U.S. Department of Energy

Office of Inspector General

Office of Audits and Inspections

AUDIT REPORT

Management of Long-Term Surveillance and Maintenance of Uranium Mill Tailings Radiation Control Act of 1978 Title II Sites

OAS-L-15-02 October 2014

Department of Energy
Washington, DC 20585

October 23, 2014

MEMORANDUM FOR THE DIRECTOR, OFFICE OF LEGACY MANAGEMENT

FROM: David Sedillo, Director
Western Audits Division
Office of Inspector General

SUBJECT: INFORMATION: Audit Report on "Management of Long-Term Surveillance and Maintenance of Uranium Mill Tailings Radiation Control Act of 1978 Title II Sites"

BACKGROUND

The *Uranium Mill Tailings Radiation Control Act of 1978* (UMTRCA) was enacted to minimize radiation health hazards to the public. Title II of UMTRCA covers uranium mill sites that held a license by the Nuclear Regulatory Commission (Commission) or host states on or after January 1, 1978. Title II sites, which were commercially owned and operated, are to be cleaned up at the expense of the mill operators, closed and then transferred to either the Department of Energy's (Department) Office of Legacy Management (Legacy Management) or the host states for long-term surveillance and maintenance. To date, no state has assumed custody of any Title II site. Legacy Management currently manages 6 Title II sites and anticipates eventually managing the remaining 21 sites that are scheduled to be closed by the mill operators.

Prior to site closure, the Commission assesses a surveillance charge to each mill operator, which is paid to the general treasury of the United States to cover the costs of long-term surveillance and maintenance of the site. Once the assessment is paid, the mill operator is relieved of all liability except for fraudulent or negligent acts, and therefore, cannot be assessed an additional charge. The operator's license is then terminated and the Department, as the final custodian, performs annual long-term surveillance and maintenance activities at the sites using appropriated funds.

Given the Department's future obligation to manage Title II sites and the potentially significant cost of doing so, we performed this audit to determine whether the Department had effectively managed its long-term surveillance and maintenance of Title II sites.

RESULTS OF AUDIT

We identified opportunities for the Department to improve its administration of the long-term surveillance and maintenance costs of its Title II sites. Specifically, we found that the

Department's costs for long-term surveillance and maintenance of its Title II sites exceeded revenue available from mill operator assessments. [1] Legacy Management's costs during Fiscal Years (FY) 2010 through 2012 for long-term surveillance and control activities at the six sites it managed exceeded revenue by $4.1 million. During this time, Legacy Management spent $4.25 million; however, the associated revenue generated from the surveillance charges totaled only $148,000. Additionally, Legacy Management spent $1.1 million for pre-transfer activities at other Title II sites that are not yet under its control and for which no provision exists for mill operators to cover the costs. Recognizing these challenges, Legacy Management has taken certain steps to address the issues associated with site transfers; however, further work is needed.

Legacy Management Sites

During FYs 2010 through 2012, Legacy Management incurred costs at Title II sites it managed in excess of revenue. We found that Legacy Management incurred $890,000 on passive monitoring activities, and almost $3.36 million for other activities, including site maintenance and groundwater monitoring that, according to Legacy Management, were necessary for compliance and protectiveness purposes. Specifically:

- Legacy Management's costs for passive monitoring activities during FYs 2010 through 2012 totaled $890,000, exceeding associated revenue by $742,000. Passive monitoring activities are statutorily required and generally consist of site inspections and reports to the Commission. Costs include salaries, benefits, travel, administrative support, management supervision and general overhead related to conducting the inspections and writing reports.

- In addition to passive monitoring activities, during FYs 2010 through 2012, Legacy Management incurred almost $3.36 million in costs for other activities at the six Title II sites it managed, with only approximately $1,700 collected to offset these costs. Those costs included more than $2.71 million for activities such as maintenance and repair of access roads and the disposal cell, vegetation control and construction of monitoring wells. In addition, Legacy Management spent approximately $648,000 for monitoring activities such as groundwater sampling, and soil and vegetation surveys.

Surveillance charges for the sites currently in the Department's inventory were based on the assumption of passive monitoring before the Department and the Commission gained experience with monitoring Title II sites. Because the Commission has already terminated these mill operators' licenses, the surveillance charges cannot be increased for the six sites currently managed by Legacy Management. While we recognize this, we believe that the inadequacy of the surveillance charges to cover incurred costs at the six sites provides valuable lessons learned for ensuring that assessments are sufficient to produce the revenue necessary to cover site surveillance and maintenance at future closure sites.

[1] In this context "revenue" is equal to a presumed 1 percent annual interest earned on the surveillance charges assessed to the uranium mill operators as assumed in 10 CFR Part 40, Appendix A, Criterion 10.

Sites Not Under Legacy Management Control

In addition to its costs at sites under its custody, Legacy Management incurred costs for activities at Title II sites that are still controlled by the original mill operators. These costs have not previously been taken into account when setting the surveillance charge. Specifically, Legacy Management spent $1.1 million during FYs 2010 through 2012, on activities to help it better understand the unique characteristics of each site and limit unanticipated events that could increase future costs. These activities included meeting with the Commission and mill operator, capturing and managing site knowledge and information, developing a technical basis to concur with site closure, ensuring conformance with applicable laws and regulations and developing a long-term surveillance plan. According to Legacy Management, these activities should begin approximately 2 years before the anticipated transfer date as part of its planning for future site stewardship. Legacy Management also stated that these costs are reasonable and appropriate, and the Commission acknowledged that it is aware of them. The Commission stated that it is not clear if pre-transfer costs can be included in the surveillance charge, although it is willing to discuss the issue with Legacy Management. However, Legacy Management has not petitioned the Commission to include the pre-transfer costs in the surveillance charge.

Management and Oversight

The costs for long-term surveillance and control at Title II sites have exceeded revenue because rates were established before the actual costs of surveillance and control were known. Legacy Management has worked with the Commission to adjust the rates for sites to be transferred in the future, but unresolved issues remain. In particular, Legacy Management believes the sites should be managed in accordance with all applicable radiological and nonradiological laws and regulations and that the surveillance charge should cover the cost of compliance. However, the Commission asserts that Title II of UMTRCA only allows for the surveillance charge to cover those activities that are deemed necessary for radiological health and safety. In addition, Legacy Management has yet to resolve the amount of Commission fees that should be attributed to Title II site management. While Legacy Management has become more engaged with the Commission on site transfers, issues with respect to certain Legacy Management estimates and practices have yet to be formally resolved. Also, as previously stated, Legacy Management has not attempted to include pre-transfer costs in the surveillance charges the Commission assesses to mill operators.

Surveillance Charge Proposals

Legacy Management believes that the disposal cells and land should be managed in accordance with applicable laws and regulations regardless of the relationship to radiological health and safety. However, the Commission issued a Regulatory Issue Summary (RIS) in September 2011 to reiterate its policy on the surveillance charge. The RIS reaffirmed that if site surveillance or control requirements are expected to exceed the minimum assumed under passive monitoring, it may increase the surveillance charge above the minimum provided Legacy Management demonstrates the nexus to radiological health and safety. The RIS specifically identified groundwater monitoring, cell cover or erosion repair, fencing, and vegetation control as potentially qualifying activities.

In a formal letter to the Commission dated February 2014, Legacy Management expressed its concerns regarding the calculation of the surveillance charge and costs associated with the planned transfer of additional Title II sites. In its response, the Commission reaffirmed its position that the activities included in the surveillance charge and recovered from the mill operator must have a nexus to radiological health and safety. The Commission asserted that neither the *Atomic Energy Act of 1954* nor UMTRCA provides the Commission with authority to regulate activities that do not have a nexus to radiological health and safety. The Commission further stated that many of the activities Legacy Management would need to undertake may have a nexus to radiological health and safety; however, it is incumbent upon Legacy Management to ensure that the activities proposed have sufficient rationale and adequate justification in order to be included in the surveillance charge.

In addition, Legacy Management has not successfully engaged the Commission in an effort to finalize the amount of Commission fees that should be attributed to Title II sites. The Commission invoices Legacy Management an annual general license fee for its UMTRCA regulatory activities, which includes Title II sites. At the time UMTRCA and its implementing regulations were established, the Commission estimated the cost of its oversight of long-term monitoring of Title II sites to be 10 percent of inspection costs. However, based on Legacy Management's calculations, this fee has, in some cases, increased to nearly 70 percent of the inspection costs. Legacy Management and the Commission have held several discussions on the fee calculations; however, according to Legacy Management, the amount of the fee specifically attributable to Title II sites has yet to be resolved.

Legacy Management has also become more engaged with the Commission in the transfer of Title II sites and establishment of the surveillance charge. For example, Legacy Management has provided certain unit cost estimates to the Commission and asserts it has obtained a verbal agreement from the Commission on the acceptability of its hourly labor rates and certain other labor costs. However, Commission officials told us that it cannot take action to accept proposed rates and overall cost estimates until Legacy Management formally submits its cost proposals to the Commission.

Legacy Management indicated to us that it has done all that it can to resolve the remaining issues. However, the Commission has indicated that it still has questions about some of Legacy Management's other estimates, such as the number of hours it is estimating, the need for multiple trips and people to the site. Further, the Commission stated they are even more concerned with the large overhead costs the Department incurs through the use of contractors to manage its sites, their ability to justify these costs to the specific licensees and their ability to defend high contract awards and general and administrative fees should the surveillance charge be judicially challenged. According to Commission officials, Legacy Management needs to justify these costs in writing and provide sufficient detail to allow the Commission to make a defensible decision.

Legacy Management told us that it has briefed both the Office of Management and Budget and Congressional budget staff regarding the discrepancy between the surveillance charge amounts assessed by the Commission and the funding requirements for these sites.

Pre-Transfer Costs

Legacy Management has not asked the Commission to include its pre-transfer costs in the calculation of the surveillance charge because it believes the charge is only for post license termination surveillance and maintenance activities. However, the Commission has agreed that Legacy Management needs to conduct pre-transfer activities to facilitate transition. Legacy Management guidance states that these activities should begin approximately 2 years prior to transfer. Despite this agreement, there is currently no provision in the rules for these costs to be part of the surveillance charge calculation and modification of governing legislation will likely be required before such costs can be included. According to the Commission, Legacy Management can include pre-transfer costs in its surveillance charge estimates, as long as it shows that these costs have a nexus to radiological health and safety and are within the scope of the *Atomic Energy Act of 1954* and UMTRCA.

Cost Increases

Unless Legacy Management reduces its costs or convinces the Commission that its costs are reasonable and necessary to control radiological hazards, it will continue to incur costs that are not fully covered by the surveillance charges. While we recognize that excess costs cannot be recovered from the owners of the six closed sites, we estimate that the shortfall in revenues relative to costs at the six sites currently in Legacy Management custody will increase by nearly $10 million by FY 2020. In addition, Legacy Management anticipates spending another $3.1 million by FY 2020 for its pre-transfer work that will not be covered by revenues. Given that Legacy Management is responsible for ensuring protection at Title II sites for a minimum of 200 years, if costs for long-term surveillance and pre-transfer activities exceed revenue at the 21 additional sites in a similar manner, the total cost to the American taxpayers could be significant. However, Legacy Management asserted that its activities at Title II sites remain consistent with its primary mission of protecting human health and the environment.

PATH FORWARD

Given Legacy Management's ongoing negotiations with the Commission to address the deficiencies outlined in our report, we are not making recommendations. However, due to the potential financial burden to the taxpayers, we suggest that the Director for Legacy Management continue working with the Commission regarding the cost of activities to be included in the surveillance charge. Specifically, for each surveillance charge proposal, we suggest that the Director for Legacy Management:

1. Provide the Commission sufficient detail, rationale and justification to clearly demonstrate the nexus to radiological health and safety for all costs and activities, including pre-transfer costs; and

2. Re-evaluate the need to conduct activities and incur costs that do not have a justifiable nexus to radiological health and safety.

Attachments

cc: Deputy Secretary
Acting Under Secretary for Management and Performance
Chief of Staff

OBJECTIVE, SCOPE AND METHODOLOGY

OBJECTIVE

The objective of the audit was to determine whether the Department of Energy (Department) has effectively managed the long-term surveillance and control of *Uranium Mill Tailings Radiation Control Act of 1978* Title II sites (Title II sites).

SCOPE

We conducted the audit from June 2013 to October 2014. We visited the Grand Junction Site Office in Grand Junction, Colorado; Department Headquarters in Washington, DC; and the United States Nuclear Regulatory Commission (Commission) offices in Rockville, Maryland. The scope of the audit covered actual activities and costs at Title II sites during Fiscal Years 2010 through 2012. The audit was conducted under Office of Inspector General project number A13ID040.

METHODOLOGY

To accomplish the audit objective, we:

- Reviewed laws, regulations, policies and procedures applicable to Title II sites;
- Obtained and reviewed the activities performed and their associated costs at Title II sites;
- Interviewed key personnel from the Department's Office of Legacy Management and Office of General Counsel;
- Held discussions with personnel from the Commission; and
- Identified and evaluated actions taken by the Department to increase the surveillance charge.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, the audit included tests of controls and compliance with laws and regulations necessary to satisfy the audit objective. In particular, we assessed compliance with the *GPRA Modernization Act of 2010* and found that the Department had not established performance measures specifically for Title II sites; however, it had established performance measures related to protecting human health and the environment. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. Finally, we conducted an assessment of computer-processed data relevant to our audit objective and found it to be reliable. Management waived an exit conference.

RELATED REPORTS

Office of Inspector General Report

- Audit Report on *Moab Mill Tailings Cleanup Project* (OAS-RA-L-10-03, April 2010). The audit noted that the Moab Mill Tailings Cleanup Project was proceeding as planned and within budget. At the time the project was ahead of schedule and under cost. Our audit testing did, however, reveal several opportunities to improve the management of the project's performance baseline. For some of the work, the Department of Energy (Department) did not sufficiently decrease the project baseline to reflect reduced work scope, which resulted in overstating the contractor's performance. These problems occurred because the Department did not ensure that the project's baselines could be traced to project work scope or that they were properly supported and appropriately managed. As a result, inflating the budgeted cost through erroneous baseline increases overstates the contractor's performance and its eligibility to earn award fee.

Nuclear Regulatory Commission Report

- Audit Report on *NRC's Oversight of Decommissioned Uranium Recovery Sites and Sites Undergoing Decommissioning* (OIG-12-A-06, December 2011). The audit determined that Nuclear Regulatory Commission's (NRC) responsibility is to ensure that decommissioning at both Title I and Title II sites meets the standards for protecting human health and the environment. The Department's responsibility under the *Uranium Mill Tailings Radiation Control Act of 1978* (UMTRCA) is to remediate Title I sites and provide long-term custody for both Title I and Title II sites. NRC's oversight of site decommissioning is largely effective. However, the NRC Office of Inspector General identified two opportunities for more effective oversight by improving compliance with the terms of the site specific Memorandums of Understanding with the Environmental Protection Agency and reducing reliance on the Department's inspection program to alert NRC of problems at decommissioned uranium recovery sites in the Department's custody. The NRC Office of Inspector recommended that they develop and document in inspection guidance a frequency for inspecting uranium recovery sites transferred to the Department for long- term surveillance.

Government Accountability Office Report

- Report on *Uranium Mill Tailings Cleanup Continues, but Future Costs are Uncertain* (GAO/RCED-96-37, December 1995). The audit determined that the NRC's regulations specify that it make a one-time minimum charge to the owners/operators of Title II sites of $250,000 in 1978 dollars to pay for the basic surveillance costs at each site. The Department's estimates of the annual costs of surveillance and maintenance at the sites indicate that NRC's expected minimum charge may be understated. Under UMTRCA, NRC is responsible for ensuring that before the Federal government takes custody of a Title II site, it makes financial arrangements with the owners/operators adequate to cover the costs of long-term custody so that they, not the Federal government, bear these full costs. NRC has not reviewed its estimate of basic surveillance costs since 1980, and the Department is currently estimating that basic monitoring will cost about three times more than NRC estimates. Moreover, while the Department maintains that ongoing, routine maintenance will be needed at all sites, NRC's minimum charge does not provide any amount for ongoing maintenance.

FEEDBACK

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