff will incorporate reuse information into the LTSP with assistance from the reuse team, as needed.

After the LTSP is finalized and site transition is complete, the LM and LMS reuse team will work with the transition team to evaluate all options, and the LM and LMS reuse team will develop a feasibility paper for the LM reuse lead to present to the LM site manager for consideration of further actions. The LM site manager will manage implementation of any reuse action with assistance from the LM/LMS reuse team, as needed. A Request for Realty Services (RRS) may be initiated if support is required from the Real Property Management group. After implementation of reuse, the LM site manager will notify the LM reuse lead of the number of acres placed in reuse for tracking and reporting purposes. The LM reuse lead has responsibility for reporting acreage in reuse to applicable organizations and to LM management.

## **4.10 Conduct Transition Readiness Review**

As site transition work nears completion and before license termination occurs, the LMS site lead will assemble the site transition team to conduct a transition readiness review, to which LM staff will be invited. LMS contractor staff will document the meeting for the site record.

## **4.11 Closeout Transition Actions**

After the transition is finalized, there are several actions that should be completed to ensure all site knowledge is preserved and LM is ready for site stewardship. The LMS site lead will issue a records call for all information gathered by the SMEs during the transition. LMS real property staff will identify all third party interest holders within the long-term care boundary and LM realty staff will issue notifications of change in ownership. If not previously conducted, LMS real property staff will schedule a condition assessment of the site to identify all existing assets at the site for inclusion in DOE's Facilities Information Management System (FIMS) (Section 6.8). With assistance from the LMS site lead, LMS public affairs staff will prepare the

site fact sheet for the LM webpage and will prepare and distribute news releases and information to the general public, as appropriate.

#### **4.11.1 Environmental Aspects**

LM requires LMS contractor compliance with Executive Orders 13423 and 13514 and DOE Orders 450.1A and 430.2B. LM and LMS have established a joint EMS to incorporate these objectives. The EMS stipulates that environmental aspects be identified for each of its transitions, such that baseline information can be gathered, targets can be established and metrics can be developed to measure progress of site-specific performance and improvements. At closeout, the LMS contractor will establish the environmental aspects that apply to the site for routine surveillance and maintenance. Established environmental aspects will be approved by the LM EMS manager and the LM site manager.

Improvements to environmental aspects are measured in total by an overall site reduction in the calculated equivalent generation of carbon dioxide. This may be accomplished by reducing energy and natural resource use, including conserving water, electricity and fuel; reducing toxicity and volume of chemicals, and solid and hazardous waste generation; and using alternate forms of renewable energy sources such as wind and solar power. Surveillance and maintenance of most Title II sites does not include consuming natural resources, but LM and LMS staff incorporate these concepts into all site activities after transition.

#### **4.11.2 Lessons Learned Session**

Successful site transition requires input and actions by all SMEs on the transition team. Throughout the process there is potential to gain knowledge and perspective that will prove useful in successive transitions. To capture the lessons learned, the LMS contractor will engage the transition team and Quality Assurance (QA) personnel to identify opportunities for improvement, process steps that can present scheduling challenges, data gaps, and other activities that should be considered in future transitions. LMS contractor staff will document the session for the site record. Attachment 7 presents an example of the session conducted for the Maybell West, Colorado, Disposal Site.

## **5.0 Regulatory Closure Track**

This set of activities is designed to ensure that LM has no post-closure corrective action, or nonroutine requirements to maintain the integrity of engineered structures, or reestablish groundwater compliance. In addition, these activities will help LM maintain protectiveness and continued regulatory compliance. Therefore, these activities constitute one portion of the due diligence that LM will employ to ensure that no unforeseen or unfunded liabilities are transferred to the federal government. Activities in this track also support development of the LTSP, the regulatory document for post-closure care. This track includes the technical review of the remedy selection and execution, and interaction with the regulator to resolve any technical issues that affect post-closure site integrity, stewardship requirements, and stewardship costs. Figure 3 shows the activities in this track.



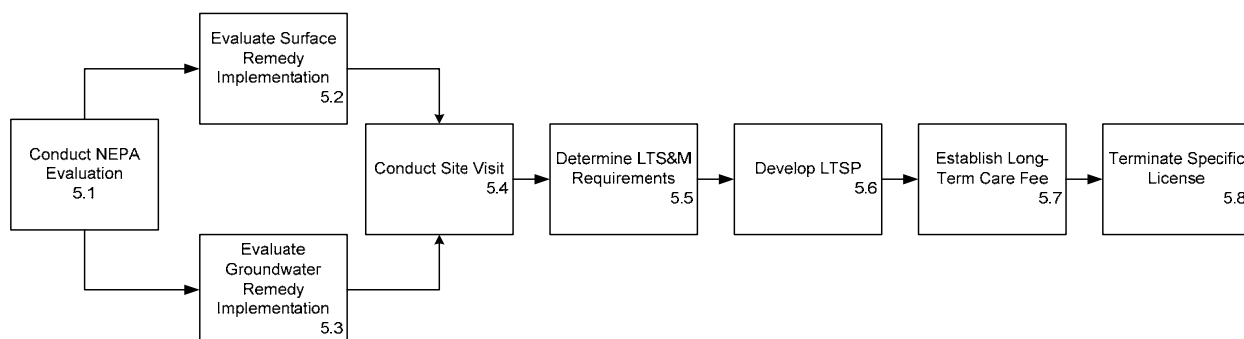


Figure 3. Regulatory Closure Track Flowchart

Regulatory closure activities cannot commence until information on reclamation design, implementation, and final site conditions is provided by the licensee and regulator. Regulatory concurrence is also essential before the end of these activities. Processes on this track will typically commence before final regulatory closure has occurred.

LM does not have an official regulatory concurrence role in determining the adequacy of the remedy design and implementation. However, the *License Termination/Site Transfer Protocol Between the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission* (DOE and NRC 1998), referred to as the Protocol, defines the relationship between DOE and NRC.

NRC and LM will consult in reviewing remedy proposals and determining that the remedy will be effective under post-closure care.

LM will also interact with agreement state staff and licensees so that LM will have completed the due diligence evaluation of the remedies and final site conditions by the time the regulator is ready to concur that the licensee's reclamation is complete. NRC and agreement roles and responsibilities are defined in *Termination of Uranium Milling Licenses in Agreement States* (NRC 2002b).

DOE does not have a specific Memorandum of Understanding with Texas, Colorado, Utah, or Washington, which are agreement states in which UMTRCA Title II sites are located. Furthermore, the NRC Agreement State Programs Branch Office oversees the agreement state programs, whereas the NRC Uranium Recovery Licensing Branch oversees the DOE general license at 10 CFR 40.28. However, the Protocol applies to the activities of all NRC elements, so DOE understands that the NRC Agreement State Programs Branch Office will consult with DOE on agreement state regulatory activities for closure of the Title II sites.

Technical issues' resolution will be achieved through regular interaction between the NRC and LM. Both agencies have protocols for issue resolution if, in the future, the agencies cannot reach agreement.

## 5.1 Conduct National Environmental Policy Act Evaluation

Federal facilities are required to comply with the National Environmental Policy Act (NEPA), which mandates the evaluation of impacts of federal actions on the environment, socio-economics of urban or rural communities in the vicinity of the site and environmental

justice. Site transition into LM is a federal action requiring federal expenditures. Therefore, LM has conducted a NEPA evaluation of the transfer. LM has determined that site transitions are simply a change of ownership and fall into categorical exclusion under DOE's implementing regulations for NEPA. However, all actions under LM management will be addressed with appropriate NEPA documentation. NRC also conducts a NEPA evaluation for the specific license termination action. LM requests NRC and licensee NEPA documentation for the site records collection.

In accordance with 10 CFR 1021, *National Environmental Policy Act Implementing Procedures*, Subpart D, Appendix A7 "*Transfer, lease, disposition, or acquisition of interests in personal property or real property, if property use is to remain unchanged*", an environmental checklist will be completed to comply with the NEPA that addresses the transition of Title II sites from the licensee to LM. Because sites' property use is unchanged in a transition from the licensee to LM, the transition action is anticipated to fall under the aforementioned Appendix A7 categorical exclusion. In addition, NRC addresses NEPA requirements in accordance with 10 CFR 51.22 (c) (11) prior to accepting the LTSP and terminating the licensee's specific source material license.

## **5.2 Evaluate Surface Remedy Implementation**

This activity includes review of the approved design, including engineering calculations (as needed) to demonstrate compliance with performance requirements and the ability to withstand design basis events, as well as construction, inspection, verification, and regulatory concurrence documentation. LM will request construction as-built data to support this work, in both paper copy and, if available, electronic formats. The LM/LMS transition team will assess the completeness of the records and request additional information, if necessary. The evaluation process will ensure that site documentation is complete and there are no concerns about long-term integrity or protectiveness. Although not a license requirement, this activity also includes an analysis of vegetation conditions and vegetation management requirements to maintain design function, particularly with regard to erosion, and compliance with noxious and invasive species laws and regulations.

## **5.3 Evaluate Groundwater Remedy Implementation**

This evaluation can be conducted in parallel with the evaluation of the surface remedy implementation. It is assumed to occur after the surface impoundment is completed so source control is ensured. Often groundwater compliance entails a period of licensee corrective action after which the licensee applies for ACLs because compliance with the existing groundwater quality standards cannot be achieved and a cost versus benefit analysis does not justify the continued expense based on risk. Licensee groundwater modeling determines the maximum predicted extent of contaminated groundwater that will occur above applicable standards and/or background, which influences transfer boundaries and post-transition use restrictions.

LM requests environmental monitoring data, which are entered into LM systems. LM also requests a copy of the groundwater models used to evaluate and archive. The evaluation typically will not entail running the model independently by LM support staff if parameters and assumptions made are reasonable, methods are accepted practices, and the modeling and the regulator compliance reviews are technically defensible.

The LM/LMS transition team will evaluate the licensee groundwater model to ensure that knowledge of site hydrology and model construction is captured for future DOE stewards. The object of the evaluation is to arrive at a defensible conclusion regarding whether the model is representative of the groundwater system and fate and transport of contaminants, as well as whether DOE will be at risk for failing to ensure protectiveness and compliance under long-term monitoring. LM will request access to licensee hydrologic resources to capture and record knowledge of the licensee groundwater compliance process.

## **5.4 Conduct Site Visit**

LM and LMS contractor staff may conduct site visits to maintain contact with licensee staff, stay apprised of site conditions, and ensure a thorough understanding of engineered structures and pertinent site features. LM may request that such visits be coordinated with other site inspection trips to the region. Often, when regulators conduct visits and inspections, LM will be invited as an observer and may participate in the discussions (DOE and NRC 1998). While DOE has no official role in the regulatory closeout of UMTRCA Title II sites, the regulators recognize the need to consult with LM on issues of concern to the long-term steward, such as site boundaries, acceptance of non-11e.(2) or hazardous materials in a disposal cell, establishing the long-term care fee, and final surface and groundwater conditions, as guidance suggests. LM should use the visit to assess the site for departures from as-built conditions and maintenance issues that should be addressed before transition.

At the site visit, the LM site manager and LMS site lead can coordinate with the licensee on design and placement of site-specific surveillance features (e.g., signs, monuments, and fencing). Boundary monuments are addressed both here and within the real property transfer process. LMS staff will provide specifications for the site marker and warning signs. Other requirements for physical site features such as fences, road restoration, and other access controls should be defined through consultation between LM and the licensee. Regulations in 40 CFR 28, Appendix A, Criterion 10 allow for site specific “surveillance and control requirements” to be specified. LM will request as-built information for site-specific surveillance features. Specifications for site-specific surveillance features are presented in the *Guidance for Implementing the Long-Term Surveillance Program for UMTRCA Title I and Title II Disposal Sites* (DOE 2001).

## **5.5 Determine LTS&M Requirements**

Long-term surveillance and maintenance (LTS&M) requirements derive from license requirements and evaluations of the surface closure and groundwater remedy. LM will identify procedures for visual inspection of surface features, define monitoring requirements for groundwater and other environmental media, and establish requirements for vegetation management. The LTSP will present a complete monitoring program, specifying monitoring locations, analytes, frequencies, and the rationale for the monitoring program.

Requirements for managing ICs will be determined through developing and evaluating those instruments during remedy review and real property transfer activities. The requirements will be incorporated into the LTSP, with reference to regulatory drivers. LM will confirm and document other regulatory requirements, such as groundwater standards beyond the site boundary.

## 5.6 Prepare and Submit LTSP

The LTSP content and format are prescribed in the *Guidance for Implementing the Long-Term Surveillance Program For UMTRCA Title I and Title II Disposal Sites* (DOE 2012), which invokes the requirements of 10 CFR 40.28. The LTSP should contain a summary of the surface closure and groundwater compliance remedies in sufficient detail to allow stakeholders to understand the LM strategy for maintaining protectiveness and should include documentation of regulator concurrence that remedies are protective and that they comply with applicable regulations. A review and evaluation of the proposed long-term groundwater monitoring program is performed (and documented) to determine if any modifications are technically warranted. Modifications to the program are then adopted into the LTSP for NRC concurrence. The LMS contractor will develop an early draft of the LTSP that will be enhanced as details of remedy implementation and post-closure care requirements are defined, and real property details are available. LM may submit the draft LTSP to the licensee to confirm site details and descriptions. When the licensee remedies are implemented and concurred in by the regulator and the post-closure care program is well defined, LM will submit the draft LTSP to NRC for review of the technical content (DOE and NRC 1998). The LTSP cannot be finalized until the real property transaction is complete and ownership is documented in the LTSP.

Information for the LTSP is assembled from geospatial and environmental data, site records, and real property activities.

## 5.7 Establish Long-Term Surveillance Charge

In accordance with the Protocol and NRC guidance, NRC and LM will consult on setting the long-term surveillance charge (LTSC). Regulations establish that the licensee fee is sufficient to ensure that routine surveillance and maintenance are performed at no cost to the federal government. Regulations at 10 CFR 40.28, Appendix A, Criterion 10 state that “the total charge to cover the costs of long-term surveillance must be such that, with an assumed 1 percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance.” Therefore, as the long-term custodian, LM has a valid interest in NRC’s determination of the long-term care fee. LM must also ensure that the costs of nonroutine maintenance and other extraordinary costs for post-closure care are considered and recovered. However, LM recognizes that NRC makes the final decision for any increase of funding requirements from the minimum charge state in Criterion 10 (\$250,000 in 1978 dollars). LM will submit an estimate of long-term care costs to NRC for consideration. NRC guidance for setting the long-term care fee is found in NUREG 1620 (NRC 2003). On September 29, 2011, NRC issued a Regulatory Issue Summary (RIS) to reiterate its policy regarding the LTSC for applicable uranium recovery facilities. The RIS states that NRC may consider increasing the LTSC for activities including, but not limited to: groundwater monitoring; riprap, erosion or other cover repairs; fencing; and vegetation control that are undertaken to ensure maintenance and radiological health and safety. Please refer to the most current version of the *Guidance for Developing and Implementing Long-Term Surveillance Plans for UMTRCA Title I and Title II Sites* (DOE 2012) for additional information on the LTSC.

## 5.8 Terminate Specific License

LM will have expressed any concerns about site conditions or remedy implementation to regulators during the transition evaluation processes. Therefore, it is LM's expectation that when the regulators concur in termination of a specific license, LM concerns will have been addressed.

## 6.0 Real Property Track

Once the final property boundary is established, work can begin on transferring the real property and other required property rights to DOE. To initiate work, the project submits an RRS form. Real property activities will be directed by the LM realty officer and LMS real property staff, as directed by the LM site manager in coordination with the LMS site lead.

During transition it is critical that LM confirm ownership of all rights that impact the lands being transferred. LM must confirm the owners of oil and gas, mineral, water, and any other rights within the transfer boundary. DOE will ensure that the ICs on privately held land are sufficient to protect human health and the environment.

Generic processes for transferring different types of real property assets are shown on Figure 4 and described in the following sections.

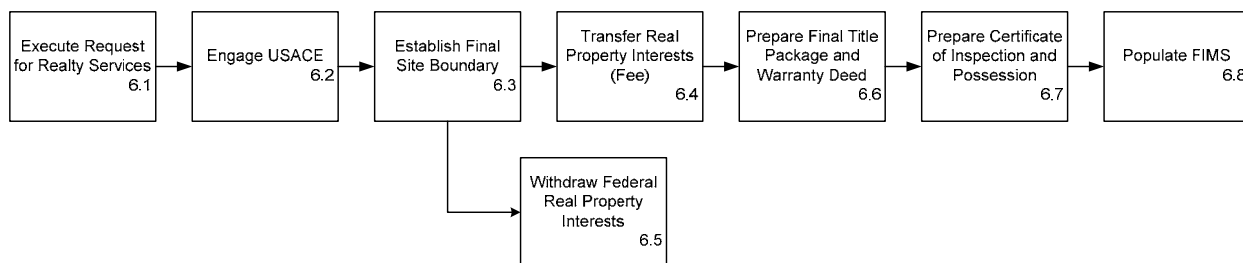


Figure 4. Real Property Track Flowchart

### 6.1 Execute Request for Realty Services

The RRS form (LMS 2102) establishes authorization to initiate real property activities. It should be completed approximately 24 months prior to the proposed transition date and as soon as possible after the site-specific kick-off meeting. The RRS form triggers LM's interaction with USACE. The form and instructions for submittal are available electronically on the LM Portal and must be signed by the LM site manager and LM realty officer. The RRS form is provided in Attachment 2.

### 6.2 Engage the U.S. Army Corps of Engineers

DOE retains USACE as its title agent to review all title information provided by the licensee and to prepare a warranty deed for the fee land transfer. LM must provide USACE with a scope of work to acquire the fee land and mineral interests. The LM realty officer will be the primary

contact with USACE to facilitate information transfer from the licensee and to resolve issues and track progress in obtaining the requisite lands and interests.

### **6.3 Establish Final Site Boundary**

The licensee will provide the final site boundary survey as soon as practicable. LM will use this survey as the starting point for determining land transfer requirements and also as the foundation for all mapping. Care should be exercised in drawing a distinction between ownership boundaries and the long-term care boundaries. The ownership boundary survey delineates and describes the land that DOE will acquire in fee or land over which it will have jurisdiction by withdrawal. The long-term care boundary can encompass additional land or real property interests. For example, the long-term care boundary will encompass land subject to ICs. DOE may not own some of the land subject to ICs but would maintain a real property interest in the restriction of uses that are established through the ICs. An example of this distinction is provided on Figure 5. States vary in their approach to recognizing and establishing ICs. In states where it is not possible to secure adequate protection using ICs, DOE may be required to own additional land to limit access to resources and to ensure restrictions for land use remain in place.

LM is particularly interested in established ICs. Once it has been determined that there is residual contamination requiring use restrictions, the licensee must establish perpetual and enforceable ICs on lands containing regulated contamination. The ICs may be within or outside the ownership boundary, but they will always be included in the long-term care boundary.

The licensee and other private owners may hold real property interests at the sites, or these interests may fall under the jurisdiction of federal, state, or local agencies. This scenario can be further complicated by the fact that surface and subsurface estates may be severed (i.e., are owned by different parties). It is essential for LM to understand the needs for long-term stewardship and to identify all parties that hold or need rights on transitioning sites. As needed to understand all real property interests, LMS Environmental Support Services staff will create mapping “layers” that define

- Surface ownership,
- Land agreements (easements, permits, ICs, etc.),
- Water rights,
- Mineral rights, and
- Oil and gas rights.



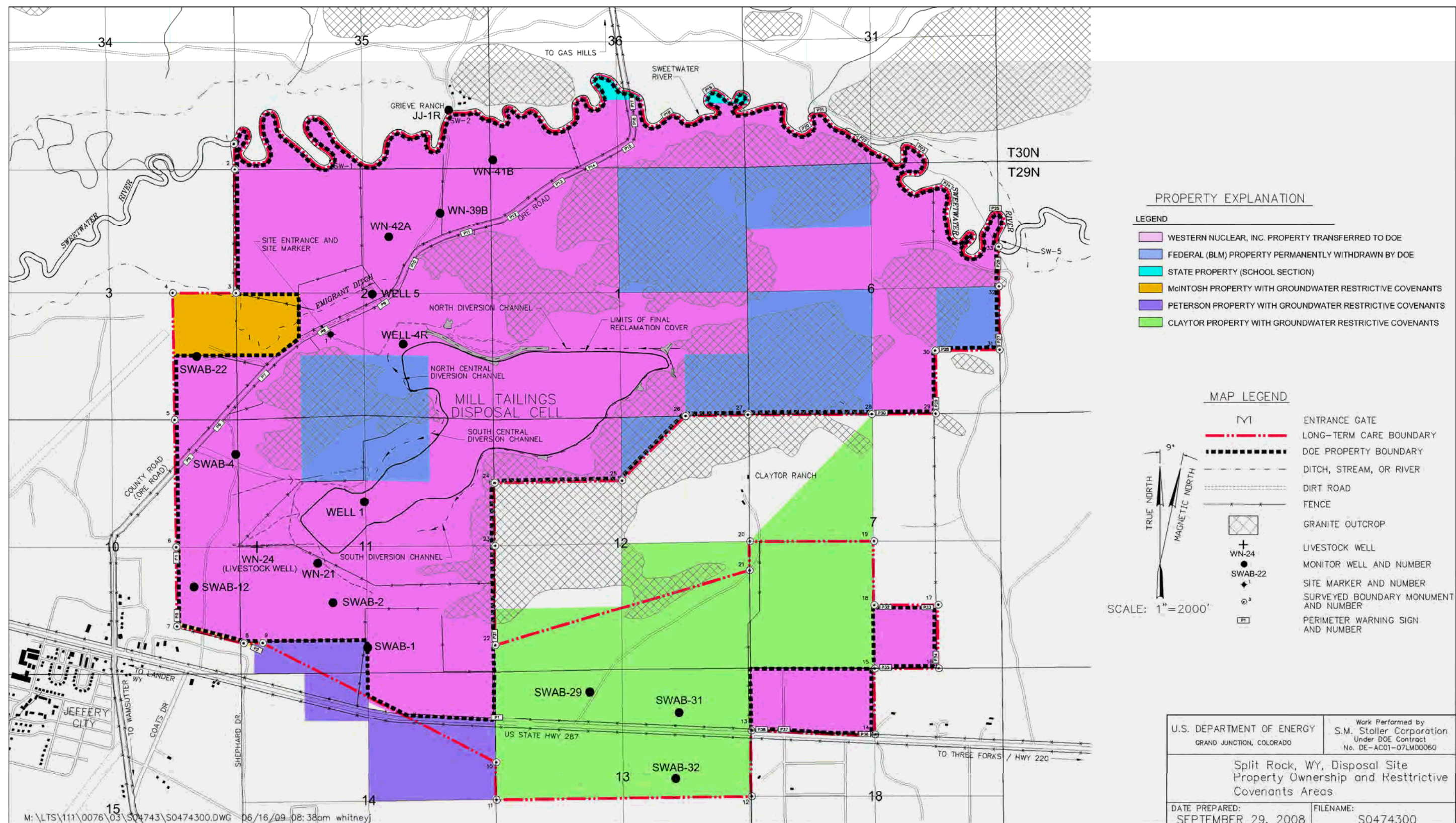


Figure 5. Split Rock Boundaries and Land Agreements

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## 6.4 Transfer Real Property Interests in Fee

For land and mineral interests owned by the licensee in fee, DOE will acquire clear title interests at transition. Any mineral rights, including oil and gas, held by the licensee will be transferred with the fee land transfer. The licensee will provide LM and USACE with surveys and descriptions of fee and federal holdings within the ownership and long-term care boundaries. The surveys and descriptions will be used for USACE work on the final warranty deed and for LM work on withdrawal of federally held real property interests. Surface or water rights necessary for long-term maintenance will also be transferred. A water right not needed for long-term care will be returned to the agency with jurisdiction over the right.

The licensee must ensure that all real property interests needed for long-term care are in place at the time of transition. This includes access to the site and to off-site wells and sampling locations. If access to the site is acquired from BLM, the licensee must ensure that the permit is transferable to DOE. If access is over private land, the licensee will secure a permanent right-of-entry per 10 CFR 40.28.

The licensee will retain a title agent that meets USACE requirements. The licensee will assemble the title package and submit it to LM. LM will submit the title package to USACE and will review the title information to ensure that all LM's needs are met and to support development of civil and survey base maps. Should the transition be delayed, USACE may require an update to the title package.

NRC regulations address the licensee's obligation to secure the mineral rights for all land transferred to DOE in fee. Applicable regulations are at 10 CFR 40, Appendix A, Criterion 11 C, D, and E; and 10 CFR 40.28 (d) (1), (2), and (3). These regulations require the licensee to make a "serious effort" to obtain all outstanding third-party mineral rights. The regulations state that, "in the event they cannot be obtained, a deed notice must be recorded in the local public land records which states that the land is being used for the disposal of radioactive materials and is subject to an NRC license prohibiting the disruption and disturbance of the tailings." Additionally, the regulations indicate that upon application, NRC may issue a specific license permitting the use of the surface and subsurface estate provided that (1) the proposed action does not endanger the public health, safety, welfare, or the environment; (2) the site will be restored in accordance with regulatory requirements; and (3) adequate financial arrangements are in place to ensure that if the waste materials are disturbed, the applicant is able to restore the site to a safe and environmentally sound condition. The "serious effort" to obtain the mineral rights required by the regulations should (1) inform the owners that the surface estate is being used for the disposal of radioactive materials under NRC's jurisdiction, (2) inform the owners of the regulatory protections in place applicable to the disposed materials, and (3) include a defensible "best and final" offer to obtain the minerals that is based on current market valuations.

NRC or the agreement state regulator will review the documentation substantiating the licensee's actions to obtain mineral rights for lands to be transferred and will render a judgment as to the adequacy of the efforts. If rights cannot be secured, and it has been determined that the regulations regarding this have been satisfied (e.g., recorded deed notice), the licensee will send the appropriate documentation to USACE for inclusion in their warranty deed information.

## 6.5 Withdraw Federal Real Property Interests

Some transition site boundaries encompass parcels of federal land and minerals that DOE will acquire under separate actions. DOE acquires jurisdiction of federal land within the transfer boundary through segregation and/or withdrawal. Segregation is used to temporarily reserve surface and subsurface rights until site boundaries are finalized. DOE will withdraw any mineral rights held by BLM. However, all withdrawals are subject to prior existing claims, and LM may have to deal with owners of existing claims on the site. Protection of the disposal cell and its associated structures from disturbance from any other surface and/or subsurface use of the land are provided under the general license at 10 CFR 40.28 (d). Should the mineral owner ever release or default on a claim, it will not become available for lease, but will become part of DOE's withdrawal. LM will evaluate the presence of all leases and the impacts on each site. LM has established a set of conditions that will allow oil and gas lease owners and operators to drill for resources as long as the disposal cell is not disturbed and site integrity can be maintained.

Approximately 2 years before transition, LM will apply to BLM to segregate the requisite real property interests or if the final boundary is established, LM may apply directly for a withdrawal. LM must seek protection through segregation as soon as possible to protect future interests while final boundaries and other transition decisions are being made and activities are completed. Timing of the request is critical to maintaining appropriate control of the federal lands and for ensuring that the segregation will not expire before the land can be withdrawn. When the segregation is approved, it will be published in the *Federal Register*.

The segregation remains in effect for 2 years after publication in the *Federal Register*. During that time, site boundaries must be finalized and the permanent withdrawal application can be prepared and submitted. It is anticipated that the withdrawal action can be completed before the segregation expires. Withdrawal is not a requirement of transition or a condition of termination of the specific license. Regulations state that the disposal site land must be owned by the federal government, and should the withdrawal not be complete, BLM remains the jurisdictional agency for the subject land.

## 6.6 Prepare Final Title Package and Warranty Deed

Through site visits and communication with the licensee, LM and LMS staff will identify all parties who have a real property interest in a site. LM will determine all interests that must continue after transition and those that, while beneficial to local stakeholders, may not be essential to LTS&M. Those that are essential, such as utility easements and other surface easements or rights-of-way, will be checked against the title package to ensure their continuity. It is the licensee's responsibility to ensure that any right of access or other surface right that is required continues in the long term. LM will make a determination regarding other rights, such as grazing licenses, and execute those agreements that are beneficial to LM and other parties.

USACE will prepare the final warranty deed and submit it to the LM realty officer for review. When all issues have been addressed and the package conforms to federal requirements, USACE will issue a title opinion for the acquisition. USACE will execute the warranty deed on behalf of the U.S. Government and DOE. The warranty deed will be recorded in the appropriate county records and a copy returned to LM for records and to be included in the LTSP.

## 6.7 Prepare Certificate of Inspection and Possession

The Certificate of Inspection and Possession is a U.S. Department of Justice requirement that must be completed prior to issuance of the warranty deed. It consists of a site inspection by the USACE or designee to verify the land description and to certify the condition of the land and improvements by physical inspection. USACE can delegate this activity to the LM realty officer.

## 6.8 Populate Facilities Information Management System

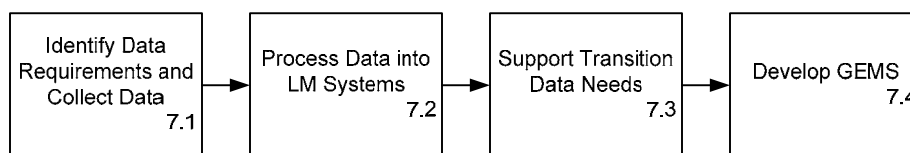
Once transition is complete, all land transfers, land instruments, and site structures and facilities must be described into the FIMS database. The database is DOE's repository for information to manage real property assets and interests and their associated costs. The LMS site lead will work with the FIMS coordinator in the LMS Real Property group to ensure that all assets and land agreements are adequately captured and reported in FIMS.

## 7.0 Environmental and Geospatial Data Acquisition and Archiving Track

The licensee will provide environmental data, geospatial data, and engineering and construction data for general data evaluation and archiving, and for geospatial mapping applications. With LM site manager approval, LMS data specialists will work with their licensee counterparts to identify and gather information needed to meet long-term care requirements and to obtain data for accurate property description and LMS contractor mapping requirements. This information will also include hydrologic and geologic information and associated data to facilitate groundwater model evaluation and reproduction, if needed. Historical data, current data, and closure data will be requested in the existing format. Both hard copy and electronic media are needed.

The collected electronic data will be converted and merged into several databases managed by the Environmental Support Services group to support transition data needs. Hard-copy data will be incorporated into LM records management systems.

Figure 6 shows how technical data are used during the transition process.



*Figure 6. Environmental and Geospatial Data Track Flowchart*

## **7.1 Identify Data Requirements and Collect Data**

The following major categories of data will be requested:

- Stamped/sealed land survey (both ownership and long-term care boundary, if different),
- Site mapping features and metadata,
- Design and as-built documentation of engineered systems and structures,
- Environmental monitoring data and associated applications, and
- Groundwater flow, fate and transport models and associated applications.

The environmental data will be used to support evaluation of groundwater compliance and surface closure and to determine if any modifications to the proposed long-term monitoring program are technically warranted. Survey and mapping data will be used to finalize the site boundary and support real property transition processes to identify and confirm regulated boundaries and restrictions. Licensee-provided data will be gathered early in the process and periodically until site transition is complete. Data will be archived in its original form and incorporated into LM systems.

Licensee data are maintained in several databases in the Environmental Support Services group. Environmental data are kept in the Site Environmental Evaluation for Projects (SEEPPro) database and are available for data evaluation and document preparation. Mapping data are stored in geographic information system (GIS) and computer-aided design (CAD) databases, and once validated; they are available for mapping needs and for inclusion in documents and reports. These data are available to stakeholders through the Geospatial Environmental Mapping System (GEMS).

### **7.1.1 Official Land Survey and Land Agreements**

The licensee will provide an electronic copy of the stamped/sealed land survey and legal description that defines the site boundary. LMS staff will ensure that the coordinate system used for the land survey is compatible with, or able to be accurately converted to LM systems. For some sites, the ownership boundary may differ from the long-term care boundary. For these sites, the licensee will provide a copy of each survey. USACE will use the ownership boundary survey for the fee transfer, and the long-term care boundary will define the area regulated under the general license. The LMS staff will plot the survey to ensure that it closes and matches LM's understanding of the boundaries. Real property interests including, but not limited to, land use, easements, rights-of-way, mineral rights, oil and gas rights, water rights, permits, leases, licenses, utilities, and other infrastructure are incorporated into the digital data management systems. These data will be used to create individual data sets or conceptual "layers" to facilitate understanding of all the rights acquired and granted to others at the site.

### **7.1.2 Site Mapping Features and Metadata**

The licensee will provide detailed mapping information and metadata in electronic format. A single geographic or projected coordinate system for the information is required. Coordinate systems, horizontal and vertical survey control points, and monuments are recorded and plotted. Coordinate system conversion information for modified or local systems is captured and applied.

Legal descriptions are entered into CAD software to plot out boundaries. Mapping data include the following:

#### **7.1.2.1    *Imagery***

LMS staff will acquire imagery, including orthophotography and quadrangle sheets. These will be assembled and added to the appropriate database for future mapping use and for use in documents and reports.

#### **7.1.2.2    *Existing and Historical Features***

The licensee will provide mapping data that will define political and ICs boundaries, vegetation and wetlands areas, structures (buildings, tanks, fences, wells, etc.), topography, contamination areas, geologic units, water features, easements and rights-of-way, property ownership (including surface and mineral ownership), land use, transportation, utilities, and maps of milling facilities and other historical structures that may have influenced contamination distribution.

#### **7.1.3    *Engineered Systems and Structures***

The licensee will provide drawing sets or documents associated with sitewide and remedy systems. This includes final design drawings, design specifications, and as-built drawings of physical structures on the site, and operating manuals and procedures for any treatment systems.

#### **7.1.4    *Environmental Monitoring Data***

LMS staff will identify required monitoring data, and the licensee will provide environmental monitoring data, databases, and data sets early in the process and periodically until site transition is complete. This will include sampling locations, analytical chemistry and radiological data, water levels, well and borehole construction data and logs, permit data, automated measurements, pumping/flow data, ecological data, sampling plans, and standards. These data will be converted, checked, and merged into SEEPro.

#### **7.1.5    *Groundwater Flow, Fate and Transport Models***

LMS staff will obtain hydrology information and contaminant flow, fate, and transport models with associated reports; and related existing features, such as topography, geology, and contamination areas of water and soil.

If any of the above data supplied by the licensee require separate technical information management systems to retrieve it; the licensee will be requested to provide the systems associated with the data. LMS staff will capture and archive necessary software, including documentation, source code, and license agreements for those systems.

### **7.2    *Process Data into LM Systems***

During the transition process, the acquired electronic technical data will be organized, converted, merged, and stored in LM data management systems managed by the Environmental Support

Services group. The systems encompass SEEPro, the GIS with related geodatabases, and the electronic directory system of engineering and construction designs and as-builts.

Analytical chemistry results, sampling locations and depths, field sample measurements, units of measurement, water levels, and well construction and lithologic data will be verified, cross-matched, converted, and stored in the SEEPro database. Mapping data are stored in GIS and CAD databases. All survey, land agreement, and infrastructure data will be reviewed by LM site managers and LMS site leads and other appropriate support staff. Once validated, the site surveys and other mapping data are available for mapping needs and for inclusion in documents and reports.

Licensee-provided data will also be archived in its original form.

### **7.3 Support Transition Data Needs**

The environmental data will be used to support evaluation of groundwater remedy implementation and evaluation of surface closure and to determine if any modifications to the proposed long-term monitoring program are warranted from a technical standpoint. Survey and mapping data will be used to finalize the site boundary and support real property transition processes to identify and confirm regulated boundaries and restrictions. Data converted into the SEEPro database becomes available for data evaluation and document preparation.

The technical data will also be used during the transition process to determine LTS&M requirements, to develop the LTSP, and to review remedy effectiveness with NRC. After site transition, the same data management system will support long-term stewardship activities such as the groundwater remedy evaluation, future designs (as needed), future documents, and the GEMS website.

### **7.4 Develop GEMS**

GEMS was designed to provide dynamic mapping and environmental monitoring data display for LM sites. At transition completion, the LMS Environmental Support Services staff will prepare a site presentation for the GEMS website that will provide access to environmental and mapping data. Users include LM staff, stakeholders, regulatory agencies, contractor staff, and members of the public.

## **8.0 Documents/Information for LTSP Preparation and Permanent Site Records**

Once records and information for a site are received, they will be coded into the appropriate category in the file plan and placed on the share drive for easy access, and the hard copy will be sent to the Records Management group for retention. If received electronically, data should be downloaded and a copy sent to the Records Management group. Real property data should be directed to the LMS Real Property group for proper coding and disposition. Electronic environmental monitoring and geospatial data should be forwarded to the LMS Environmental Support Services group for appropriate disposition and retention. The following documents

should be requested from the licensee to facilitate transition activities and for retention in the site record collection.

- Reclamation Plan, including design-basis documentation and engineering calculations.
- Site history (summary history of site operations and previous owners, historical photos of previous operations, etc.).
- ACL application and supporting documentation, if applicable.
- Description of groundwater contaminant fate and transport model and model files.
- Groundwater monitoring/data report.
- Water Sampling and Analysis Plan.
- Aerial photograph of site after reclamation is completed.
- As-built drawings.
- Environmental Assessment report or equivalent.
- Historical NEPA documentation.
- Adjacent property ownership maps, including any rights-of-way across site property, if applicable.
- Final, post reclamation site topographic map.
- Well completion logs for all wells transferred to DOE.
- Any regulatory permits expected to be transferred to DOE.
- Legal description of final “restricted area” boundaries.
- Title documentation.
- Specific reports on hydrogeology and geology of disposal site area.
- Construction completion report.
- Completion Review Report (agreement states only, indicates that state finds reclamation is complete and specific license can be terminated).
- Electronic file for geospatial, environmental, and design data.
- Any additional historical information or documentation that would be useful under LTS&M.

Additional needs for site-specific information may develop during the site transfer process, and the licensee may be asked to provide additional documents.

## **9.0 Project Management and Control Tools**

### **9.1 Project Schedule**

The project schedule is developed during the planning phase of the project and is integrated into the task plan schedule baseline to define the critical path for major project activities. The project schedule also indicates the anticipated duration for each activity, which is the main tool to help maintain progress. The actual project schedule may not be as detailed as shown in Attachment 1

because the transition process was deconstructed in the attachment for descriptive purposes, whereas the project schedule will reflect actual work packages developed for the task plan.

## **9.2 UMTRCA Title II Transition Status and Remaining Scope— Periodic Updates**

Generally, this document is updated quarterly or when significant change has occurred for internal distribution to all transition team members for all Title II sites. It covers the primary categories of concern (e.g., regulatory status, real property, LTSP, and groundwater) and provides an overview of activities in each of the categories. This update provides the status of transition activities for the Title II sites to the LM staff and helps each transition team member stay informed of issues that may impact final transition. The document also identifies LM staff, LMS site leads, and licensee contact information. Attachment 3 is an example of this update.

## **9.3 Site-Specific Punchlist**

The site-specific punchlist is an internal tool used by the LMS transition team to track individual actions. It lists the details of each action, who should track it (accountability) and the anticipated completion date. It has columns of green, yellow, and red to indicate where effort must be focused. Indicators in the green column signify that actions are progressing as planned, whereas a check in the yellow column shows that an action may require special attention or may be impacting other actions. A check in the red column is an indicator that this outstanding action will most likely impact the ability of the site to transition at the anticipated time. Items in the red column should be discussed with the LM site manager to determine future actions. An example of a site-specific punchlist is shown in Attachment 4.

## **9.4 Site Transition Framework**

The Site Transition Framework is an LM policy document that outlines the issues common to all site transitions that must be addressed during the transition process. It was originally developed to accommodate transitions between DOE's Office of Environmental Management (EM) and LM. While many sections of this document are not directly applicable to Title II sites because they are transitioning from private sector owners, it is a high-level guide that provides a reference to transitions in general. The Site Transition Framework is included as Attachment 5.

## **9.5 Title II Transition Checklist**

This checklist is a subset of the detailed checklist that was originally developed for transition of large DOE EM sites (e.g., Rocky Flats, Colorado) into LM. The nonapplicable sections from the larger checklist have been removed to generate a checklist that is more consistent with Title II transition requirements. This checklist is useful to identify all issues that could potentially impact a Title II transition and subsequent LTS&M. It should be used in the planning phase to identify actions that will either contribute to the transition or actions that, if not completed, could impede successful transition. Activities identified using the checklist should be added to the punchlist. Attachment 6 is an example of the Title II transition checklist.



## 10.0 Quality Assurance

The LMS contractor's quality assurance program applies to the LMS Title II transition project. Specific quality assurance for LMS contractor technical products is enhanced through the standard practices described below. These practices are generally not documented formally for project records.

- Inclusion of pertinent staff—The LMS site lead will ensure that significant recommendations provided to LM have been reviewed by appropriate LMS contractor staff to ensure consideration of all aspects of transition.
- Technical reviews—Significant LMS contractor technical products will be peer-reviewed by other contractor SMEs and other project staff. Reviews may be performed on real property instruments, technical reports and analyses, and planning documents.
- Real property data validation—The Environmental Support Services and Property Management groups will coordinate activities to ensure a consistent and validated data set. Property Management and Environmental Support Services staff will consider other data uses and incorporate utility into their systems (e.g., for FIMS data management). Geospatial data are managed according to internal procedures and procedures implemented by the Environmental Support Services organization that ensure data quality, security, and integrity are maintained.
- Technical products and transition activity conformance with DOE policy and procedures—Applicable guidance documents are presented in Section 3.5 and Section 12, “References.” Specific transition guidance was developed to address the transition of sites remediated by the DOE Office of Environmental Management. The Site Transition Framework (Attachment 5) prescribes a transition process that conforms to the DOE orders governing real property management and legacy workforce obligations, as well as LTS&M requirements. The Title II Checklist (Attachment 6) was developed to incorporate lessons learned from the transition of the Rocky Flats, Colorado, Site to LM. This instrument captures the technical requirements for site transition to ensure that site knowledge is captured and protectiveness is maintained. The larger checklist was reduced to those sections applicable to the UMTRCA Title II site transition process, and the Title II Transition Checklist is used as a “tickler” for development of the site-specific punchlist.
- The LMS site lead will provide technical oversight.
- Lessons learned sessions for incorporation into ongoing work—Informal critiques will also be conducted among LMS contractor staff. These measures are a part of the LMS contractor culture and constitute one source of quality improvements.
- LM participation in quality assurance activities—The LMS contractor suggestions for improvement will be conveyed to LM staff.

## 11.0 Lessons Learned

Each transition activity involves different issues to be resolved, but there may be valuable lessons to be learned from what has already been experienced in previous or currently ongoing site transitions. General transition process lessons learned are presented below. Highlights of the

lessons learned session held in May 2010 to evaluate the Maybell West, CO, Disposal Site transition are presented in Attachment 7.

Project Management Track Lessons:

- **Securing Site Information, Losing Site Knowledge**—These are two issues that can be addressed by securing as much site information as possible as early as is practicable in the transition process. As the sites get closer to transition, licensee staff members are reassigned or are no longer available as sources for institutional knowledge of site information. Licensee contracts for hydrology consultation may no longer be available. Often new staff members are assigned to handle final closure details and are unable to address questions or concerns. Also, as the offices close, records may be transferred to other locations or lost. This leaves gaps in potentially important site knowledge. It is helpful to have groundwater modeling data and to have the models archived along with the historical monitoring data. New data and observations can be compared against the model predictions. Further, this helps LM understand how the site ACLs were developed to enhance LM's ability to address departures from predicted groundwater system performance. A thorough review of historical groundwater monitoring data against established site standards allows for detection of potential post-transitional noncompliance problems.

This applies to each site with ACLs and was particularly pertinent to the Panna Maria, Texas, and Shirley Basin South, Wyoming, Sites.

- **Early Communication in the Transition Process**—Because a site will be transitioned to LM for long-term custody and care, it is important that LM be given the opportunity to comment on documents and decision-making that may potentially affect the site's long-term care, recognizing that NRC or an agreement state has official regulatory authority over the site. Examples of such site documents and associated decision-making include disposal cell design plans and construction reports, reclamation plans, completion reports, ACL applications, Environmental Assessments, changes to groundwater standards or points-of-compliance, designation and implementation of ICs, agreements regarding site use, outgranted rights (owner gives easement or other rights to another party), and subsurface minerals. As appropriate, to further this communication, LM should be included on distribution or provided copies of all subject correspondence and documentation in which LM has an interest. LM acknowledges that NRC posts most docketed materials on their public access website, and for many communications it is incumbent upon LM to obtain pertinent documentation without assistance from the licensee or regulator. Protocols with agreement states should be considered to provide LM with access to the regulatory record. Because NRC or an agreement state has authority over the site, and because a licensee may have concerns about "answering" to DOE as a second federal agency, LM should submit all significant comments and concerns about pre-transition site actions through NRC or the agreement state regulator. LM will track the progress of regulatory closure through quarterly meetings and may participate in NRC site visits when invited. During the active transition period (i.e., 2 years), regular and continual discussions among all parties to the transition will enable concerns to be addressed and resolved in a timely manner. LM will conduct due-diligence reviews of remedy implementation concurrently with the regulatory closure process such that all concerns are communicated and addressed before transition.
- **Timing and Delays in Transfer**—More often than not, transition activities have been halted or delayed as a result of unforeseen regulatory issues. This diminishes the ability of DOE to efficiently conduct the transition process, schedule resources, and direct

subcontractor (e.g., USACE and LMS contractor) activities. Delays have resulted from licensee difficulties in achieving compliance, regulator scheduling, and changing uranium market conditions. DOE has no control over these issues. Nonetheless, DOE endeavors to assess and predict the potential for delays to occur and to plan accordingly, while leaving flexibility in resource allocation to respond to changes in transition priorities.

Current and proposed LMS task plans reflect assumptions that address delays. The 2-year transition process is planned to begin in the fiscal year proceeding the planned transition year, and LTS&M activities are now assumed to begin in the year following the transition year. (Previously, LTS&M activities were assumed to commence in the year of transition in case the transition occurred early in the fiscal year.) Also, DOE will obtain formal communication of anticipated transition dates from the licensee, and will then apply acquired knowledge of regulatory closure processes to determine realistic transition dates. Licensees have been informed of the consequences of commencing and then halting the transition process, including lapses between segregation and withdrawal of federal real property and the potential for having to address third-party property rights, and resource limitations at USACE.

DOE will remain in close communication with licensees and regulators to stay apprised of issues and use the change control process to respond to delays when the schedule changes impact transition dates and resource allocation.

#### Regulatory Closure Track Lessons:

- **Due Diligence**—Licensing regulations stipulate that DOE will suffer no cost for long-term custody and care except for the administrative cost of transition. Therefore, LM may elect to review remedy design and implementation to confirm there will be no unanticipated costs to maintain site integrity and protectiveness after transition. Confirmation entails reviewing and evaluating the technical basis for remedy decisions and remedy implementation. This may include:
  - Reviewing hydrology and contaminant distribution in groundwater, as well as modeling predictions and monitoring requirements, to arrive at an independent appraisal of model validity and to ensure that LM will not have to respond to exceedences of applicable groundwater standards or acceptable risk.
  - Reviewing the actual and predicted performance of a surface closure to reduce the likelihood that LM will have to respond to threats to the impoundment integrity from such occurrences as erosion and riprap degradation.
  - Reviewing potential exposures and associated controls to determine the adequacy and enforceability of controls in place at transition.

The due diligence activity also allows LM to ensure that site documentation is complete.

The prudence of uniform exercise of due diligence before transition is indicated as a result of several recent occurrences:

- Severe erosion was documented at the L-Bar, New Mexico, Disposal Site as early as 2006. A sediment trap is filling, threatening off-site sediment transport and potentially compromising storm water diversion away from the cell. LM has corrected the erosion by hardening structures.

- Groundwater monitoring results have exceeded exceeded ACLs at the Shirley Basin South, Wyoming, Disposal Site since LM's first monitoring event in 2005. LM installed additional monitoring wells to obtain sufficient data to reevaluate site groundwater and to demonstrate that contaminated groundwater has not migrated off site.

LM bore the full cost of these responses.

Due diligence in data collection and migration has resulted in valuable lessons learned. LM began migrating historical groundwater monitoring results into SEEPro. Access to these data have been instrumental in achieving notable and positive outcomes for sites in transition. Reviewing hydrology and contaminant distribution in groundwater, as well as modeling predictions and monitoring requirements, to arrive at an independent appraisal of model validity and to ensure that LM will not have to respond to exceedences of applicable groundwater standards or acceptable risk. To accomplish this, LMS staff migrates historical groundwater monitoring results into SEEPro, performing quality assurance and descriptions for the data while licensee institutional knowledge is available. This allows trending to determine if ACL levels might be exceeded after transition or if other protectiveness or regulatory issues might arise. Access to these data have been crucial in performing a thorough evaluation of site hydrology and groundwater contamination before transition.

Several examples include:

- While preparing the LTSP in 2009 for the Gas Hills North, WY, Disposal Site, a review of historical groundwater data showed that the ACL for radium had been exceeded on several occasions beginning in the late 1980s and as recently as 2009 (just prior to site transition). Further evaluation of the historical data determined that the exceedences appeared to be the result of natural fluctuations in background concentrations in the uppermost aquifer, which hosts uranium mineralization, and were not related to cell performance; there was no correlation with other site-related constituents. This review and evaluation of historical data allowed DOE to obtain regulatory acknowledgement thru the LTSP that these sporadic radium exceedences alone did not indicate a regulatory non-compliance issue or the need for corrective action. The LTSP states that the results of other processing-related constituents (such as nitrate, chloride, and sulfate), which are generally low and stable in background groundwater, would also need to be trending toward their respective standards or exhibit a significant change in behavior, such as a sharp upward trend, before an evaluation of cell performance would be warranted.
- For the Split Rock, WY, Disposal Site, a review of groundwater data showed that uranium concentrations in a 2009 replacement well had increased significantly and were approaching the ACL. As a result of this observation and concern, NRC directed the licensee to perform additional monitoring in order to determine if the groundwater standard would likely be exceeded following transition.
- For the Bear Creek, WY, Disposal Site, groundwater trends were evaluated in 2009 using licensee data going back to 1981. Contaminant levels have increased since pumping ceased under the corrective action program in 1996; this was expected as groundwater flowed from beneath the impoundment to the dewatered portion of the aquifer just down gradient. As of 2009, concentrations were not close to maximum concentration limits or ACLs. However, in 2010, uranium concentrations spiked to levels above the ACLs causing the NRC to request the licensee to reevaluate the groundwater model. Water levels are trending downward where the aquifer was not saturated before milling began.

## Real Property Track Lessons:

- **Timing of Segregations and Withdrawals from BLM**—Transition dates must be monitored continuously to ensure that the federal and fee land transfers converge for a fixed transition date. Site transitions rarely happen at the originally projected transition date. If there is fee and federal land to be transitioned, timing of the segregation and withdrawal of the federal land and mineral portion to coincide with the fee land transfer can be difficult. The segregation is a 2-year action that suspends mining and mineral leasing on the land (subject to prior existing rights) and puts the public on notice that some of the rights on either all or a portion of the segregated land will transfer to DOE. The 2-year time frame gives BLM time to address any comments from the public, provides protection of the resources to be withdrawn, conduct NEPA reviews, and gives LM the opportunity to establish a final transfer boundary. When the withdrawal is complete, as signified by issuance of a Public Land Order and publication in the *Federal Register*, the jurisdiction of the requested rights transfers to DOE. If DOE secures a withdrawal of the federal land portion, and the transition does not happen (i.e., the site is sold or reopened for activity), DOE would have rights it neither needs or wants. Should the federal land transfer be only in the segregation stage, the segregation can simply expire, and the land would stay in BLM's inventory of public land. There could be risk to DOE if there is no mechanism such as a segregation in place to protect the real property interests (i.e., minerals), and third parties may establish real property rights. These rights would become senior to DOE's should a segregation and withdrawal be needed in the future.

This situation occurred for the Lisbon Valley, Utah, site. With a firm transition date communicated by the licensee, DOE applied for, and was granted, a segregation of the federal land portion. Subsequently, the licensee announced an agreement to sell the site for resumed uranium production. DOE did not apply for the withdrawal and will wait until the licensee again seeks termination of their specific license and transition of the site to DOE.

- **Senior and Other Real Property Rights**—In many states the surface and mineral estates are severed. This means that the subsurface interests do not run with land and may have different owners. For privately held land at the Title II sites, the licensee may not own all of the mineral interests under the surface of the land they will transfer to DOE. For federal land, subsurface interests such as mineral and oil and gas rights may be held by others prior to DOE asking for the withdrawal of mining and mineral leasing. According to NRC regulations, the licensee must make a serious effort to secure the mineral estate under the private land to be transferred. Should the licensee be unsuccessful, the regulations state that a deed notice must be filed stating the land is being used for disposal of radioactive materials and is subject to an NRC general license. BLM is obligated to administer active leases on the federal land transfers that are senior to DOE's withdrawal. It is essential for all parties to know and understand NRC's and DOE's protections against interference or encroachment on disposal cells and the associated structures. Protections can likely be found in federal and state regulations.

This situation occurred for the Maybell West, Colorado, site. The site licensee made the "serious effort" required by the regulations but was unable to secure all the subsurface interests. Protection for the disposal cell against future activity is afforded in NRC regulations and in State of Colorado mining laws. In their best and final offer, the licensee advised the mineral rights owners of those regulations, which require actions that might prove difficult or expensive should they choose to exercise their rights.

## 12.0 References

10 CFR 40, U.S. Nuclear Regulatory Commission, “Domestic Licensing of Source Material,” Appendix A, *Code of Federal Regulations*, January 1, 2009.

10 CFR 40.28, U.S. Nuclear Regulatory Commission, “General License for Custody and Long-Term Care of Uranium or Thorium Byproduct Materials Disposal Sites,” *Code of Federal Regulations*, January 1, 2009.

10 CFR 1021, U.S. Department of Energy, “National Environmental Policy Act Implementing Procedures,” *Code of Federal Regulations*, January 1, 2010.

40 CFR 192, U.S. Environmental Protection Agency, “Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings,” *Code of Federal Regulations*, July 1, 2008.

42 USC 2011, et seq., Atomic Energy Act of 1954, *United States Code*.

42 USC 7901, et seq., Uranium Mill Tailings Radiation Control Act of 1978, *United States Code*.

DOE (U.S. Department of Energy), Order 450.1A, *Environmental Protection Program*, June 4, 2005.

DOE (U.S. Department of Energy), 2012. *Guidance for Implementing the Long-Term Surveillance Program for UMTRCA Title I and Title II Disposal Sites*, Grand Junction, Colorado, April.

DOE (U.S. Department of Energy), 2010. *LM Site Management Guide*, prepared by S.M. Stoller Corporation for the U.S. Department of Energy Office of Legacy Management, Grand Junction, Colorado, Rev. 9, June.

DOE and NRC (U.S. Department of Energy and U.S. Nuclear Regulatory Commission), 1998. *License Termination/Site Transfer Protocol Between the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission*, February.

NRC (U.S. Nuclear Regulatory Commission), 2003. *Standard Review Plan for the Review of a Reclamation Plan for Mill Tailing Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978*, NUREG-1620, Rev. 1, June.

NRC (U.S. Nuclear Regulatory Commission), 2002a. *Design of Erosion Protection for Long-Term Stabilization*, NUREG-1623, September.

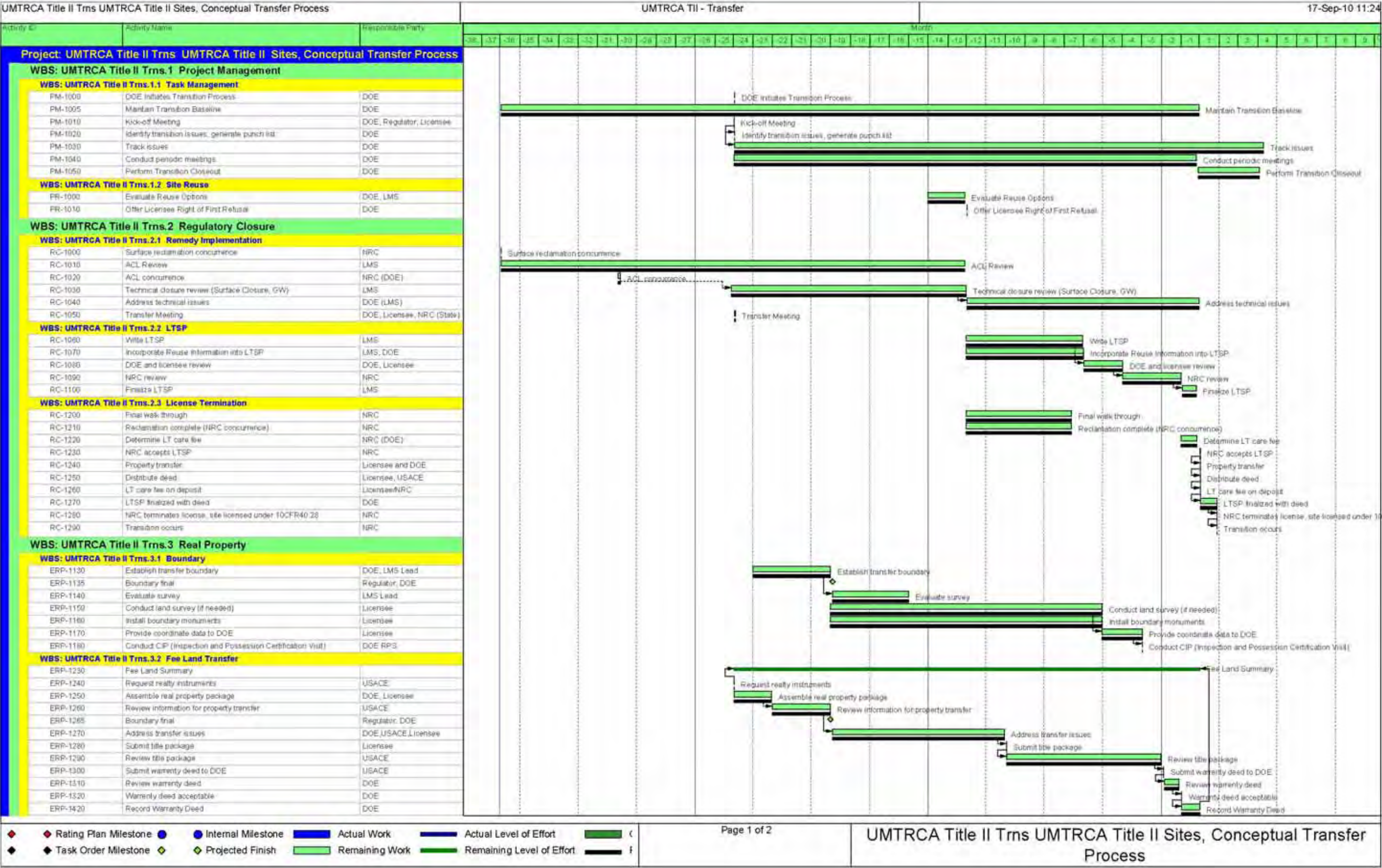
NRC (U.S. Nuclear Regulatory Commission), 2002b. *Termination of Uranium Milling Licenses in Agreement States*, STP SA-900 Procedure, Office of State and Tribal Programs, Washington, DC, December 31.

## **Attachment 1**

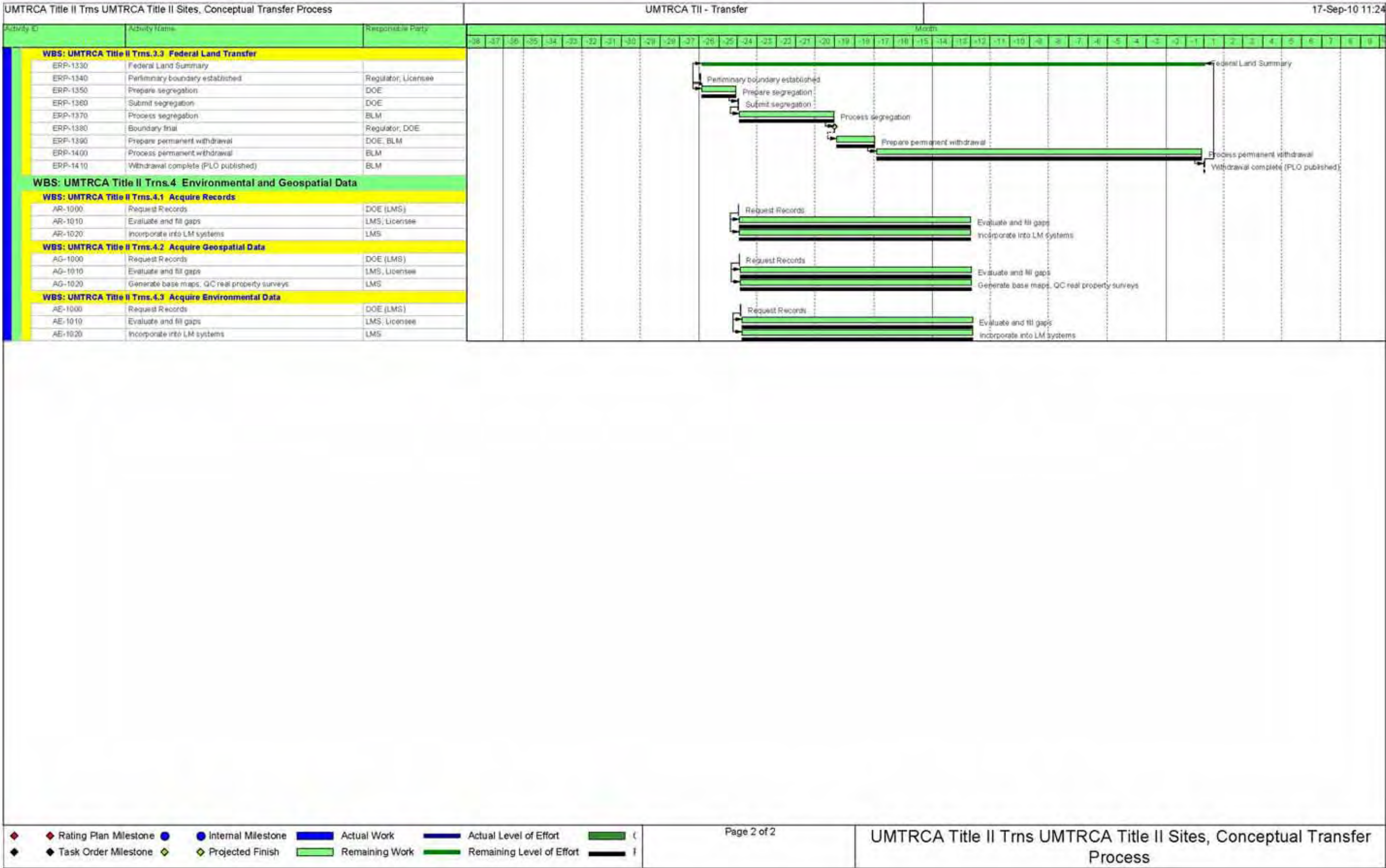
### **Project Schedule**

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**Attachment 2**

**Request for Realty Services**

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U.S. Department of Energy Office of Legacy Management

**Request for Realty Services**

*When complete, please submit to Contractor Real Property Group*

<b>Site name (Blue Book designation):</b>			
<b>Other party(ies) to action or instrument, if known please provide:</b>			
Name: _____			
Company/Organization: _____			
Address: _____			
City		State	Zip
Phone: _____		E-mail address: _____	
<b>Brief description of need</b> <i>(please provide sketch or map if appropriate):</i>			
Fees/costs associated: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> unsure			
Suggested term of instrument: _____ years <b>or</b> <input type="checkbox"/> perpetual			
<b>Special conditions to be considered/included:</b>			
NEPA evaluation: <input type="checkbox"/> action(s) is covered <b>or</b> <input type="checkbox"/> being evaluated			
If action(s) is being evaluated, NEPA documentation was completed on: _____			
Documentation reference: _____			
<b>Action/instrument must be completed by:</b>			
<b>Charge number:</b>			
<b>Signature block</b>			
_____		_____	_____
DOE Site Lead		Date	Realty Officer/Reuse Program Manager
_____			
Date			
<i>To be completed by contractor Real Property group:</i>			
Realty instrument number: _____		Support assigned to: _____	

LMS 2102  
06/07/2011

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### **Attachment 3**

#### **Example of a Transition Status Summary: UMTRCA Title II Transition, Status, and Remaining Scope—Monthly Update**

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UMTRCA Title II Site Transition Status, Updated 7-15-10

Bear Creek, WY, Disposal Site				
Priority Ranking: 2 Leads: Widdop / Surovchak / Montaña Licensee Contacts: Ernie Scott, 307-352-3304 (ernie.scott@anadarko.com) 307-870-4455 (cell) Code: BRC Alternate Name: Union Pacific, Anadarko Estimated Transfer Calendar Year & Qtr: 2010 (3rd Qtr.)				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Completion Report and ACL approved.  Sent estimated costs to NRC to support setting LT Care fee.  NRC PM: Tom McLaughlin.	<b>Land Status</b> Fee and Federal.  <b>Legal Survey: Completed.</b>  <b>S&amp;W:</b> Segregation expires 4/14/2010. Permanent withdrawal at DOI HQ for consideration. Currently resolving NEPA issues for withdrawal application.  BLM working to establish R-O-W until withdrawal complete (needs Forest Service permission).  <b>Minerals, O&amp;G:</b> All fee mineral issues owned upon transfer. Federal minerals part of withdrawal.  <b>Access:</b> Anadarko securing new easements with Hornbuckle and Hardy from Spook to Bear Creek.  <b>USACE:</b> Holding title package for revised, recorded access easements with Hornbuckle and Hardy.  <b>ICs:</b> Federal ownership, no other ICs needed.  <b>FIMS:</b> OSFs to track upon transition will be determined when condition assessment is scheduled.  <b>CIP:</b> Completed 6/29/2010.	1/6/10 NRC will accept LTSP when real property instruments are inserted.	ACL approved and reflected in LTSP. Obtained licensee monitoring results.  Modeling review complete, prepared report (Zinkl).  Orientation/duplicate sampling in July 2009. Received licensee results October 2009.  Surface sample September 2009, results received, validation complete, evaluated results with respect to applicable standards, no exceedances.	Reuse – wind power – access agreements with Hardy and Hornbuckle may need to be revised – current access pertains to LTS&M activities; grazing leases need to be finalized.  Vegetation baseline visit in September 2009; conditions are excellent, report submitted.  Four monitoring wells surveyed May 2010.  Boundary metes and bounds description issues unresolved and federal land transfer will be based on aliquot portions of section.  DOE to begin grazing discussions w/ Hardy's. Stoller developing recommendations.

## UMTRCA Title II Site Transition Status, Updated 7-15-10

Gas Hills North, WY, Disposal Site				
Priority Ranking: 1 Leads: Hall / Surovchak / Montaña Licensee Contacts: Tom Hardgrove; Site Manager, 307-356-4312 (e-mail; thardgrove@cogema-mining.com); Denis Anderson; Real Property, 307-234-5019 (e-mail; DAnderson@cogema-mining.com); George Hoffman; GW/Eng consultant (Hydro-Engineering), 307-266-6597 (e-mail; hydro@alluretech.net) Code: GHN Alternate Name: Pathfinder (PMC) Lucky Mc Estimated Transfer Calendar Year & Qtr: 2010 (3 <sup>rd</sup> Qtr)				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Completion Report and ACL approved. NRC approved discontinuing offsite ground water monitoring; PMC license was amended to remove AL-8 & AL-9 from monitoring program (July 2008); LTSP was revised to reflect the decision. 09/21/09, DOE provided correspondence to NRC regarding their understanding of the final steps for completing site transition. NRC to determine long-term care fee (with input from DOE). Licensee pays to NRC. Ted Carter is NRC Site Manager.	<b>Land Status:</b> Fee and Federal <b>Legal Survey:</b> Complete. <b>S &amp; W:</b> Segregation expires 4/14/2010. Permanent withdrawal at DOI HQ for consideration. Currently resolving NEPA issues for withdrawal application. Exclusive R-O-W on federal land until withdrawal complete. <b>Minerals &amp; O&amp;G:</b> PMC acquired all private and state minerals and will transfer the minerals with fee land. <b>Access:</b> Access is public use of road and county right of way over private parcels. <b>USACE:</b> Signed, recorded warranty deed sent to USACE. <b>ICs:</b> Federal ownership upon transfer. No other ICs needed. <b>FIMS:</b> OSFs to track upon transition will be determined at the same time of the condition assessment. <b>Other:</b> Monitoring wells transfer paperwork received 6/30/2010. <b>CIP:</b> Completed 6/29/2010.	11/26/08; Draft final LTSP submitted to DOE (offsite wells AL-8 & AL-9 remove from monitoring program per NRC concurrence). 12/19/08; Tailings impoundment x-sections added to LTSP (PMC provided as-builts 12/10/08). 01/16/09; DOE comments received; revisions included site map modifications, tech GW text clarification, IC section. 01/29/09; Final draft LTSP submitted to NRC; placeholders remain for warranty deed, permanent withdrawal, and access route ROW. 04/20/09; Received WDEQ comments (Reid Draw well needed, corrective action discussion needed, consider Class III stds applicable onsite, clarification on evaluative GW Program, exit strategy needed); provided responses to DOE on 04/28/09, suggested any response to State should go thru NRC. 06/01/09; NRC review comments received—relatively minor. 06/09/09; Response to NRC comments provided to DOE—forwarded to NRC for review (response pending). Document will be revised and resubmitted to NRC once RP instruments are complete and inserted. 07/10/10; Preliminary final LTSP submitted to DOE for review. Copy of recorded warranty deed inserted, revisions made in response to NRC technical comments, clarification on definition of and actions to be taken with regard to a groundwater standard exceedance (in response to licensee's recent radium exceedances), updated historical groundwater data included, and a pre-transition land ownership and use map added.	PMC abandoned offsite wells AL-8 & AL-9 (August 2008). Review of ACL application complete. GW model files received from PMC 9/30/08 (GWV files for flow and transport and DXF bkgd files not provided). 05/28/09; Hydro-Engineering indicated software was developed in-house to build the required input files and process the results for the flow and transport models—if necessary, reproduction is possible. Approval of the no action alternative in Reid Draw—done in consultation with State, notice of no action FONSI published in Fed Reg (03/17/99). Nov09 groundwater monitoring data reported exceedances of the radium ACL (7.5 pCi/L) at; trend well AL-1 (7.7 pCi/L) and background well T1-6 (7.6 pCi/L). Other recent radium ACL exceedances; 8.3 pCi/L in POE well AL-6 (Mar07) and 11.8 pCi/L in background well T1-6 (Jun07). Appear to naturally occurring as site overlies uranium ore-bearing formation.	Site visit conducted 6/4/08. NRC concluded disposal cell was not threatened by poor state of reveg. Stoller SMEs assessed reveg and noxious weeds on 09/25/08; reveg is poor, some areas will likely need additional work in future, significant gully noted in SW corner of site. DOE will contact PMC to discuss gully and need for repair prior to transition). Conf calls held 09/03/08, 01/14/09, 04/29/09, and 07/15/09 and 02/17/10 to discuss status of remaining site transition actions. PMC indicated WPDES permit expired in June 2008; no further action needed—documentation being sent to DOE. 07/15/09; PMC indicated plans to repair gully on west side of site and to spray weeds. 08/10 & 8/11/09; vegetation baseline assessment performed; report pending. 9/23/09; PMC provided current grazing information in and around site—PMC has no grazing agreements in place; Philp Sheep Co holds a grazing lease with BLM (Allotment No. 1508)—the site lies within this allotment, the restricted area fence keeps livestock off disposal areas. 9/25/09; PMC notified DOE of seasonal impoundment located on site in SE corner. PMC indicated a local rancher may use. DOE is ok with its existence and use. PMC renewed water right and will transfer it to DOE. 02/10/10: PMC provided water quality data and rad scan information on impoundment-no concerns. 10/15/09; PMC provided update on weed control and erosion repairs (photos provided). Stoller engineer agreed erosion repair work looked good. 11/2/09; Assessment on erosion repair provided to DOE and forwarded to PMC; design info requested for records. NEPA Environmental Checklist required (per 10 CFR 1021, Subpart D, Appendix A7) for site transition is complete; no issues, CX recommended.

# UMTRCA Title II Site Transition Status, Updated 7-15-10

Gas Hills East, WY, Disposal Site				
<p>Priority Ranking: 3  Leads: Hall / Surovchak / Montaña  Licensee Contacts: Tom Gieck; Site Manager, 970-256-8889 (e-mail; gieckte@dow.com)  Jason Smith; Site Contact, 970-256-8852 (e-mail; jcsmith@dow.com)  Scott Schierman; Radiation Safety Manager, 435-788-2120.  David Levy; geochem (970) 223-9600  Errol Lawrence; hydro</p> <p>Code: GHE  Alternate Name: Umetco  Estimated Transfer Calendar Year &amp; Qtr: 2010 (4<sup>th</sup> Qtr)</p>				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
<p>Revised ACL concurrence in 2003.</p> <p>CR; NRC approved revised document (and associated license amendment) September 2008.</p> <p>NRC walk-through conducted 06/03/08; no concerns expressed.</p> <p>09/08/08; POC well GW-7 damaged—Umetco repaired.</p> <p>09/21/09, DOE provided correspondence to NRC regarding their understanding of the final steps for completing site transition.</p> <p>9/22/09; Umetco submitted report addressing Cd exceedance reported during “one-time” full suite sampling event at POCs—NRC responded.</p> <p>3/17/10: (see GW)</p> <p>NRC to determine long-term care fee (with input from DOE). Licensee pays to NRC.</p> <p>07/13/10; Umetco to submit license amendment to remove trend well PW4 from LT monitoring (per DOE's request—was not included in LTSP; no comment from NRC regarding its omission).</p> <p>Richard Chang is NRC PM.</p>	<p><b>Land Status:</b> Fee and Federal.</p> <p><b>Legal Survey:</b> Complete (revised final recorded survey received 5/10/10).</p> <p><b>S&amp;W:</b> Segregation expires 4/14/2010. Permanent withdrawal at DOI HQ for consideration. Currently resolving NEPA issues for withdrawal application. Exclusive R-O-W established until withdrawal is complete.</p> <p><b>Minerals &amp; O&amp;G:</b> State minerals in Section 16 (school section) will not be transferred. Umetco minerals will transfer in fee, federal minerals will be withdrawn.</p> <p><b>Access:</b> Complete. Unfettered off public ROW (from east, Natrona County side).</p> <p><b>USACE:</b> UMETCO is gathering information for transmittal to USACE. Anticipated August 2010.</p> <p><b>ICs:</b> Federal ownership. No other ICs needed.</p> <p><b>FIMS:</b> OSFs to track upon transition will be determined at the time of the condition assessment.</p> <p><b>Other:</b> UMETCO gathering information on all remaining wells (including Cameco, AML, and remaining stock well) and water-right information for transfer to DOE. Resolution for liability issues of Dry Creek Rd. in Fremont County is pending. Determine need for access to wells post transfer. 02/05/10: UMETCO provided a copy of the recorded documentation received from AML that ensures the mine shafts are considered closed by the State.</p> <p><b>CIP:</b> Schedule when transfer is imminent.</p>	<p>6/3/09; final draft submitted to DOE for review. Modifications to the long-term monitoring program made (4 analytes removed, POC locations revised).</p> <p>6/15/09; DOE comments received—revisions needed.</p> <p>6/30/09; revised LTSP provided DOE for submittal to NRC—DOE senior mgmt review generated additional questions regarding LT monitoring program—re-evaluation directed.</p> <p>7/28/09; Re-evaluation of LT monitoring program provided to DOE Site Manager (Iron Spring and two wells in SW flow regime removed). Additional info requested and received from Umetco regarding basis).</p> <p>7/30/09; DOE Site Manager approved revisions, provided copy to senior mgmt.</p> <p>7/31/09; DOE senior mgmt approved revisions.</p> <p>8/6/09; Final draft submitted to NRC for review. Placeholders left for RP instruments (warranty deed and permanent withdrawal PLO notice).</p> <p>9/22/09; NRC indicated LTSP review put on hold until cadmium exceedance is resolved.</p> <p>03/17/10; NRC concurred that all constituents detected during the one-time sampling event are not considered COCs; NRC will resume review of the draft LTSP (a conference call is planned to address NRC questions).</p> <p>04/15/10; NRC technical review comments received; relatively minor, discussed intended comment with NRC prior to submittal on 04/07/10). LTSP being revised in response to NRC comments.</p>	<p>ACLs: Umetco received NRC concurrence to the ACL application in 2001—revised in 2002 following an exceedance—NRC concurrence received in 2003. ACL groundwater model evaluation completed 09/30/07—it was checked against site long-term care boundary and was determined to be adequate (08/21/08).</p> <p>Historical groundwater monitoring data received – completed evaluation to determine long-term monitoring program (appendix to LTSP).</p> <p>MCL concentrations (0.01 mg/L) of cadmium were reported in groundwater samples collected from POC wells GW7 and GW8 during NRC required full suite analysis prior to site closeout (per NUREG 1620 Appendix E, Section E3.3.2(1)). Umetco submitted report that concluded the cadmium exceedance meets criterion in 10 CFR 40, Appendix 5B(3) for regulatory exclusion as a designated hazardous constituent (COC ); NRC response pending.</p> <p>03/17/10; NRC provided Umetco written concurrence that all constituents detected during the one-time sampling event are not considered COCs in accordance with 10 CFR 40, Appendix A, Criterion 5B(3).</p> <p>Umetco to submit license amendment to remove trend well PW4 from LT monitoring (per DOE's request—was not included in LTSP; no comment from NRC regarding its omission).</p> <p>Offsite monitoring location omitted from LT monitoring program in LTSP; no comment from NRC.</p> <p>Four hazardous constituents omitted from LT monitoring program in LTSP; no comment from NRC.</p> <p>POCs will remain well GW7 (SW flow regime) and well MW1 (NW flow regime).</p>	<p>Final work on perimeter fence being performed.</p> <p>404 permit for wetlands—offsite, adjacent to east boundary (some reveg requirements may encroach on site).</p> <p>Grazing lease—DOE will address after transition and determine onsite areas available (base on existing fencing; plan to maintain status quo). Current parties grazing within long-term care boundary: Clear Creek Cattle Co. (Rob Hendry), Lazy TY Ranch (Lois Herbst), and Philp Sheep Co (Frank Philp). Umetco holds a lease with Philp Sheep Co that expires at transition.</p> <p>Conf calls held 08/28/08, 01/15/09, 04/30/09, 07/16/09, and 02/23/10 to discuss status of remaining site transition actions.</p> <p>08/12/09; vegetation baseline assessment conducted, report pending.</p> <p>09/22/09; Umetco's WDEQ mining permits (# 349 and 349C-A2) remain open; closure being worked on.</p> <p>NEPA Environmental Checklist required (per 10 CFR 1021, Subpart D, Appendix A7) for site transition is complete; no issues, CX recommended.</p>



# UMTRCA Title II Site Transition Status, Updated 7-15-10

Split Rock, WY, Disposal Site				
Priority Ranking: 4 Leads: Hall / Surovchak / Montaña Licensee Contacts: Brad DeWaard; Site Manager, 307-544-2291 (e-mail; Bradley_DeWaard@FMI.com) Harley Shaver; Real Property Lawyer, 303-757-7500 (e-mail; hwsfish@aol.com) Code: SPR Alternate Name: WNI Split Rock Estimated Transfer Calendar Year & Qtr: 2011 (1st Qtr)				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
<p>NRC concurred in CR 09/20/00.</p> <p>ACL application submitted 1999; concurred in 2006.</p> <p>NRC requested an ACL for Se due to elevated levels. July 2008, WNI discussed issue with NRC—NRC requires an abbreviated EA.</p> <p>Potential GW compliance related concerns remain: Increasing uranium (and sulfate) concentrations in replacement well SWAB-1R—concern that uranium could exceed ACL following transition (NRC requested additional monitoring—thru Fall2010), increased U and SO4 concentrations in SWAB-1R raise question over vertical extent of contamination and adequacy of well screen depths to monitor cell performance and the legacy plume long-term, uranium ACL exceedance in Well-1, regulatory significance and application of trigger levels, and need for clarification on POE designations.</p> <p>02/24/10: NRC approves selenium ACL of 0.05 mg/L and revised trigger levels for uranium based on established bkgd concentrations (0.44 mg/L for the flood plain aquifer, and 0.087 mg/L for the regional Split Rock aquifer). Standards for other constituents were also addressed. DOE is reviewing significance to LT monitoring program.</p> <p>GW corrective action terminated 2006. Evap ponds reclamation complete 2007 (constr rpt submitted 08/15/07) —addendum to as-built report submitted to NRC 04/29/08 regarding rock mulch added to reclaimed evap ponds in response to NRC concerns; NRC inspected on 06/04/08—rock mulch cover ok—NRC final written approval submitted to WNI.</p> <p>NRC walk through performed 06/04/08.</p> <p>09/21/09, DOE provided correspondence to NRC regarding their understanding of the final steps for completing site transition.</p> <p>NRC: Richard Chang.</p>	<p><b>Land Status:</b> Fee and Federal.</p> <p><b>Legal Survey:</b> Completed.</p> <p><b>S&amp;W:</b> Segregation expires 4/14/2010. Permanent withdrawal at DOI HQ for consideration. Currently resolving NEPA issues for withdrawal application. Exclusive R-O-W established on federal land until withdrawal complete.</p> <p><b>Minerals &amp; O&amp;G:</b> WNI is acquiring small amount of State minerals near river. WNI minerals will transfer in fee, federal minerals will be withdrawn. Determination of federal minerals that are senior to withdrawal is pending.</p> <p><b>Access:</b> Site access is from a county road.</p> <p><b>USACE:</b> USACE notified 3/15/10 that Split Rock transition is likely. USACE has no files – Stoller copy info and send to USACE.</p> <p><b>ICs:</b> Complete. Federal ownership, GW restrictive covenants in place within LTSM boundary.</p> <p><b>FIMS:</b> OSFs will be tracked upon transition will be determined at the time of the condition assessment.</p> <p><b>Other:</b> Water rights Well 24—conditional use (no ownership). Monitor wells need to be transferred to DOE.</p> <p><b>CIP:</b> Schedule when transfer is imminent.</p>	<p>DOE comments incorporated.</p> <p>Distributed to licensee for review March 2008; minor comments received.</p> <p>Final draft being prepared. Groundwater concerns need resolution before final LTSP can be submitted to NRC for review (see regulatory status and GW columns for details).</p>	<p>ACLs approved, GW model eval and monitoring program assessment complete (09/27/06).</p> <p>Evaluating adequacy of long-term monitoring network.</p> <p>GW data loaded into SEEPPro.</p> <p>NRC requested an ACL for selenium due to elevated levels noted in well WN-42A. July 2008; WNI discussed resolution with NRC. 8/29/08; WNI submitted a proposed license amendment to address the Se ACL, redefining the POE, and revise site standards. 12/10/08; NRC requested WNI resubmit the license amendment request to address only Se ACL—WNI submitted request on 02/07/09. 03/09/09; WNI submitted proposed license amendment requesting changes in stds for non-ACL constituents. 04/01/09; NRC responded with a RFI to WNI's 02/07/09 Se ACL license amendment request. 06/16/09; WNI provided response to NRC's RAI—0.05 mg/L ACL remains the proposed std for Se—NRC draft EA (08/12/09) addressing issue provided to DOE for comment. 09/14/09; DOE comments to EA submitted to NRC—expressed concerns over proposed 0.05 mg/L ACL and regulatory implications of "trigger values"—Jan10; NRC published final EA (notice posted in FR on 02/05/10)—02/24/10; NRC approves WNI license amendment request addressing Se ACL, revised U trigger levels and other gw stds. Bkgd: DOE has expressed concern that proposed Se ACL is too close to existing concentrations—an evaluation of the Se ACL approach was provided to DOE 04/13/09—purpose of the evaluation was to develop a technically defensible approach for establishing a Se ACL—it was determined that an ACL for Se could be established at a higher concentration that would still be protective and would be consistent with the methodology used to develop ACLs for other site constituents. Note; since the 0.042 mg/L max concentration was reported in well WN-42A in Oct07, a downward trend has occurred to a current concentration of 0.03 mg/L (Sep09).</p> <p>May 2009; Monitor wells SWAB-1 and SWAB-12 were replaced due to insufficient yield to collect samples—increased concentrations were reported for uranium and sulfate in SWAB-1R (from 0.622 to 1.91 to 2.46 mg/L and from 428 to 1000 to 1200 mg/L, respectively; uranium ACL=3.4 mg/L, no ACL for sulfate, Class III std =3000 mg/L)—concentrations of these two constituents continue to decreased in SWAB-12R. Also noted; well construction records for replacement wells SWAB-1 and SWAB-12R show completion depths significantly above bedrock (152' and 466', respectively)—both of which raise questions regarding vertical extent of contamination and if the screen depths of the current</p>	<p>Freemont County requested access to water well in December 2006. NRC verbal ok with well use.</p> <p>Conf calls held 08/27/08, 04/14/09, 07/14/09 and 02/22/10 to discuss status of remaining site transition actions.</p> <p>Access easement to Lost Creek natural gas line was terminated.</p> <p>Walk-in Agreement with F&amp;W to be re-initiated following transition. Grazing leases drafted (Corbett &amp; Claytor).</p> <p>9/15 &amp; 9/16/09; vegetation baseline assessment performed, report pending.</p> <p>NEPA Environmental Checklist required (per 10 CFR 1021, Subpart D, Appendix A7) for site transition is complete; no issues, CX recommended.</p>

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			<p>GW monitoring network is adequate for monitoring cell performance and the legacy plume long-term (particularly, the vertical component). Evaluation in process; appears contaminants generally decrease with depth and an overall upward flow component exists, particularly in the flood-plain aquifer—however, onsite vertical flow in the Split Rock regional aquifer varies due to variability of the underlying bedrock elevation, but is upward overall with eventual discharge into the Sweetwater River downgradient of the site.</p> <p>10/9/09; NRC's review of WNI's 1<sup>st</sup> half 2009 monitoring report noted the ACL for uranium is exceeded at Well-1 (and has been for several years).</p> <p>10/9/09; NRC's review of WNI's 1<sup>st</sup> half 2009 monitoring report noted the uranium std (i.e., trigger level) of 0.03 mg/L for the POE was exceeded at wells SWAB-12R and SWAB-31, adjacent to the POE (i.e., site boundary). NRC acknowledged WNI's license amendment request to address the issue (i.e., revising the std to 0.087 mg/L for the SPR aquifer, except SWAB-32 which will remain at 0.3 mg/L)( SWAB-12R and SWAB-31 were also proposed as POE wells)</p> <p>10/9/09; NRC's review of WNI's 1<sup>st</sup> half 2009 monitoring report also noted the increased uranium concentration in well WN-39B since Oct07 (from ~0.25 to ~0.5 mg/L), indicating a possible pulse of contamination, and asked WNI to demonstrate future compliance at the POE (i.e., Sweetwater River). DOE had also expressed concern regarding these concentrations and a possible future exceedance of the proposed 0.044 mg/L trigger value/std at well WN-41B, the next downgradient well and the last well before the POE, recognizing attenuation will likely occur—and if so, would NRC consider that a compliance issue. Note; the most recent uranium concentration in well WN-39B was reported at 0.284 mg/L (Sep09), a significant decrease.</p> <p>02/24/10; NRC approves selenium ACL of 0.05 mg/L and revised trigger levels for uranium based on established bkgd concentrations (0.044 mg/L for the flood plain aquifer and 0.087 mg/L for the regional Split Rock aquifer). Standards for other constituents were also addressed. DOE is reviewing significance to LT monitoring program.</p> <p>03/02/10; WNI informed DOE there is no well completion information for replacement Well-4R, that completion information for the original Well-4 should be used. DOE expressed concern in doing so in light of the difference in completion information that occurred in replacement wells SWAB-1R and SWAB-12R.</p>	
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Lisbon Valley, UT, Disposal Site				
Priority Ranking: 5 Leads: Traub / Bush / Montaña Licensee Contacts: Terry Fletcher (505) 287-8851 x15 Pres. Rio Algom Mining (RAM) Dan Erskine, Intera, Hydro 505-246-1600 John McBee, Tetra Tech, engineering  Code: LIS Alternate Name: Rio Algom (RAMC) BHP Billiton Estimated Transfer Calendar Year & Qtr: 2011				
DOE sent copies of DOE Process for Transition Doc to Utah DEQ on Oct 22, 09. Next step is to set up conf call / startup meeting w/all parties. Early Nov 2009?				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
07/13/09 RAM letter to DOE asking to reopen transition.  UDEQ: Tom Rushing, Dave Rupp, John Hultquist.  NRC: Dennis Sollenberger.  CRR to go to State in late Feb. 2010 (not received as of 6/15/10).  RAM still working on CRR as of May 2010.	<b>Land Status:</b> Fee and Federal. <b>Legal Survey:</b> Need to finalize transfer boundary. <b>S&amp;W:</b> Segregation expired 9/25/09. Path forward for withdrawal will be determined when boundary and the anticipated transfer date are established. <b>Minerals, O&amp;G:</b> Rights granted before seg. are now senior. DOE will discuss with BLM when transition is under way. <b>Access:</b> TBD. <b>USACE:</b> Sacramento. <b>ICs:</b> TBD. <b>FIMS:</b> OSFs to track upon transition will be determined at the time of the condition assessment. <b>CIP:</b> Schedule when transfer is imminent.	Submitted revised LTSP to DOE September 2007.	State has modified NRC-approved ACL. Model eval completed, follow-on issues to be resolved; no action yet.  13 wells, incl. 2 bkg, 2 POC.	Reclamation complete. Exploration drilling within proposed transfer boundary. Sent well cover specs and padlocks March 2007.  Traub, Widdop, Bahrke, Zinkl visited site 11/06/08, met Utah DEQ and RAMC representatives. 11/13/08.  Site visit w/ NRC 08/25/09. Licensee is still working on CRR.  DOE sent transfer process doc to State on 10/22/09.  Discussed start-up meeting w/ Terry Fletcher on Dec 21. CRR should go to state in late Feb. 2010. He wants to wait for start-up meeting until CRR is submitted. Terry retires in June 2010, Billy Ray is new RAM LIS manager.  June 2010 – Have discussed starting working group to discuss transfer issues / investigate reducing the site boundary. No action yet (June 2010).

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Uravan, CO, Disposal Site				
<div>Priority Ranking: 6 Leads: Traub / Ribeiro / Kilpatrick Licensee Contacts: Tom Gieck; 970-256-8889 (e-mail; gieckte@dow.com) Jason Smith; 970-256-8852 (e-mail; jcsmith@dow.com) UMETCO is subsidiary of Dow Chemical Code: URA Alternate Name: Uravan Estimated Transfer Calendar Year &amp; Qtr: 2013 due to boundary survey and NRC activity.</div>				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
<div>NRC has Alternate Soils Standard Criteria. NRC stated they do not know when they will look at it. UMETCO working on CRR but will not submit until Soils Criteria is approved. EPA accepted Closeout Report on 09/29/08, established construction complete milestone. EPA won't delist until DOE accepts site. EPA may require ROD, EPA did not attend last Working Group, Status still unclear as of March 2010. CDPHE: Phil Egidi. EPA : Frances Costanzi (Fran). NRC: William Rautzen CDPHE said EPA Headquarters has requested a ROD be completed for the site. Status on this issue is uncertain, Jan. 10.</div>	<div><b>Land Status:</b> Fee and Federal. Transfer boundary agreed to by DOE, State, County, BLM. <b>Legal Survey:</b> Umetco currently working on survey. <b>S &amp; W:</b> Will be submitted upon determination of transfer boundary. <b>Minerals, O&amp;G, Water rights:</b> TBD. <b>Access:</b> From public highway. <b>USACE:</b> DOE may direct this work to be conducted from the Omaha Office and will determine contact when survey is complete and transfer date is more established. <b>ICs:</b> Federal ownership, DOE will work with County on possible MOU for ICs on county roads and for utilities. <b>FIMS:</b> OSFs to track upon transition will be determined at the time of the condition assessment. <b>Other:</b> Surface water rights? Placer claims? <b>CIP:</b> Schedule when transfer is imminent.</div>	<div>Draft LTSP to DOE September 2007. LTSP should have text to require periodic monitoring of soil washing from hillside for elevated Rad.</div>	<div>Model eval completed. CDPHE or NRC requested additional monitor wells in valley. GW ACL granted.</div>	<div>Reclamation complete in 2008. UMETCO has Draft Agreement for roads/bridge (July 2008) w/Montrose CO. Had Group meeting 07/30/09 at UMETCO. Issues were boundaries, ICs, ROW size, Old Bridge. Next Uravan Working Group meeting was 02/18/2010. CDPHE and EPA were ill, not attending. Next meeting set for Aug. at DOE-GJPO. UMETCO is currently working on boundary survey tasks (Feb. 2010).</div>



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Ambrosia Lake West, NM, Disposal Site				
Priority Ranking: 7 Leads: Traub / Dr. April Gil / Montaña Licensee Contacts: Billy Ray (505) 287-8851 Tetra Tech, hydro John McBee Code: AMW Alternate Name: Rio Algom (RAMC) BHP Billiton Estimated Transfer Calendar Year & Qtr: 2020				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
RAMC site closure plans TBD. Site sale not probable, May 2009. NRC: Tom McLaughlin. CRR to go to NRC in 2010.	<b>Land Status:</b> Fee and Federal, a section of state land., discussions with licensee and buyer whether transfer will occur in near future. <b>Minerals:</b> TBD. <b>Access:</b> TBD.	Will need to start / continue work on LTSP as transition is back on again as of July 2009.	ACL approved. Model eval completed, follow-on issues identified.	Traub/Johnson at site for NRC inspection of rock work/drainage alignment in May 2009. RAMC hopes to sell site, no removal of roads, power, or infrastructure as of May 2009, but sched. for decommissioning late 2009. 05/07/09, site visit with NRC, State, USACOE. 08/26/09 NRC /DOE site visit. Terry said they want to turn in CRR next year and transfer site to DOE. 10/27/09 McBee said Office bldg will be demolished in Spring 2010. Probable site visit with NRC on 7/14/2010.

Panna Maria, TX, Disposal Site				
Priority Ranking: 8 Leads: Traub / Dayvault / Montaña Licensee Contacts: (Kevin Raabe, Brenda Hughes 830-780-3911 x238, 230 Code: PNM Alternate Name: Chevron, Rio Grande Resources (RGR), RGR is subsidiary of General Atomics Estimated Transfer Calendar Year & Qtr: 2012				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
TCEQ: Dr. Han Tu. NRC: Dennis Sollenberger. State has new model results and is evaluating – fall 2009. State would like licensee to acquire more land to cover ACL area, June 2010.	<b>Land Status:</b> Fee. <b>Legal Survey:</b> TBD. <b>Minerals, O&amp;G:</b> unknown. <b>Access:</b> from pubic ROW. <b>USACE:</b> Request support when transition can be scheduled. <b>ICs:</b> Federal ownership. <b>FIMS:</b> TBD. <b>Other:</b> GW modeling may change transfer boundary and need for offsite restrictions.	Drafted, need to revise and submit to NRC.	ACL application submitted to TX. TX hired hydro to begin review. Met with RGR at GJO on 03/12/08. RGR creating new model to address issues with old model. 06/11/08 meeting discussed progress and path forward; issue effectively placed with State. DOE met with licensee on 01/13/09. GW model should be complete in March 2009. September 2009, Stoller Hydro has evaluated results of new modeling and is satisfied with model results.	Texas (agreement state). Proposed resin processing plant near DOE property. Surface reclamation complete. Texas has new law which should expedite transfer process, Has mandate to speed up legacy sites. Stoller collected split samples week of 04/28/08. October 2009 – Waiting to hear from RGR regarding modeling activities. Met with Panna Maria Hydro at NMA, June 2010.. State wants RGR to acquire more land to control ACL boundary.



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Ray Point, TX, Disposal Site				
Priority Ranking: 8 Leads: Traub / Dayvault / Montaña Licensee Contacts: Mahesh Vidyasagar (281) 654.8458 Code: RYP Alternate Name: ExxonMobil Estimated Transfer Calendar Year & Qtr: 2013				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
CR at TCEQ, uncertain when State will review. 05/25/10 Licensee has purchased adjacent property to west. Will conduct soils cleanup, pursue ACLs. TCEQ: Dr. Han Tu. NRC: Dennis Sollenberger. Licensee met with State on Feb. 2, 2010 to request help in accessing adjacent property. State requested a formal Work Plan and will add a letter to the adjacent owner. If letter does not work, State will elevate access via legal methods. Traub sat in on meeting via phone. May 2010 - evidently state involvement assisted with sale of property.	<b>Land Status:</b> Fee, Exxon purchased additional land; <b>Legal Survey:</b> TBD. <b>Minerals, O&amp;G:</b> Unknown. <b>Access:</b> From public ROW. <b>USACE:</b> Request support when transition can be scheduled. <b>ICs:</b> Unknown. <b>FIMS:</b> TBD. <b>Other:</b>	Draft reviewed by DOE April 2007.	Met with licensee in January 2009 for briefing. DOE considers additional land necessary for LTS&M. State supports purchase.  ExxonMobil will develop a program for the ACL application at the Ray Point site, (03/03/09).	ExxonMobil sent letter to State 03/03/09 agreeing that Catahoula FM is an aquifer and will pursue ACLs. ExxonMobil has acquired adjacent property, and will initiate additional groundwater characterization and soil cleanup. Activities have not started as of June 2010.

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Conquista, TX, Disposal Site				
Priority Ranking: 8 Leads: Traub / Dayvault / Montaña Licensee Contacts: Bryan Heath, Conoco Phillips PM, (918) 661-3753 John McBee, Tetrattech, Soils, (505) 237-8440 Michael Gabora, Tetrattech, Hydro (505) 237-8440 Code: CON Alternate Name: Conoco Phillips Estimated Transfer Calendar Year & Qtr: 2017				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Continued field investigations January 2009. Approx 10K yd <sup>3</sup> s soil to be removed from ROW and placed on cell.  October 2009 / volume may change if regulators approve new bkg numbers.  TCEQ: Dr. Han Tu, Chuck McLendon - PE.  NRC: Dennis Sollenberger.	<b>Land Status:</b> Fee. <b>Legal Survey:</b> TBD. <b>Minerals, O&amp;G:</b> Unknown. <b>Access:</b> from public ROW. <b>USACE:</b> Request support when transition can be scheduled. <b>ICs:</b> Unknown. <b>FIMS:</b> TBD. <b>Other:</b>	Not started.	Results of GW and soils investigation may change model and ACL boundary.  Met with licensee 10/27/09 at GJO. Conoco presented results of 2008/2009 field investigations. Will send results to State in late 2009, will send full investigation results to State in 2010 to prepare way for ACL application.	Texas (agreement state).  Stoller provided FCT water level data to CON hydrologist March 2008.  Licensee gave State update in July 2009 on actions.  Interested in transfer of site without final cell settlement complete, Engineered solution option?  FCT RAP documents sent to McBee to assist with calculations for their closure – June 2010. McBee estimated 2017 transfer date at earliest.

Highland, WY, Disposal Site				
Priority Ranking: N/A Leads: Widdop / Surovchak / Montaña Licensee Contacts: Mahesh Vidyasagar (281) 654.8458 Code: HIG Alternate Name: Exxon Estimated Transfer Calendar Year & Qtr: 2015				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Licensee revising ACL to address flow SW of cell.  February 2009: Discussions with NRC about including pit lake in transfer boundary.  NRC/State/licensee meeting in Casper June 2009 to discuss pit lake.  NRC: Tom McLaughlin.	<b>Land Status:</b> Patented lands; licensee may need to purchase adjacent parcel. <b>Legal Survey:</b> Need to finalize transfer boundary. <b>Minerals, O&amp;G:</b> Some may be held by US Gov't. <b>Access:</b> Unknown. <b>USACE:</b> Request support when transition can be scheduled. <b>ICs:</b> TBD. <b>FIMS:</b> TBD. <b>Other:</b>	Drafted, need to revise and submit to NRC when transition can be scheduled. ACL values need to be updated. Postpone LTSP due to unresolved site issues.	Open pit is filling and may alter GW hydro conditions, NRC determined 11e.(2) (007) material in lake water.  ACL application approved but will need to be reevaluated. Postpone model eval. but review monitoring data. (Zinkl). Received GW data from TetraTech in March 2009.	New/additional wells have been installed east of site, results not yet evaluated. May require Exxon to purchase land to east or obtain ICs. Exxon will send GW results and add DOE to dist list. 09/08/08: Licensee installing GW monitoring wells.

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Church Rock, NM, Disposal Site				
Priority Ranking: N/A Leads: Traub / Bush / Montaña Licensee Contacts: Larry Bush (505) 722-6651 Code: CHR Alternate Name: UNC/GE (General Electric) Estimated Transfer Calendar Year & Qtr:				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Treating GW  NRC: Yolande Norman.	<b>Land Status:</b> TBD.  <b>Legal Survey:</b> Need to finalize transfer boundary.  <b>Minerals, O&amp;G:</b> TBD.  <b>Access:</b> TBD.  <b>USACE:</b> Request support when transition can be scheduled.  <b>ICs:</b> TBD.  <b>FIMS:</b> TBD.  <b>Other:</b> Possible co-disposal with NECR waste might alter transfer boundary.	Not started.	Possible T1, licensee still pumping Zone 3, remedy not determined.  05/20/09 UNC letter to NRC stating cleanup is impossible under current EPA actions.	NPL site. DOE attended closure meeting w/EPA, NRC, State, NN, remedial action alternatives include additional disposal of non-11e.(2) on existing cells and  EPA 5-Year Review held on 05/05/09.  07/28/09 EPA press release states GE will perform remedial actions.  05/31/09 Northeast Church Rock Mine EE/CA released by EPA, (Eng Eval/Cost Analysis).  August 2009 At site w/NRC, earthmoving underway at mine site, nearby EPA residential soils cleanup soon.

Ford, WA, Disposal Site				
Priority Ranking: N/A Leads: Widdop / Bush / Montaña Licensee Contacts: Bob Nelson, Dawn Mining (Newmont) 509-258-4511 Code: FOR Alternate Name: Dawn (Newmont) Estimated Transfer Calendar Year & Qtr: 2015				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Reclamation in progress  WA: Dorothy Stoffel  NRC: Dennis Sollenberger.	Not started.	Not started.	Unknown.	Cover start in 2009.  Licensee/DOE telecon on 01/22/2010: Licensee proposes cell for disposal of water treatment sludge, uranium removed, next to 11e.(2) cell.  Licensee 6/9/2010: Transition target is 2015.

Shirley Basin North, WY, Disposal Site				
Priority Ranking: N/A Leads: Hall/Surovchak/Montaña Licensee Contacts: Tom Hardgrove (307) 356-4312 Code: SBN Alternate Name: Pathfinder Shirley Basin Estimated Transfer Calendar Year & Qtr: 2047				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Transition on hold indefinitely, cell to remain open.  NRC: Ted Carter.	Not started.	Not started.  Postpone indefinitely.	ACL application approved by NRC. Suspend model evaluation indefinitely.	Transfer delayed indefinitely, Pathfinder will keep cell open to receive Smith Ranch ISL waste; possible ISL on site property from existing Pathfinder claims.

UMTRCA Title II Site Transition Status, Updated 7-15-10

Durita, CO, Disposal Site				
Priority Ranking: NA Leads: Widdop / Ribeiro / Kilpatrick Licensee Contacts: (Dave Holland, Hecla Mining, (208) 769-4156); dholland@hecla-mining.com Code: DTA Alternate Name: Hecla Durita Estimated Transfer Calendar Year & Qtr: 2012				
Regulatory Status	Real Property	LTSP	GW	Other/Actions
Discuss LT Care fee with NRC. NRC PM: Dennis Sollenberger. CDPHE lead: Edgar Ethington. State scheduled to submit CRR 12/07, on hold pending resolution of GW mon requirements. Tracy is in contact with Dennis Sollenberger.	<b>Land Status:</b> Fee and Federal. <b>Legal survey:</b> TBD. <b>S &amp; W:</b> Four areas covering engineered structures under BLM permit COC-57170, will draft permanent withdrawal of area encompassing these ROW areas and access road. <b>Minerals:</b> Owned by licensee w/in fee land transfer boundary, Federal minerals will be part of withdrawal. <b>Access:</b> BLM permit COC-57170, exp 06/20/25, can transfer to DOE prior to withdrawal. <b>USACE:</b> DOE may direct this work to be done from the Omaha Office, currently in Sacramento Office. Title will have to be updated pending outcome of discussion of GW monitoring. <b>ICs:</b> Federal ownership. <b>FIMS:</b> Determine OSFs to track upon transition. <b>Other:</b> Fence on private land on NW side of site. Letter to licensee requesting fence relocation sent September 2008.	Drafted, sent to NRC 02/01/05. Stoller is updating. NRC will review after GW issues resolved.	State proposes no GW monitoring, NRC disagreed, State responded to NRC November 2007.  01/14/09: NRC expects to respond in 6 months.	NRC requests GW monitoring, CDPHE doesn't. 04/02/07: NRC (Sollenberger) to address Maybell West before Durita NRC independent geologist report, CDPHE responded 11/08/07. CDPHE/DOE visit 04/22/08, DOE trip report submitted.  Initiated geospatial data transfer 06/28/08.  Need to initiate records eval and transfer.  10/06/08: letter and trip report drafted, includes request to move fence and get engineering evaluation on erosion damage on N end of Central Diversion Channel.  10/15/09: Hecla negotiating sale, transition remains on hold.  02/08/2010: Sale will not occur.

## **Attachment 4**

### **Example of a Site-Specific Transition Punchlist— Maybell West, Colorado, Disposal Site**

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**UMTRCA Title II Site Transition Punch List**  
 Site: Maybell West, CO, UMTRCA Title II Disposal Site  
 DOE Site Lead: Tracy Ribeiro  
 DOE Realty Officer: Bill Montana  
 Contractor Program Manager: Mike Widdop  
 Contractor Site Lead: Steve Hall  
 Estimated Site Transition Date: 2010  
 Licensee: Umetco Minerals Corporation

LM Checklist Section No. *	Action	Task Lead	Date started	Date Due	Date Completed	Check one			Status	Notes on Actions & Issues (Path Forward)
1.4.5 & 4.6	Determine if any institutional controls (ICs) are needed; if so, acquire	SH, CB	10/1/2007	8/30/2009	7/8/2009					Standard ICs are being acquired (i.e., site ownership/control, perpetual access). A deed notice for the outstanding 3rd party subsurface mineral rights was prepared by Umetco (licensee) and recorded in the local public land records as required by 10 CFR 40 Appendix A (Criterion 11-C) on 7/8/09. DOE reviewed and provided input.
3.6.4-3.6.6	Acquire copies of any and all agreements needed post transfer	CB	10/1/2007	8/30/2009	8/1/2009					Confirm Umetco terminates their former haul road ROW (DOE secured ROW for site access on 9/16/08).
3.6.5	Acquire ROW permit from BLM for perpetual unfettered site access route	CB	10/1/2007	10/30/2008	9/16/2008					BLM issued DOE's 299 ROW permit for site access on 9/16/08.
5.1	Obtain all pertinent real property records	CB	10/1/2007	2/1/2010	1/30/2010					Real property records obtained from licensee. Information will accompany updated title work required for USACE preparation of the warranty deed. Includes both surface and subsurface interests.
6	Obtain all pertinent geospatial information/data for the site	EL	10/1/2007	8/30/2009	12/31/2009					Site information complete. Received historic aerial photography, TOC elevations, information on the local coordinate system, etc.
6	Create a GEMS page for the site and link it to the site's webpage	EL	10/1/2007	1/30/2010	6/11/2010					GEMS page complete.
6	Obtain all pertinent environmental monitoring data for the site	KM	10/1/2007	8/30/2009	12/31/2009					Historical and existing site monitoring data obtained and loaded into SEEPPro (note: long-term ground water monitoring is not required at the site).
6	Obtain all pertinent engineering information for the site	JW, EL	10/1/2007	8/30/2009	12/31/2009					Information received and archived (e.g., reclamation plan, as-builts, completion report).
6	Obtain all site as-built drawings	JW	10/1/2007	8/30/2009	12/31/2009					Disposal cell and associated surface water drainage/control features design drawings/as-builts received and archived (AutoCAD format and hard copy).
8	Obtain current civil base and topographical maps of the site	JW	10/1/2007	8/30/2009	12/31/2009					Information obtained; civil and topo base generated.
8	Create a land use and ownership map for the site	JW, CB, SH	10/1/2007	8/30/2009	2/15/2010					Land use and ownership map depicts the various real property interests at the site.
7	Obtain all pertinent technical and other site records	SH	10/1/2007	8/30/2009	1/31/2010					Obtained copies from licensee (Umetco); examples - reclamation plan, completion report, and Umetco records index.
7	Determine site records to be posted (or linked) on the LM webpage	SH	10/1/2007	8/30/2009	3/30/2010					LTSP, fact sheet, annual inspection and monitoring report (with links to completion report, reclamation plan).
7	Determine if revegetation success is adequate	MK, LS	10/1/2007	8/30/2009	8/4/2009					Site vegetation baseline assessment conducted 8/3 & 8/4/2009. Reveg is sufficient (significant improvement from 2007). Noxious weeds continue to be controlled (sprayed with herbicide).
7.1.1	Obtain permanent withdrawal from BLM	CB	7/20/2007	8/30/2009	4/18/2008					Permanent withdrawal published in Fed Reg 4/18/08.
7.1.1.11	Ensure no wells remain onsite	CB, KM, SH	10/1/2007	8/30/2009	7/8/2008					No wells exist on site (GW monitoring not required). Records obtained from Umetco for historical on site wells (well construction info, CDPHE approval to discontinue monitoring & decom wells).
7.1.2.3	Obtain Master Title Plats and Historical Register pages	CB	10/23/2007	8/30/2009	11/7/2007					Received and archived.
7.1.3	Determine rights afforded under millsite claims (and should they continue)	CB	10/1/2007	8/30/2009	7/15/2008					Millsite claims are senior to the lode claims which are senior to withdrawal. Because there is no longer a mill on site, BLM informed DOE that millsite claims can not be maintained by DOE to minimize risk associated with the lode claims that pre-date withdrawal. The NRC general license at 10 CFR 40.28 provides protections against any surface or subsurface activities that could impact the disposal cell and it's associated structures.
7.1.3	Determine risk posed by lode claims that pre-date withdrawal	CB	10/1/2007	8/30/2009	12/31/2009					Lode claims are senior to the withdrawal. DOE contacted BLM and determined there is minimal risk; BLM will discourage action. BLM should send letter to owners of lode claims informing them that a disposal cell is present on site which is protected from disturbance under the NRC general license at 10 CFR 40.28. Example: BLM received a letter (Dec 2005) from Standard Uranium acknowledging the withdrawal but indicating that Western Fuels mining claims clearly pre-date the Fed Reg Notice and remain valid.
7.1.3	Determine if UMETCO offer to buy mineral rights for the 20-acre parcel is adequate (satisfies "serious effort" called for in the regs) and that required deed notice is filed with local public land records	CB	10/1/2007	8/30/2009	7/8/2009					Umetco submitted 1st offer to purchase outstanding 3rd party minerals in Aug07; all refused. 12-13-07; DOE requested Umetco to send 2nd "best & final" offer (sent Feb08) -- all but one refused -- 18% of minerals obtained. 1/8/09, DOE received decision from NRC that per regs only a "serious effort" to obtain 3rd party mineral rights is required. Umetco provided CDPHE documentation of serious effort made. 2/16/09; CDPHE verified that serious effort was made and sent letter to NRC (cc DOE), 7/8/09; Umetco recorded deed notification in public land record as called for by the regs; DOE provided guidance, review, and comment (Jan09). DOE received assurance from NRC no future action will be needed regarding minerals and no increase to the long-term care fee is warranted.
7.1.6	Determine impact, if any, of permanent withdrawal on grazing allotment	CB	10/1/2007	8/30/2009	12/31/2009					Umetco indicated that historically the local rancher has had no interest in grazing within the site boundary.

\* LM Transition Checklist (October 10, 2007 revision)

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Estimated Site Transition Date: 2010  
Licensee: Umetco Minerals Corporation

LM Checklist Section No. *	Action	Task Lead	Date started	Date Due	Date Completed	Check one			Status	Notes on Actions & Issues (Path Forward)
7.1.9	Determine what will need to be tracked in FIMS, ensure accounting set up	SH	10/1/2007	8/30/2009	12/31/2009					No structures onsite, only OSF's are the disposal cell, fencing, and site marker (no monitor wells). Offsite ROW access road is not a FIMS tracking item.
	Verify perimeter warning signs are posted at the site	SH	10/1/2007	8/30/2009	8/5/2009					Umetco was provided sign schematic and site map with proposed locations in Aug07. Umetco posted signs prior to site transfer. Verified 08/08/2009.
	Verify site marker is erected at the site	SH	10/1/2007	8/30/2009	7/17/2008					Site marker placement verified 7/17/08.
3	CIP complete (real property inspection required prior to transfer)	CB, SH	10/1/2007	8/30/2009	10/21/2009					In order for USACE to complete the warranty deed for the site fee land, DOJ requires a site inspection prior to transition. 6/13/08; USACE sent DOE a request to perform the inspection, along with a Certificate of Inspection of Possession form (CIP#2) to complete. Bill Montana (DOE Realty Officer) completed CIP inspection on 10/21/09.
3	Determine and obtain evidence for corporate authority for signing conveyance documents	CB, SH	10/1/2007	8/30/2009	2/10/2010					DOJ requirement. Umetco provided Corp Authorization on 2/10/2010, included with USACE package. Provided to Title Co.
3	Determine and ensure current year taxes are paid by licensee (Umetco)	CB, SH	10/1/2007	8/30/2009	1/26/2010					USACE paid taxes to Moffat County -- received check from Umetco on 1/26/2010.
3	Title Insurer requires a signed and delivered affidavit and indemnity document	CB, SH	10/1/2007	8/30/2009	2/9/2010					USACE ensured Umetco obtained a copy from insurer and arranged for it's signature and delivery.
3	Ensure warranty deed is secured by the USACE and provided to DOE	CB, SH	10/1/2007	8/30/2009	2/10/2010					Umetco provided the recorded warranty deed to DOE and the USACE on 2/10/2010 (it was recorded with Moffat County on 2/09/2009).
3	DOE consultation with NRC regarding long-term care fee	SH	10/1/2007	8/30/2009	11/16/2009					DOE input to NRC regarding the long-term care fee was provided by letter dated 11/09/2009; DOE indicated the minimum amount (\$250K in 1978 dollars) is sufficient for LTS&M at the site (as there is no groundwater monitoring. Additionally, there is no need to increase the fee for the future purchase of outstanding 3rd party mineral rights (1/8/09; NRC indicated an increase was not warranted).
3	Ensure licensee pays LTS&M fee to the US Treasury	SH	10/1/2007	8/30/2009	3/9/2009					On 3/9/2010, NRC notified DOE by e-mail that the LT care fee was paid by Umetco.
8.1	Create contact list	SH, BD	10/1/2007	8/30/2009	3/30/2010					The Land Management contacts list in Outlook is being used to generate the site contacts/stakeholder list. The primary site and regulatory stakeholders have been entered. Stakeholders will also be solicited from the licensee.
8.1	News release notifying stakeholders of site transfer	BD	10/1/2007	8/30/2009	5/13/2010					Following site transfer, DOE-LM issued a news release to notify all appropriate stakeholders of the transfer of the site from Umetco to DOE.
8.4	Create site web page and post it to the DOE-LM website	PP, SH, SM	10/1/2007	8/30/2009	4/30/2010					The site webpage was created and posted to the LM website on 4/30/2010.
8.4	Post site records to website	PP, SH, SM	10/1/2007	8/30/2009	4/30/2010					Pertinent documents and site information was scanned and posted to the site webpage.
8	Create fact sheet and post to site webpage	BD, SH, PP	10/1/2007	8/30/2009	4/7/2010					DOE approved posting of the site fact sheet to the site's webpage.
2.2.1	Ensure draft LTSP addresses control of noxious weeds and invasive plants	SH, SB, MK	10/1/2007	8/30/2009	3/5/2008					LTSP stipulates that DOE will control listed noxious weeds and invasive plants.
3.3	Revise draft LTSP to satisfy NRC technical comments	SH	11/12/2007	3/30/2008	6/10/2009					10/18/07; NRC indicated minor revisions needed (a few NUREG 1620 referenced items need to be addressed). DOE received letter (with RAI) from NRC on 11/14/07. Revised draft LTSP addressing technical issues submitted 3/5/08 ("placeholders" left for real property instruments, i.e., warranty deed, public land records notification of outstanding 3rd party mineral rights, access road ROW permit, permanent withdrawal PLO Federal Register Notice). 4/8/2009; at NRC's request revised LTSP was resubmitted. 6/10/2009; minor comments from NRC received. LTSP was revised (held until warranty deed was completed and inserted).
3	Submit final draft LTSP with real property instruments to NRC	SH	3/5/2008	3/30/2009	2/16/2010					On 2/16/2010, DOE submitted for NRC's acceptance the final draft LTSP revised to address all NRC comments and with all real property instruments inserted (i.e., warranty deed, public land records notification of outstanding 3rd party mineral rights, access road ROW permit, permanent withdrawal PLO Federal Register Notice).
3.3	Obtain NRC acceptance documentation for LTSP	SH	1/2/2007	6/30/2009	3/11/2010					On 3/15/2010, DOE received the NRC's LTSP acceptance letter (dated 3/11/2010) which places the site under the general license at 10 CFR 40.28 establishing DOE as the LT custodian responsible for LTS&M. The acceptance letter indicates the LT care fee (\$800,173.56) was paid to the U.S. Treasury, and that as an Agreement State, the State of Colorado will terminate Umetco's specific license (on 3/19/2010, DOE received a copy of the State's termination letter to Umetco dated 3/16/2010). These actions officially complete the site transition from a regulatory perspective.

Note: Status colors are intended to prioritize actions (i.e., the urgency and level of attention needed to complete; in part, because the incomplete action may also be affecting other site transfer issues). Green = minimal attention is needed to complete; progressing, action is not affecting other site transfer issues. Yellow = attention is needed to complete; action has potential to affect other site transfer issues. Red = maximum attention is needed immediately to complete; action is directly affecting other site transfer issues.

Task Lead (Name Abbreviations): SH - Steve Hall, CB - Cheri Bahrke, SM - Sandy McDowell, KM - Keith Miller, JW - Jim Whitney, SB - Sandy Beranich, BD - Bob Darr, PP - Phyllis Price, EL - Ed LaBonte, MK - Marilyn Kastens, LS - Linda Sheader

Last Updated: 6/30/2010

\* LM Transition Checklist (October 10, 2007 revision)

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## **Attachment 5**

### **Site Transition Framework**

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## **Site Transition Framework for Long-Term Surveillance and Maintenance**

This Site Transition Framework (STF) provides a framework for all U.S. Department of Energy (DOE) facilities and sites where DOE may have anticipated long-term surveillance and maintenance (LTS&M) responsibilities. It is a tool to help facilitate a smooth transition from remediation to LTS&M, providing a systematic process for affected parties to utilize in analyzing the baseline, and to understand and manage actions from completion of the Environmental Management (EM) mission through site transition into LTS&M.

The STF is not intended to provide an exhaustive list of the specific requirements and information. Sites will have unique considerations that may not be adequately addressed by this tool, and it is anticipated that a team consisting of the transferring and receiving organizations will use judgment in utilizing these requirements and augmenting them with other DOE guidance. However, the STF should be followed to the extent possible at each site and adapted to accommodate unique site-specific requirements, needs, and documents.

Ideally, this STF should be used as early in the remediation process as possible. Subsequent applications of the STF to the site should be conducted periodically and used to verify that all appropriate steps have been or will be taken to close out the site and that actions by both organization to transfer the site to LTS&M are identified. The requirements are provided in the following sections and attachments of this document:

- Section I. Authorities and Accountabilities Are Assigned and Documented
- Section II. Site Conditions Are Accurately and Comprehensively Documented
- Section III. Engineered Controls, Operation and Maintenance Requirements, and Emergency/Contingency Planning Are Documented
- Section IV. Institutional Controls, Real and Personal Property, and Enforcement Authorities Are Identified
- Section V. Regulatory Requirements and Authorities Are Identified
- Section VI. Long-Term Surveillance and Maintenance Budget, Funding, and Personnel Requirements Are Identified
- Section VII. Information and Records Management Requirements Are Satisfied
- Section VIII. Public Education, Outreach, Information, and Notice Requirements Are Documented and Satisfied
- Section IX. Natural, Cultural, and Historical Resource Management Requirements Are Satisfied
- Section X. Business Closure Functions, Pension and Benefits, Contract Closeout or Transfer, and Other Administrative Requirements Are Satisfied
- Attachment 1, Real Property Requirements
- Attachment 2, Post-Closure Benefit Information and Data Needs

## **I. Authorities and Accountabilities Are Assigned and Documented**

All interested parties' assignments of accountabilities and authorities for LTS&M have been identified and documented.

- A. All documents allocating the roles and responsibilities of interested parties have been approved and signed (e.g., Memorandum of Agreement, Memorandum of Understanding, Interagency Agreement, Cooperative Agreement).
- B. Each federal or non-federal entity that will be responsible for LTS&M activities listed in Section I-A has been identified. Funding sources for each activity have been identified and documented in Section VI.
- C. Appropriate governmental requirements, policies, and procedures for managing resources have been incorporated into the LTS&M Plan and agreements.
- D. The legal authority under which LTS&M will be conducted has been identified and documented or a "reservation of rights" has been indicated.
- E. Section IV presents a discussion of authorities related to institutional controls.

## II. Site Conditions Are Accurately and Comprehensively Documented

All documentation identifying site historical uses characterization, and remedial action, including the Preliminary and Final Closeout Reports, has been completed and made available to the public. Where available, the information identified in this section should be of survey quality and have Geographical Information Systems (GIS) references.

- A. The site at the time of closure, including all remedies and remaining hazards, has been described. Examples include, but are not limited to, the following components:
  - 1. Physical features of the site, including, site topography, geology, hydrogeology, geomorphology, seismicity, site and area boundaries, and other features relevant to the long-term performance of the site.
  - 2. Locations of active, inactive, and decommissioned buildings, structures, and surface and subsurface infrastructure (e.g., utilities).
  - 3. Locations of residual hazards and associated engineered and institutional control systems.
  - 4. Locations of groundwater wells, wastewater outfalls, and air quality monitoring stations. Information has been depicted on site maps.
  - 5. For those sites undergoing closure, locations of off-site buildings and structures, important ecological resources, and associated potential receptors in the vicinity of the site.
  - 6. Characteristics of the remaining contaminants (e.g., radioisotope, activity, and physical and chemical form).
  - 7. Descriptions of the initial risk at the site and the risk remaining at the site following remediation. This information will be used to provide a reference baseline.
  - 8. The existence of and basis for decisions on cleanup levels for the end state, such as a "No Further Action," should be indicated.
- B. For those sites undergoing closure, a conceptual site model for LTS&M has been completed (if deemed applicable) that shows the relationships between existing residual hazards, environmental transport mechanisms, exposure pathways, and human/ecological receptors.
- C. All remedial action(s) and associated documentation have been completed and approved by regulators.
- D. Results of any Natural Resource Damage Assessment claims, where applicable, with associated documentation have been identified. This assessment should discuss the Department's potential environmental liability at the site.

### **III. Engineered Controls, Operation and Maintenance Requirements, and Emergency/Contingency Planning Are Documented**

- A. Engineered controls have been identified and documented. The information should include, but not be limited to, the following elements:
  - 1. Design and construction drawings, specifications, and completion report.
  - 2. Site physical and geotechnical data.
  - 3. Locations of engineered controls accurately identified and depicted on site maps.
  - 4. Identification of ongoing remediation and related waste management activities.
  - 5. Performance history assessments indicating successful operation.
- B. A life-cycle cost estimate, including basis and assumptions. The life-cycle cost estimate should be based on best available data but should also include a reasonable and prudent amount for future contingencies, recognizing that in most cases LTS&M activities may be ongoing until such a time that no hazards remain to human health and the environment. The results of the life-cycle cost should be documented in Section VI-B.
- C. A master schedule of ongoing activities has been made available.
- D. The risk-based end state, including exit criteria outlining if and/or when engineered controls will no longer be necessary, should be identified along with the supporting information. If exit criteria will be implemented while hazards to human health and the environment remain, a Probabilistic Risk Assessment over several half-lives should be provided to justify the exit strategy and the discontinuance of the engineered controls.
- E. Operation and maintenance (O&M) activities have been documented, funding is in place, and a party has been selected to perform the necessary activities.
  - 1. Surveillance and monitoring requirements have been documented (e.g., scope frequency, reporting, process descriptions, and analytical parameters and methods). This document should allow for optimization that is consistent with the selected remedy.
  - 2. The cost, including basis and assumptions, of operations, maintenance, and surveillance activities has been estimated, documented, and revised periodically as experience dictates. The request for funding should be in accordance with applicable budget appropriations procedures.
  - 3. An agreement and/or contract is in place for performance of all O&M activities during LTS&M if an outside party will be performing these activities.

### **III. Engineered Controls, Operation and Maintenance Requirements, and Emergency/Contingency Planning Are Documented (continued)**

- F. Emergency/contingency planning and the authority and responsibilities to implement have been identified.
  - 1. Uncertainties associated with residual hazards, fate-and-transport mechanisms, exposure pathways, and the effectiveness of LTS&M activities have been identified.
  - 2. Scenarios related to each uncertainty have been identified (e.g., failure scenarios).
  - 3. Roles, responsibilities, and procedures to respond to each scenario have been established.
  - 4. The conceptual site model developed in support of the remedial action or closure decision should be routinely reviewed, updated, and re-evaluated based on new technical information and on monitoring data collected during stewardship of the site.
  - 5. Emergency and catastrophic planning for events such as fires, floods, etc., shall be documented.

#### **IV. Institutional Controls, Real and Personal Property, and Enforcement Authorities Are Identified**

- A. Land use/institutional controls have been identified, approved by the regulator(s) (if applicable) and implemented. All institutional control components of each implemented remedy are described (e.g., future land-use assumptions upon which each implemented remedy is based, associated land-use restrictions). If engineered barriers will be relied upon as part of the remedy requiring institutional controls, assumptions regarding the longevity and performance of these barriers should be identified.
  - 1. On-site and off-site land uses for each area (property) and its associated land-use assumptions have been identified.
  - 2. Procedures for managing, assessing potential changes in, and enforcing on-site and off-site (as appropriate) land uses have been documented and are being conducted.
  - 3. Institutional controls established as part of an implemented remedy have been identified, and a process is in place to monitor and document these institutional controls.
  - 4. Roles and responsibilities that have been outlined for responding to requests to change existing land uses are consistent with the land use assumed during implementation of the selected remedy.
  - 5. Procedures have been put in place for periodic review of land uses and institutional controls to ensure that they are being maintained and remain protective.
  - 6. Performance history indicating successful operation has been documented.
  - 7. Procedures for management and periodic reassessment of institutional control restrictions are in place.
  - 8. Off-site easements implemented to ensure the protectiveness of the remedy have been documented, and a process is in place to enforce/maintain these easements.
  - 9. Exit criteria outlining when engineered controls/institutional controls will no longer be necessary have been documented, if not previously documented, in the Record of Decision (ROD) or other appropriate document.
- B. Property records (as required by applicable regulations and/or guidance) are complete. Examples of property records follow; Attachment 1 provides a more complete list of property records.
  - 1. The site's real estate history has been documented, including identification of former property owners, deed restrictions, or other land-use restrictions.
  - 2. Site boundaries and site markers are easily identified and have been documented.
  - 3. On-site and off-site easements, rights-of-way, and other property access rights have been established and documented. Preferably, this information should be depicted on site maps.
  - 4. Water, mineral, and other natural resource rights have been identified.
  - 5. Tribal treaty rights and other U.S. Government obligations have been identified.
  - 6. Areas where LTS&M activities will be conducted have been documented in the property records.



#### **IV. Institutional Controls, Real and Personal Property, and Enforcement Authorities Are Identified (continued)**

##### **C. Personal Property Transfer Requirements**

The personal property transfers are completed in accordance with Title 41 *Code of Federal Regulations* (CFR) Part 101, Federal Management Regulations, and DOE Property Management Regulations (PMR).

## V. Regulatory Requirements and Authorities Are Identified

Regulatory requirements regarding residual contamination have been identified. Pertinent regulatory documents are maintained and available to the public (e.g., RODS, Resource Conservation and Recovery Act (RCRA) permits and Corrective Action Decisions, Consent Orders, Interagency Agreements, and Federal Facility Agreements).

- A. All regulatory decision documents and associated site characterizations have been identified and are either complete or scheduled for completion (e.g., all remedial action activities regarding the soil have been completed, but the impacted groundwater is in the process of being resolved) and are maintained in accordance with regulatory requirements.
- B. The implemented remedy and associated LTS&M activities are verified to be in compliance with all regulatory requirements [e.g., appropriate agreements have been entered into with appropriate regulator(s)].
- C. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review or other review results are available. Future periodic reviews (not to exceed 5 years), including supplemental analysis of site-wide Environmental Impact Statements (if applicable and/or required), should be planned and consistent with existing guidance.
- D. The U.S. Environmental Protection Agency (EPA) National Priority List (NPL) status and/or RCRA permit status or state requirements and the basis for these requirements have been clearly indicated (e.g., delisting, partial delisting, and non-NPL).
- E. U.S. Nuclear Regulatory Commission (NRC) license status has been established. This status information should identify the license holder and the development of license transfer plans.
- F. Locations of documents have been identified, and the documents are accessible. A process should be in place to ensure that the documents are maintained and kept current (e.g., new technology updates for records management).

## **VI. Long-Term Surveillance and Maintenance Budget, Funding, and Personnel Requirements Are Identified**

Sites should be consistent with and follow their prescribed guidance in determining budget, funding, and personnel requirements. Some of the elements in this section may not apply.

- A. A technical baseline document for LTS&M programs and activities at the site has been developed. The LTS&M baseline includes activities to be conducted by the receiving organization.
- B. Funding (consistent with technical baseline) and supported by cost-estimates (Section VI).
  - 1. Any funds for LTS&M have been identified and are available.
  - 2. Estimates for the annual funding requirements for LTS&M activities, associated oversight, and information management requirements have been derived and have been included in the Annual Budget Request to Congress.
  - 3. Funding assurances have been made based on those estimates.
  - 4. Mechanisms to transfer funds required for LTS&M have been established.
  - 5. Funding mechanisms for LTS&M activities and regulatory oversight activities conducted by other federal and non-federal entities have been established (e.g., documentation of financial assurance agreements for long-term monitoring and surveillance funding).
  - 6. Estimates required for financial assurance payments have been determined.
  - 7. Authority has been granted to the steward to use, or have access to, funds related to LTS&M.
- C. Personnel requirements have been identified (for activities not previously addressed within this set of criteria).
  - 1. All personnel functions and qualifications necessary for the technical implementation and administration of LTS&M activities have been identified.
  - 2. A determination for the need of other on-site personnel has been made and the specific duties that may be required have been identified.
  - 3. A closeout plan for the disposition of excess federal full-time equivalents has been developed.
- D. A business closeout process has been developed (see Section X).

## VII. Information and Records Management Requirements Are Satisfied

Records and information for LTS&M turnover or retention plans are reflected in post-closure or disposition plans.

### A. Transfer of information and records.

1. Agreements are in place that identify the disposition of records transfer to the site custodian and records that transfer to other organizations (i.e., contract closeout records, ongoing litigation records and FOIA/Privacy Act requests, transuranic waste-related records, classified information).
2. Information and records needed for LTS&M, property management, contractor personnel benefits other than pensions, worker compensation, and Energy Employees Occupational Illness Compensation Program Act (EEOICPA) have been identified.
3. Practices and procedures for the transition of information systems and records have been established. Guidance is provided in the document *Legacy Management Information and Records Management Transition Guidance (March 2004)*.
4. The guidance and operations information for information systems transferring to the site custodian, including metadata, have been identified and transferred along with the information systems.
5. A Site Information and Records Transition Plan has been developed and approved that establishes a framework to address site-specific records and information requirements, including storage locations, special handling needs, geospatial data, and access and retrieval requirements.
6. The location(s) for storage and maintenance of site records and information systems has been identified and approved.
7. A records tracking system has been implemented, and standards for data formats, finding aids, and indices have been provided to the transfer site.
8. Information from the transfer site's records tracking systems has been migrated to the tracking system, along with locator guides and indices.
9. Records and record locations specified in agreements (Section V) are identified along with points of contact.

### B. Information and records management planning has been performed and is acceptable to the stakeholders, as required under regulatory requirements for stakeholder involvement and public availability.

1. Systems and procedures for the archival of LTS&M information in one or more on-site or off-site repositories have been developed.
2. Retention schedules that are appropriate for the management of records for LTS&M and for continuity of benefits, worker compensation, and EEOICPA claims have been developed.
3. Systems and procedures to establish and facilitate public access to and retrieval of records and information critical to LTS&M are in place. Examples could include, but are not limited to, Internet access, local library, and on-site information center (e.g., Interpretive Center, museum).

**VII. Information and Records Management Requirements  
Are Satisfied (continued)**

- B. Information and records management planning has been performed and is acceptable to the stakeholders, as required under regulatory requirements for stakeholder involvement and public availability (continued).
  - 4. The National Archives and Records Administration (NARA) has been engaged, through the DOE Office of Chief Information Officer, to approve any transfer of records past their retention dates or the loan of current records to organizations outside of DOE.
  - 5. The DOE Librarian and DOE Historian should be consulted regarding the transfer of non-record materials, such as library materials and other items that may have historic value, before agreements are made regarding their transfer to non-DOE entities.
  - 6. Classes of LTS&M information users and their access requirements have been identified and solutions have been implemented.
  - 7. Information in DOE-approved information systems, such as those identified in DOE Order 430.1B, *Real Property Asset Management*, required for LTS&M has been identified.

## **VIII. Public Education, Outreach, Information, and Notice Requirements Are Documented and Satisfied**

Any community involvement and associated Community Relations Plans should be governed by existing participation standards and systems.

- A. List of site stakeholders with associated address information has been developed and a process is in place for updating this list.
- B. Annual or more frequent updates of the Administrative Record and on-site information repository are available to interested parties. Community involvement tools have been developed (e.g., fact sheets, newsletters, email notifications, public meetings, etc.).
- C. Costs associated with public involvement have been estimated (e.g., oversight committees, meeting locations). Funds sufficient for public involvement should be included in the funding requests.

## **IX. Natural, Cultural, and Historical Resource Management Requirements Are Satisfied**

- A. A discrete system or process is in place to protect information about sensitive and natural resources from inappropriate or unauthorized use or access.
- B. Biological resources, threatened and endangered species, archaeological and cultural resources, Native American treaty rights, and/or other natural and cultural resources requirements have been identified and satisfied.
- C. Precise locations and characteristics of natural and cultural resources that require LTS&M have been identified. A management system is in place and operating successfully.

## **X. Business Closure Functions, Pension and Benefits, Contract Closeout or Transfer, and Other Administrative Requirements Are Satisfied**

Actions required by the completing organization and the receiving organizations related to business closeout functions are identified and reflected in requirements, policies and procedures (Section I-C), schedules and cost estimates (Sections III-B and III-C), and budget (Section VI)

- A. Responsibilities have been determined for the administration and funding of
  - 1. Retiree benefits and pension fund(s)
  - 2. Workforce transition services (e.g., outplacement assistance)
  - 3. National Defense Authorization Act for Fiscal Year 1993, Section 3161 Tuition Reimbursement Program and Relocation and Entrepreneurial Resource Program
  - 4. Worker compensation claims
  - 5. EEOICPA claims
- B. Current contractor pensions and benefits needs are identified and planned (see Attachment 2 for more details):
  - 1. Information about current pensions and benefit plans has been obtained.
  - 2. Post-closure benefits administrator and providers have been identified and appointed.
  - 3. Employment dates, salary, and security clearances have been verified.
  - 4. Personnel-related databases (including manual systems) and records responsibility have been identified:
    - a. Employment history and personnel files
    - b. Historical radiological dose records
    - c. Medical records
    - d. Retiree pension and benefit records
    - e. Security clearance history files
    - f. Training records
- C. Status of pending litigation and liabilities identified (Generally, these actions should be completed by the transferring organization.):
  - 1. Pollution liability policy
  - 2. Auto liability policy
  - 3. General liability policy
  - 4. Fiduciary/crime/medical malpractice liability policy
  - 5. Government rating plan for workers compensation
  - 6. Non-government rating plan workers compensation claims
  - 7. Equal Employment Opportunity (EEO) and discrimination cases
  - 8. Unresolved hourly employee claims
  - 9. Beryllium liability claims
  - 10. State or community litigation or claims



**X. Business Closure Functions, Pension and Benefits, Contract Closeout or Transfer, and Other Administrative Requirements Are Satisfied (continued)**

- C. Status of pending litigation and liabilities identified (generally, these actions should be completed by the transferring organization) (continued)
  - 11. Pending citizen action suits
  - 12. Department of Labor, Administrative Review Board cases, and/or Federal court litigation relating to Labor Standards (e.g., Service Contract Act, Davis-Bacon Act)
- D. Contract termination actions (These actions will normally be completed by the transferring organization unless contracts are required for LTS&M.):
  - 1. Contract closeout actions for closure of restoration contracts shall be identified.
  - 2. Contracts and financial agreements required for LTS&M identified (see Section I-B).
- E. Requirements of DOE orders satisfied.
  - 1. Facility Authorization Basis terminated
  - 2. Price Anderson Authorities oversight
  - 3. Reporting to International Atomic Energy Association (IAEA) terminated
  - 4. Disposition of personal property items

## **Attachment 1, Real Property Requirements**

### **I. Real Property Information Requirements**

All real property information requirements must be identified and documentation must be obtained prior to the transfer of any site to the Office of Legacy Management (LM). Real property assets are defined as any interest in land, together with the improvements, facilities, structures, and fixtures located thereon, including prefabricated movable structures and appurtenances thereto, under the control of DOE. Real property assets are further defined in the *Federal Management Regulations*, Sections 101-476.103-12. Consider the following elements, as applicable:

- Determine what interests will remain at closure both on site and off site, including land, easements, minerals, water rights, well permits, licenses, and permits.
- Determine any other in grants or out grants proposed for transfer to LM.
- Determine future land use for property.
- Obtain as-built drawings for any remaining improvements and utilities.
- Obtain existing maintenance/operations plans and procedures.
- Perform a physical inspection of facility.
- Complete information on any ongoing acquisition/disposal efforts.

Where applicable, the following real property information requirements must be met prior to transfer of a property to LM.

### **II. General Information Needed**

All the following information should be documented, stored, and available for LM use:

- Identification of authority used to acquire the interests
- Identification of all jurisdictions that exist
- Identification of proprietary, exclusive, or other federal interests, including off-site interests such as easements, licenses, and permits
- Identification of each grantor
- Indemnification granted

### **III. Budget and Accounting Data**

- The budget authority for any area, such as leases, operation and maintenance of improvements, and infrastructures, that will be transferred to LM.
- PILT money
- Integrated facility infrastructure documentation
- MARS record
- Quarterly maintenance

## **Attachment 1, Real Property Requirements (continued)**

### **IV. Land**

All the following information should be documented, stored, and available for LM use:

- Identification of the type of title and the holder of the title (the agency or the United States).
- Request U.S. Army Corps of Engineers or other agency real estate records.
- Identification of where original real estate records are located and whether the real estate record is complete, including acquisition instrument and deeds, withdrawal records and *Federal Register* Notices, title plats, legal descriptions and plats, surveys, and maps
- Identification of outstanding interests, such as out leases or easements, deed restrictions, or non-federal controls or other burdens on the property (such as highway and utility rights-of-way).
- Identification, if applicable, of any federally funded off-site improvements (e.g., roads, traffic lights).
- All unneeded real property in grants and out grants must be terminated prior to transfer.
- Identification of any RCRA/CERCLA transfer restrictions.
- Identification of local government with jurisdiction for the property.
- Realty instruments have been recorded and any zoning or tax issues have been identified.
- Real Property Asset Management (RPAM)-required, 10-Year Plan has been completed.
- Identification of existing land uses, zoning, and proposed land use if available.
- Identification of any subsurface (mineral, oil, gas) rights.
- Identification of any water rights and well permits.
- PILT requests granted or pending.
- FIMS is complete and up to date.

### **V. Maps, Plats, and Exhibits**

All the following information should be documented, stored, and available for LM use:

- Official land surveys, monumentation records, and cadastral surveys records stored and available for use.
- Official site maps, mineral rights maps, water rights maps, well permit maps, easement maps and legal descriptions, oil and gas lease maps, and tribal trust land properly geo-referenced in accordance with state or latitude/longitude coordinates and standards.
- Master title plats, title plats, and county title plats.
- Legal descriptions and recorded data.
- Existing and abandoned utility improvement easements maps.
- Locations of monuments.

## **Attachment 1, Real Property Requirements (continued)**

### **VI. Mineral Rights**

All the following information should be documented, stored, and available for LM use:

- Identification of mineral interests owned by the United States
- Locations of minerals severed from the surface estate
- Locations of any permitted mining operations

### **VII. Water Rights**

All the following information should be documented, stored, and available for LM use:

- Identification of water rights owned by the United States.
- Location of water rights retained by the former owner of the property.
- Location of outstanding water conveyances on the property and information on the easement holders; provide copies of the easements.
- Description of surface water rights.
- Description of the surface water impoundments.

### **VIII. Well Permits**

All the following information should be documented, stored, and available for LM use:

- Identification of well permits that exist for the United States.
- Identification of any state abandonment requirements.
- Identification of the state regulatory authority and point of contact.
- Identification of any off-site permits and access agreements; provide copies of the records and instruments to LM
- Data for FIMS are complete and up to date.

### **IX. Leasehold Interests:**

All the following information should be documented, stored, and available for LM use:

- Identification of any existing leases and expected expiration dates; provide copies of the contracts to LM.
- Identification of any granted leaseholds to others (out grants).
- Data for FIMS are complete and up to date.

## **Attachment 1, Real Property Requirements (continued)**

### **X. Other Real Property Interests**

All the following information should be documented, stored, and available for LM use:

- Identification of any real estate institutional controls, such as deed restrictions, covenants, zoning agreements, or easements.
- Identification of any restrictions on the use of airspace over the site and point of contact if there are any restrictions
- Subordinated rights of others

### **XI. Infrastructure**

All the following information should be documented, stored, and available for LM use:

- Identification of buildings or other structures that will remain.
- Identification of any leasehold interests associated with any buildings and other structures that will remain; if so, provide addresses of the leaseholders and copies of the contract.
- Identification of the costs, restoration requirements, cancellation or termination costs, and time frame for notices.
- Identification of any dam safety requirements or required annual inspections and reports:
  - o Power generation systems
  - o Treatment systems
  - o Fencing
  - o Disposal facilities
  - o Electrical distribution stations
  - o Extraction wells
  - o Injection systems
  - o Surface water structures (e.g., drainage channels, streams, dams, ponds flow controls, flow diversions)
- Identification of existing utilities that will remain.
- Identification of types and names of service providers (e.g., transmission or service, electric, natural gas, domestic water, sewage).
- FIMS requirements must be met, and applicable fields must be populated, complete, and up to date
- Identification of the FIMS administrator for the property
- Identification of security requirements that will remain or will be needed with the transition.
- Identification of maintenance management system used.

## **Attachment 2, Post-Closure Benefit Information and Data Needs**

### **I. Pension Plans**

Provide a list of current defined benefit plans. The following information is needed for each plan.

- A. Financial/Custodian Data
  - 1. Statement of assets
  - 2. Reconciliation of market value of assets from period to period
  - 3. List of benefits paid
- B. Actuarial Information
  - 1. Complete table of disability rates
  - 2. Complete table of withdrawal rates
  - 3. Actuarial valuation for each plan
  - 4. Any assumption studies that have been performed in the past 5 years
  - 5. Any other assumptions not explicitly detailed in the actuarial reports
  - 6. The census data used for the actuarial valuations for the most recent plan year
- C. Employer Plan Documents
  - 1. With all updated amendments and Summary Plan descriptions for all plans
  - 2. Most recent 5500 filings

### **II. Health and Welfare Benefit Plans**

The following information is needed for each health and welfare plan (such as medical, dental, life insurance, vision and prescription drug) that is currently extended to or continues post-employment and is likely to continue for retirees and/or for other selected former employees post-closure (if different). The types of financial data required will vary based on the plan's funding arrangement, as outlined in the following subsections:

- A. Financial Data
  - 1. Fully Insured Plans
    - a. Current rates
    - b. Rates for the prior 2 plan years
    - c. Copies of renewal letters
    - d. Claims experience and participation history for the past 2 years (separated by plan)
    - e. Premium history for the past 2 years

## **Attachment 2, Post-Closure Benefit Information and Data Need (continued)**

### **II. Health and Welfare Benefit Plans (continued)**

- A. Financial Data (continued)
  - 2. Self-Funded Plans
    - a. Premium equivalent rates for the past 2 years
    - b. Administrative rates for the past 2 years
    - c. Reinsurance rates for the past 12 years
    - d. Monthly participation history for the past 2 years
    - e. Monthly incurred/paid claim data for the past 48 months (separated by plan, and by actives and retirees)
  - 3. All Plans Regardless of Funding
    - a. Employee and retiree contribution rates for the past 2 years
    - b. Claim utilization reports for the past 2 years
- B. Insurance Company Documents
  - 1. Insurance contracts
  - 2. Certificates of Insurance
  - 3. Reinsurance contracts for self-funded plans
- C. Employer Plan Documents (including Section 125 document, if applicable, and retiree health care document)
- D. Employee Communication Materials
  - 1. Summary Plan Descriptions
  - 2. New hire orientation
  - 3. New hire benefit enrollment (both health and welfare and retirement benefits)
  - 4. Annual benefit enrollment materials and employee contributions
  - 5. Employee newsletters and other regular communication
  - 6. Retiree communications
- E. Pension and Health and Welfare Benefit Plans Census Data Elements
  - 1. Status [active, disabled, Consolidated Omnibus Budget Reconciliation Act (COBRA), terminated vested, retired]
  - 2. Employee identification
  - 3. Name
  - 4. Date of birth
  - 5. Sex
  - 6. Date of hire
  - 7. Zip code
  - 8. Salary (base pay only)

## **Attachment 2, Post-Closure Benefit Information and Data Need (continued)**

### **II. Health and Welfare Benefit Plans (continued)**

#### **E. Pension and Health and Welfare Benefit Plans Census Data Elements (continued)**

9. Pension compensation [a description of the salary being provided (e.g., W-2 wages plus 401(k) deferrals)]
10. Prior plan year's hours
11. Job description (or title)
12. Employee classification (salaried or hourly)
13. Other employee classification (if applicable)
14. Prior pension plan accrued benefits (if applicable)
15. January 1, 1976, accrued benefit
16. Any supplemental benefits being paid (if applicable)
17. Date of disability, retirement, or COBRA qualifying event
18. Date of pension benefit commencement (if applicable)
19. Monthly pension benefit (if in pay status)
20. Form of benefit (if in pay status)
21. Beneficiary date of birth for pension (if applicable)
22. Medical plan election
23. Medical coverage tier (individual, family, etc.)
24. Dental coverage tier (individual, family, etc.)
25. Vision coverage tier (individual, family, etc.)
26. Amount of basic life insurance

In addition to the documents and data LM needs to collect, LM needs to develop an understanding about what is expected to happen to the plans and the workforce through site closure and beyond. The following questions include some of the questions LM has regarding pension and health and welfare benefit plans:

- Does the site anticipate changing the asset allocation in any of the pension plans from now until closure?
- What baseline date is the site using for site closure? What is the possibility that the actual site closure will be sooner or later?
- Does the site expect to hire any new employees (additional or replacement) from now until closure?
- What turnover pattern does the site expect for the site employees from now until closure (please provide separately for salaried and hourly employees)?
- What salary increases does the site expect from now until closure?
- Does the site expect to implement early retirement incentive programs or any changes to the site pension or health and welfare plans from now until closure?
- Does the site expect any cost of living adjustments for retirees in the pension plans from now until closure?
- When do terminated vested participants generally start collecting benefits?



**Attachment 6**

**Title II Transition Checklist**

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## **Title II Transition Checklist**

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## Contents

### Introduction and Site Information

- 1.0 General Information
- 2.0 Regulatory Drivers
- 3.0 Program Management
- 4.0 Remedy Management
- 5.0 Records and Administrative Information Management Systems
- 6.0 Environmental, Engineering, and Technical Information
- 7.0 Real Property
- 8.0 Community Relations

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## Introduction and Site Information

This Title II Transition Checklist is a subset of the checklist that was developed for the U.S. Department of Energy Office of Legacy Management (LM) as part of the process of transferring site responsibilities from the Office of Environmental Management and other programs into LM for long-term surveillance and maintenance. It was recognized that some items on the larger checklist will never apply to Title II transitions and those items have been eliminated from this checklist. The purpose of this Transition Checklist is to provide an effective and consistent method to initiate collection of site information prior to transfer of site responsibilities from the private licensee into LM. Additionally, the data collected via this checklist should be used as a guide to verify all requirements of the Site Transition Framework are adequately addressed and understood. This checklist will be used to identify site issues and track the issues to successful resolution. Targeted activities are tracked on the Site-Specific Punchlist. The data and information collected will ensure DOE's concerns are addressed in the transition process and will support development of long-term surveillance and maintenance plans (LTSPs) and supporting documents.

Information collected to complete the checklist should be directed toward the expected end-state conditions at the site rather than current conditions. As the date nears for transfer of the site into LM, end-state conditions may differ from previous expectations. These changes should be monitored and the Site-Specific Punchlist updated accordingly.

Site Name \_\_\_\_\_ Site Nmeumonic \_\_\_\_\_

Site Location (Address/T,R,Sec) \_\_\_\_\_ State \_\_\_\_\_

Zip Code \_\_\_\_\_

Nearest Major City/Town \_\_\_\_\_

Licensee Contact Person \_\_\_\_\_

Licensee Contact Phone Number (\_\_\_\_\_) \_\_\_\_\_

DOE Site Lead \_\_\_\_\_ Phone (\_\_\_\_\_) \_\_\_\_\_

DOE Realty Officer \_\_\_\_\_ Phone (\_\_\_\_\_) \_\_\_\_\_

LMS Site Lead \_\_\_\_\_ Phone (\_\_\_\_\_) \_\_\_\_\_

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## 1.0 General Information

### 1.1 Organizational Structure

1.1.1 What is the organizational structure of the site, including licensee, contractors, and subcontractors? (See Section 3.0 for additional details)

1.1.2 What are the major responsibilities for each organization listed above?

1.1 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 1.2 Principal Stakeholders

1.2.1 Who are the principal stakeholders and their affiliations? Which groups will continue after transition? (See Section 8.0 for additional details)

1.2 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 1.3 History of Site

1.3.1 What documents provide a brief overview of the site history for LM personnel to gain a better perspective of the overall site issues in the past? What is the current status of remediation at the site?

1.3 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 1.4 Site Conditions (See Section 6.0 for additional details)

1.4.1 What are the end state conditions expected for the site?

#### 1.4.2 Site Maps and Drawings

1.4.2.1 Has the transition site provided or identified locations where site features and environmental data are available?

#### 1.4.3 Surrounding Landowners/Users

1.4.3.1 Who are the current landowners and users of adjacent properties?

1.4.3.2 What are the implied or written expectations with these landowners?

1.4.3.3 What are the existing surrounding land uses?

1.4.4 Future Plans

1.4.4.1 What future plans are being developed for the site and are they available for review?

1.4.4.2 Does the site have a future land-use map?

1.4.4.3 What are the future land-use plans for adjacent properties?

1.4.4.4 What are the impacts, if any, of local zoning on future plans?

1.4.4.5 Who will be the site owners after transfer to LM?

1.4.5 Institutional Controls (ICs) (See Section 4.6 for additional details)

1.4.5.1 What ICs exist in the form of deed restrictions, interagency agreements, cooperative agreements, memorandums of understanding, etc.?

1.4 Notes:

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## 2.0 Regulatory Drivers

### 2.1 General Information

- 2.1.1 Under what authority or authorities are the cleanup and the long-term surveillance and maintenance being undertaken?
- 2.1.2 What are the regulator (EPA, state, NRC, etc.) roles in the cleanup and long-term surveillance and maintenance?
- 2.1.3 What other regulatory agencies have roles in the cleanup and long-term surveillance and maintenance?
- 2.1.4 List any Notices of Violation that have been received.
- 2.1.5 List any compliance actions that have not been completed.
- 2.1.6 Have any groundwater standards been exceeded?

2.1 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 2.2 Federal (RCRA, CERCLA, UMTRCA, CWA, CAA, ESA, National Historic Preservation Act, Floodplains/Wetlands, etc.)

- 2.2.1 What federal regulations apply?
- 2.2.2 List all federal statutory requirements that have yet to be completed or transferred.
- 2.2.3 Are there legislative constraints or requirements for the property?

2.2 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 2.3 Tribal/Native American

- 2.3.1 What tribal regulations apply to clean-up and long-term surveillance and maintenance?

2.3 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **2.4 State**

2.4.1 What State regulations apply (e.g., solid waste disposal, mined land reclamation, well permits, water regulations both on-and off-site)?

2.4.2 List all state requirements that have yet to be completed or transferred (e.g., noxious weeds, well permits, ground water or surface water points of compliance).

2.4 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **2.5 Local**

2.5.1 What local governmental regulations apply?

2.5.2 List any local requirements yet to be completed or transferred.

2.5 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **2.6 Other**

2.6.1 What DOE orders apply?

2.6.2 List any other regulatory drivers not already addressed.

2.6.3 What regulatory issues are unresolved?

2.6.4 What, if any, lawsuits or pending natural resource damage claims exist?

2.6 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 3.0 Program Management

### 3.1 Roles and Responsibilities (DOE/Contractor)

- 3.1.1 Who is responsible on site (both DOE and contractor) for major activities that will be transitioned?

3.1 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 3.2 Points of Contact/Interfaces

- 3.2.1 Who are the primary points of contact between site and LM personnel?
- 3.2.2 What are the protocols for communicating between LM and site personnel?

3.2 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 3.3 Programmatic Plans: H&S, QA, Program Management, Contracts (Task Orders, etc.), Life-Cycle Baseline, Staffing Plan, etc.

- 3.3.1 What are the pertinent programmatic planning documents and procedures and where are they located or available?
- 3.3.2 What changes to the programmatic plans are required as the site closes and LTS&M begins?
- 3.3.3 What management systems (e.g., Integrated Safety Management, Quality Assurance, Environmental Management System, Radiation Protection/Price Anderson) are established that will need to be maintained? Where are the implementing plans located or available?

3.3 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 3.4 Budget Projections and Schedules

- 3.4.1 What budget estimates for out years have been developed? Are they still adequate?
- 3.4.2 When should site budget and LM budget transition?
- 3.4.3 What are the programmatic reporting requirements, such as for performance, milestones, costs, funding, safety statistics?

3.4 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### **3.5 Costs/Schedules**

#### **3.5.1 Major Milestones**

3.5.1.1 What are the major milestones for closure and their current statuses?

3.5.1.2 When is the official target closure date?

3.5.1.3 What other dates are significant to the site in regard to transitioning activities (i.e., regulatory closeout)?

#### **3.5.2 Cost Structures**

3.5.2.1 What is the site's WBS structure and cost-sharing requirements?

3.5.2.2 Has long-term surveillance and maintenance scope been identified and have costs been estimated?

3.5 Notes:

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### **3.6 Agreements, Orders, or Treaties**

#### **3.6.1 Cooperative Agreements**

3.6.1.1 What, if any, cooperative agreements are in effect with other entities, such as Native American Tribes, other federal agencies, states, or local governmental agencies, and where are they located or available?

#### **3.6.2 Interagency Agreements**

3.6.2.1 What, if any, agreements are in effect with other federal agencies, such as Memorandums of Understanding with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, or others?

#### **3.6.3 Federal Facility Agreements**

3.6.3.1 Is this site subject to the Federal Facility Act? If yes, where is the agreement located or available?

3.6.3.2 What, if any, post-closure agreements have been discussed, started, or completed?

#### **3.6.4 Outgrants/Use Agreements**

3.6.4.1 Are use agreements in effect for portions of the property or for the entire site? If yes, where can these be obtained?

3.6.4.2 Are there outgrants for grazing, access, or research? Describe the revenues generated and the procedure for processing them.

3.6.5 Ingrants/Access Permits, Easements, and Licenses

3.6.5.1 Are there any access agreements that are needed for ongoing operations, reuse, or existing third-party activities? If yes, where can these be obtained?

3.6.6 Others/General

3.6.6.1 Are there any other types of legal agreements that LM will need to consider accepting, maintaining, or be aware of?

3.6.6.2 What closeout actions, regarding agreements, are in progress that need to be completed?

3.6.6.3 Are there any state cleanup oversight Agreements in Principle to close out?

3.6 Notes:

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## 4.0 Remedy Management

### 4.1 Compliance Strategy

#### 4.1.1 Technical Documents

4.1.1.1 Which documents describe the compliance strategies at the site? Where are they located or available? These may include

- Site characterizations (conceptual site models, risk assessments, feasibility studies)
- Remedial Action Plans/activities/reports
- Compliance documents (CRRs, etc.)

4.1.1.2 List any areas where long-term surveillance and maintenance requirements are not yet defined?

4.1.1.3 Are LTS&M requirements established that will be incorporated into the LTSP (see also Section 4.2)?

4.1 Notes:

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### 4.2 Operations and Maintenance

4.2.1 What are the types and locations of remedy facilities (e.g., surface water treatment systems, groundwater treatment systems, landfills, caps, soil covers)?

4.2.2 Conduct a physical inspection of the facility.

4.2.3 Procedures and Plans (See Section 6.0 for additional details)

4.2.3.1 Obtain existing maintenance/operations plans and procedures (e.g., storm water, SPCC, emergency preparedness, treatment system,). Do the plans describe performance requirements for the systems?

4.2.3.2 Obtain current/final construction specifications for the remedy systems and site reconstruction.

4.2.3.3 Obtain the design files for the remedy system and site reconstruction.

4.2.3.4 What warranty items will there be after transition?

4.2.4 Drawings/Maps (See Sections 6.0 and 7.0 for additional details)

4.2.4.1 What drawing sets exist for engineered systems and structures?



#### 4.2.5 Waste Management

- 4.2.5.1 What waste-generating operations are expected to continue after transition for long-term surveillance and maintenance activities?
- 4.2.5.2 What are the waste streams resulting from the ongoing waste-generating operations?
- 4.2.5.3 What is the frequency/amount of waste disposal?
- 4.2.5.4 What are the requirements and procedures to manage the waste?
- 4.2.5.5 Will anything currently known about future land use require new/different waste streams or disposal paths under long-term surveillance and maintenance? If yes, describe.

#### 4.2.6 Permits

- 4.2.6.1 What permits are needed for LM operations? When will they be transferred to new parties responsible to maintain them?
- 4.2.6.2 List the closeout actions in progress and those actions that need to be completed?

4.2 Notes:

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### 4.3 Monitoring

#### 4.3.1 Sampling and Analysis

- 4.3.1.1 What sampling requirements will be required by LM and are they in place (e.g., surface water, air, ground water, soil, biota, T&E species)?
- 4.3.1.2 What types of long-term monitoring are required by permits or other documents?
- 4.3.1.3 Obtain procedures and protocols for sampling and analyses.
- 4.3.1.4 What equipment and automated data collection systems are in use?

#### 4.3.2 Data Validation

- 4.3.2.1 What are the requirements and procedures for data validation?
- 4.3.2.2 Who is on the distribution list to receive various types of monitoring data (e.g., regulators, landowners, or lessees, information repository receiving ground water quality data)? How do they receive the information?

4.3.3 Analytical Chemistry Laboratory Services

4.3.3.1 Determine the requirements for an analytical chemistry laboratory subcontract, including detection limits, analytical procedures, reporting, electronic data deliverables, laboratory quality control, sample media, and certifications.

4.3.3.2 Determine status of current analytical chemistry laboratory contracts.

4.3.4 Database Management (GIS) (See Section 6.5 for additional details)

4.3.5 What real estate permits or instruments, such as access agreements, exist for monitoring? Are they in written form and, if so, where are the records?

4.3 Notes:

**4.4 Performance Evaluations**

4.4.1 Verification Process

4.4.1.1 What is the process for verifying that the remedy is operating properly and how is it documented?

4.4.1.2 How often is the remedy verified and who performs the verification?

4.4.1.3 What contingency plans are required and in place?

4.4.1.4 Obtain copies of procedures, plans, etc.

4.4.1.5 Who is on the distribution list for remedy verification reports?

4.4 Notes:

**4.5 Revegetation/Reclamation**

4.5.1 What are the revegetation/reclamation commitments for the site? What are the maintenance and inspection requirements for these measures?

4.5.2 Is there, or will there need to be, noxious weed control for the site?

4.5.3 Who will be responsible for the monitoring?

4.5 Notes:

#### **4.6 Institutional Controls (ICs)**

- 4.6.1 What ICs are necessary for any or all of the site for any medium (e.g., for ground water, but not surface use)?
- 4.6.2 What agreements that document required ICs, such as an environmental covenant with the state, a deed restriction with a landowner, have been prepared? Where are these instruments located and are they recorded?
- 4.6.3 What are the physical controls that are in place or will be needed for the site (e.g., fencing, roads, signs, and other controls)? Are any of these physical of ICs considered interim (temporary for clean-up action or security) and will be terminated?
- 4.6.4 Is there residual contamination on the site that requires administrative controls (e.g., mechanism to prohibit drilling or land disturbance)?
- 4.6.5 Have the ICs been accepted/adopted by all parties that are affected?
  - 4.6.5.1 If not, what is the process for reaching agreement?
  - 4.6.5.2 How will the ICs be enforced?

4.6 Notes:

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#### **4.7 Regulatory Reporting**

- 4.7.1 Identify reports, regulatory drivers and due dates for all reporting requirements.
- 4.7.2 Does this site require an Annual Site Environmental Report per DOE Order 231.1A?

4.7 Notes:

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## **5.0 Records and Administrative Information Management Systems**

### **5.1 Records Identification and Administration**

- 5.1.1 Identify the Licensee and contractor points of contact knowledgeable of the site records.
  - 5.1.1.1 Identify agency and contractor points of contact for Freedom of Information Act (FOIA) and Privacy Act requests and responses.
    - 5.1.1.1.1 *What are the projected volumes and types of FOIA and Privacy Act requests at the time of closure?*
  - 5.1.1.2 Does the Licensee or Contractor have any policies and procedures being used for records management? Has LM received copies of the current documents?
  - 5.1.1.3 If applicable, identify agency and contractor points of contact for Energy Employees Occupational Illness Compensation Program Act (EEOICPA) and any other compensation programs.
  - 5.1.1.4 Identify all reference/library collections and the Licensee and contractor points of contact for each.
    - 5.1.1.4.1 *Identify those required for long-term surveillance and maintenance activities.*
- 5.1.2 Is a Records Transition Plan required? If so, when will it be completed?
- 5.1.3 Does language in site contracts adequately address records ownership and disposition?
- 5.1.4 Has an activity schedule been developed to identify information and records activities? If yes, does this schedule include actions, responsibilities, and milestones? Are updates adequate?
- 5.1.5 Have all site records been inventoried and scheduled?
  - 5.1.5.1 Does the inventory include volumes, media types, records schedule identification, and storage locations?
  - 5.1.5.2 Are there any electronic records? If so, what is their planned disposition?
  - 5.1.5.3 What indices, tracking databases, and finding aids are used?
  - 5.1.5.4 Will training be provided to LM in the use of the finding aids, databases, and any other tools needed to access and retrieve information and records from the Licensee and its contractors?

- 5.1.5.5 Have copies of the transmittal and archive forms been provided (SF-135s and SF-258s)? What is the media (e.g., electronic and/or paper)?
- 5.1.5.6 Has an SF-115 been prepared for any unscheduled records?
- 5.1.6 Have all records to be received by LM to support long-term surveillance and maintenance been identified and segregated for post-closure maintenance of the site?
  - 5.1.6.1 Has the media been identified and accepted by LM?
  - 5.1.6.2 Has a process been established for their transfer?
- 5.1.7 Have all records and information to be received by LM to support other LM post-closure activities been identified (e.g., records and information needed to support LM administration of contractor pensions and benefits)?
- 5.1.8 Is an Administrative Record (AR) or similar information repository been created and maintained? (See also Section 8.3)
  - 5.1.8.1 What are the requirements and is there a plan to manage the collection post-closure?
  - 5.1.8.2 What is the volume and media?
  - 5.1.8.3 Where will this collection be located after site turnover and who will have long-term maintenance?
- 5.1.9 What are current and projected volumes and costs for records at records storage locations?
- 5.1.10 Are there any special needs records (e.g., contaminated, damaged, deteriorating x-rays)? If so, what is the plan of action for these records?
- 5.1.11 Are there any records-related issues that will impact LM?

5.1 Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## 6.0 Environmental, Engineering, and Technical Information

### 6.1 Existing Engineered Systems and Structures

6.1.1 Obtain the following drawing sets or documents associated with site-wide and remedy systems at transition:

- Final design drawings
- Design specifications
- As-built drawings
- Operating manuals and procedures

6.1 Notes:

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### 6.2 Official Land Survey

6.2.1 Obtain the official land survey documents and drawings associated with

- Plats
- Other legal and real property instruments (deeds, restrictions, ICs, etc.)
- Drawing and/or coordinate listing of all horizontal and vertical control points used to establish site features and legal boundaries. This must include the controlling monument and other set or found monuments.
- Coordinate system information, geographic or projected (horizontal and vertical datums)
- Coordinate system conversion information (if any information, data or drawings to be provided is in a modified or local system)

6.2 Notes:

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### 6.3 Site Mapping Features and Metadata

6.3.1 Obtain detailed mapping information and metadata for the following in electronic format (It is assumed that the information provided will be in a single geographic or projected coordinate system and that coordinate system information will also be provided).

6.3.1.1 Imagery (orthophotography, quad sheets, etc.)

6.3.1.2 Existing features

- Political/institutional control boundaries
- Vegetation/wetlands
- Structures (buildings, tanks, fences, etc.)
- Topography
- Contamination areas (soil, ground water, etc.)

- Geology
- Water features (lakes, rivers, drainages, etc.)
- Easements/rights of way
- Property ownership (site boundary, land ownership, current and future, etc.), including surface and mineral ownership
- Land use (current and future)
- Transportation (roads, railroads, etc.)
- Survey control and other monuments
- Utilities (gas, electric, water, phone, other piping, etc.), both active and abandoned, utility corridors, and easements

#### 6.3.1.3 Historical features (former features of historic significance)

6.3 Notes:

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## 6.4 Environmental Monitoring Data

### 6.4.1 What databases/data sets exist and will likely be required for

- Basic site data (name, location, coordinate systems, etc.)
- Sampling locations (both onsite and offsite)
- Well/borehole construction/lithology data
- Well/borehole construction/lithology logs
- Well permit data
- Sampling location access agreements
- Chemistry data (water, soil, sediment, vegetation, biota, air filter, etc.)
- Sampling field measurements
- Water levels
- Automated measurements
- Pumping/flow data
- Air monitoring data
- Meteorological data
- Ecological data (wildlife and plant surveys, etc.)
- Radiation measurements
- Standards, site-specific standards, permit limits, action levels, cleanup goals, etc.
- Sampling plans

6.4 Notes:

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## **6.5 Technical Information Management Systems and Applications**

(Environmental Data Management Systems, GIS, etc.)

6.5.1 Obtain the following for database management systems and applications:

6.5.1.1 Documentation

- System administration guides
- Users' guides
- Data dictionaries
- Entity relationship diagrams

6.5.1.2 Source code

6.5.1.3 License agreements

6.5 Notes:

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## 7.0 Real Property

### 7.1 Real Property

Identify and provide obtain documentation for the real property assets listed below. Real property assets are defined as any interest in land, together with the improvements, facilities, structures, and fixtures located thereon, including prefabricated movable structures and appurtenances thereto, under the control of DOE. Real Property Assets are further defined in the *Federal Management Regulations* §101-476.103-12. Consider the following, as applicable:

- Determine what interests will remain at closure both on site and off site, including land, easements, minerals, water rights, well permits, licenses, and permits.
- Determine any other ingranants or outgrants proposed for transfer to LM.
- Determine future land use for property.
- Obtain as-built drawings for any remaining improvements and utilities.
- Obtain existing maintenance/operations plans and procedures.
- Perform a physical inspection of facility.

What authority was used to acquire the interests? What jurisdiction exists? Are these Proprietary, Exclusive, or other federal interests including off-site interests such as easements, licenses and permits? Obtain information on each grantor.

#### 7.1.1 Land

- 7.1.1.1 What type of title exists and is it in the name of the agency or the United States?
- 7.1.1.2 Has U.S. Army Corps of Engineers been engaged to process interests in fee land?
- 7.1.1.3 List any outstanding interests, such as outgrants or easements, deed restrictions, or nonfederal controls or other burdens on the property.
- 7.1.1.4 List any federally funded off-site improvements (e.g., roads, traffic lights).
- 7.1.1.5 Have all unneeded real property ingranants and outgrants been terminated?
- 7.1.1.6 Are there any regulatory (i.e., RCRA/CERCLA) transfer restrictions?
- 7.1.1.7 What local government has jurisdiction for the property? Are the realty instruments recorded? If so, where? Are there any zoning or tax issues?
- 7.1.1.8 List any subsurface (mineral, oil, gas) rights.
- 7.1.1.9 List any water rights. Well permits.

- 7.1.2 Maps, Plats, and Exhibits
  - 7.1.2.1 Where are the official land surveys, monumentation records, and cadastral surveys records stored and available for use?
  - 7.1.2.2 Where are the official Site maps, mineral rights maps, water rights maps, well permit maps, easement maps and legal descriptions, oil and gas lease maps, and tribal trust land maps stored and available for use?
  - 7.1.2.3 Where are the master title plats, title plats, and county title plats stored and available for use?
  - 7.1.2.4 Where are the legal descriptions and recorded data stored and available for use?
  - 7.1.2.5 Where are the existing and abandoned utility improvement easements maps stored and available for use?
- 7.1.3 Mineral Rights
  - 7.1.3.1 What mineral interests are owned by the United States?
  - 7.1.3.2 Were any minerals severed from the surface estate?
  - 7.1.3.3 List any permitted mining operations.
- 7.1.4 Water Rights
  - 7.1.4.1 What water rights are owned by the United States?
  - 7.1.4.2 List any water rights retained by the former owner(s) of the property.
  - 7.1.4.3 List any outstanding water conveyances on the property and who are the easement holders. Provide copies of the easements.
- 7.1.5 Well Permits
  - 7.1.5.1 What well permits exist for the United States?
  - 7.1.5.2 Are there abandonment requirements by the state? Who is the state regulatory authority and point of contact?
  - 7.1.5.3 List any off-site permits and access agreements. Provide copies of the records and instruments.
- 7.1.6 Leasehold Interests
  - 7.1.6.1 What leases exist and are expected to continue? Provide copies of the contracts.
  - 7.1.6.2 List any granted leaseholds to others (outgrants).

7.1.7 Other Real Property Interests

7.1.7.1 List any real estate ICs, such as deed restrictions, covenants, zoning agreements, or easements.

7.1.7.2 Are there any restrictions on the use of airspace over the site? If yes, who is the point of contact?

7.1.8 Infrastructure

7.1.8.1 What buildings or other structures will remain?

7.1.8.2 Are there any leasehold interests associated with any buildings and other structures that will remain? If so, provide addresses of the leaseholders. Copies of the contract? What are the costs, restoration requirements, cancellation or termination costs, and time frame for notices?

**7.2 FIMS**

7.2.1 List any other structures that will remain. List any dam safety requirements or annual inspections and reports required.

- Power generation systems
- Treatment systems
- Fencing
- Disposal facilities
- Electrical distribution stations
- Extraction wells
- Injection systems
- Surface water structures (e.g., drainage channels, streams, dams, ponds flow controls, flow diversions)

7.2.1.1 What existing utilities will remain?

- Identify types and names of service providers (e.g., transmission or service, electric, natural gas, domestic water, sewage)

7.2.2 Are Facilities Information Management Systems (FIMS) reporting requirements being met?

7.2.2.1 Who is the FIMS administrator for the property and are the records (required fields) populated?

**7.3 Reuse**

7.3.1 Has the site been evaluated for reuse?

7.3.2 Has reuse information been included in the LTSP?

7.0 Notes:

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## 8.0 Community Relations

### 8.1 Stakeholders

- 8.1.1 Who are the major stakeholders and key individuals who may be interested in the site after transition?
- 8.1.2 What is the relationship between the site and these entities (e.g., is it cooperative or adversarial)?
- 8.1.3 Have any major issues with any stakeholder groups been identified? Who is actively involved and what is the resolution status?
- 8.1.4 How active are the stakeholders (what is their interest level, how organized are they)?
- 8.1.5 How does the site communicate with the stakeholder groups?

8.1 Notes: \_\_\_\_\_  
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### 8.2 Contact Information

- 8.2.1 Obtain electronic copies of key contacts mailing lists.
- 8.2.2 Has all stakeholder contact information been provided to the LM Stakeholder database?
- 8.2.3 Information will be made available to the public via the LM Website?

8.2 Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 8.3 Websites

- 8.3.1 Have all the required documents and links for the site website been identified and generated?
  - 8.3.1.1 Site Fact Sheet
  - 8.3.1.2 LTSP
  - 8.3.1.3 Inspection/Sampling Schedule

8.3.1.4 Annual Inspection Reports

8.3.1.5 Regulatory Framework

8.3.1.6 Additional Site Specific Documents

8.3 Notes:

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## **Attachment 7**

### **Example of Documentation from Lessons Learned Session— Maybell West, Colorado, Disposal Site**

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## **Lessons Learned; Maybell West, Colorado, UMTRCA Title II Disposal Site Transition**

**Date:** June 24, 2010

### **Purpose of Lessons Learned Session**

The purpose was to evaluate the efficiency and quality of procedures and products in order to make improvements on future Title II site transitions. Information derived from a brainstorming session following the completion of the Maybell West, Colorado, UMTRCA Title II disposal site transition will be beneficial in facilitating future UMTRCA Title II disposal site transitions. Information gained can be used to revise project documents and strengthen work processes. Continual improvement by seeking employee feedback through this type of session following the completion of a site transition implements the intent of DOE's Integrated Safety Management Core Function 5: Provide Feedback and Suggestions.

### **Lessons Learned Process**

The Site Lead requested assistance in conducting a lessons learned session to critique the transition process for the Maybell West, CO UMTRCA Title II disposal site. The site lead met with QA and administrative staff to plan the session. A facilitated brainstorming session with the Title II Transition Team was then held on June 24, 2010 to gather information and recommendations for improvement.

### **Areas of Discussion; Information and Recommendations for Improvement**

Five focus areas; licensee coordination, real property, regulatory, technical issues, and information gathering were discussed and the main issues and recommendations for improvement from each are as follows.

#### Licensee Coordination

- Begin site transition process no less than two-years prior to anticipated transition date,
- Establish clear lines of responsibility and communication early in the process and maintain throughout the site transition.
- Schedule regular status meetings with core group representatives (licensee, DOE, DOE support, and regulators), discuss issues and concerns, develop path forward.
- Discuss and obtain licensee buy-in to the transition process and adhere to the process.

#### Real Property

- Research and understand all property issues early on in the process (including both surface and subsurface interests); communicate regularly with licensee, USACE, and BLM. DOE acquisition of fee land (i.e., warranty deed) and securing BLM segregation and withdrawal for federal lands are key ICs in meeting DOE's future long-term care obligations.
- Ensure the site LTS&M boundary and features surveys are accurate and that information needed to enter into the GIS system is obtained from licensee is complete (e.g., resolve any coordinate system discrepancies early on).
- Obtain all the data associated with the site as early as possible (i.e., in-grants and out-grants); plot all existing easements to determine accuracy — expect issues. Ensure site access is secured prior to transition; begin process at least one year prior to anticipated transition date.

### Regulatory

- Review site conditions against UMTRCA regulations; become familiar with the site from both technical and real property aspects. Determine if compliance with National Environmental Policy Act (NEPA) was maintained throughout the reclamation and closure process; obtain list of NEPA documents.
- Acquire letters of interpretation and direction, as needed, for specific issues and document DOE's and the contractor's attempt to get guidance on interpretation and decisions made from regulators.
- Communicate with regulators regularly, both early on and throughout the transition process.

### Technical Issues

- Groundwater remedy: Obtain original models as a starting point; verify groundwater modeling assumptions, standards, software, and completeness of model information. Review ACL applications and resulting standards thoroughly, along with all associated regulatory decisions and assumptions; evaluate the ability to remain compliant under long-term care.
- Acquire historical monitoring data; evaluate the information and the site's proposed long-term monitoring program as early in the process as possible—incorporate any technically sound modifications to the long-term monitoring program into the LTSP.
- Request the licensee transfer complete historical data in a compatible format as it is generated throughout the transition process.

### Information Gathering

- Conduct site visits early on and at least annually throughout the transition process, as well as when information is received that may significantly impact site integrity (obtain licensee approval, regulators generally offer DOE invitation).
- Review and evaluate site information and records for completeness at the beginning of the transition process (engineering information, reclamation plans, completion reports, ACL applications, license amendments, available licensee and regulator correspondence, condition assessments, aerial surveys, photos and topographical information, NEPA documentation).
- Evaluate the management of raw data and field information for retrieval purposes (records); periodically review site historical records and information throughout the process, and for completeness prior to transition.

The information derived from these lessons learned session will be incorporated into the transition processes and will be used to revise the transition process guidance document. Continual improvement by seeking employee feedback through this type of session following completion of a site transition is beneficial and should be performed following each site transition.

*Note: The lessons learned session was scheduled to last one hour. The session lasted two hours and not all the topics were completely addressed (i.e., significant issues were discussed; however, additional discussion could have continued that may have provided additional value). A minimum of two hours should be reserved for a session of this type.*

### **References**

LMS/S05096, *Process for Transition of Uranium Mill Tailings Radiation Control Act Title II Disposal Sites to the U.S. Department of Energy Office of Legacy Management for Long-Term Surveillance and Maintenance*, June 2009

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