**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

November 4, 2014

Jesse R. Toepfer, Closure Manager
Homestake Mining Co. of California
P.O. Box 98
Grants, NM 87020

SUBJECT: NRC INSPECTION REPORT 040-08903/14-001

Dear Mr. Toepfer:

This letter refers to the routine announced U.S. Nuclear Regulatory Commission (NRC) inspection conducted from August 18-22, 2014, at your uranium recovery facility near Grants, New Mexico, with continued in-office inspection-related activities through October 17, 2014. The inspection was an examination of activities conducted under your license as they relate to public health and safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The preliminary inspection results were presented to you at the conclusion of the onsite inspection. The final inspection results were presented to you by telephone on October 17, 2014, after NRC review of an audit you conducted at an instrument calibration vendor. Further details about this audit are provided in the attached report. No violations were identified during the inspection, and no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

Should you have any questions concerning this inspection, please contact Dr. Robert Evans, Senior Health Physicist, at 817-200-1234 or the undersigned at 817-200-1191.

Sincerely,

**/RA/**

Ray L. Kellar, P.E., Chief
Repository and Spent Fuel Safety Branch

Docket: 040-08903
License: SUA-1471

Enclosure:
NRC Inspection Report 040-08903/14-001

cc: Michael Ortiz, Chief
New Mexico Environment Department
Radiation Control Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

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|---|---|
| Docket: | 040-08903 |
| License: | SUA-1471 |
| Report: | 040-08903/14-001 |
| Licensee: | Homestake Mining Co. of California |
| Facility: | Former Grants Mill |
| Location: | Grants, Cibola County, New Mexico |
| Dates: | August 18-22, 2014 |
| Inspectors: | Robert J. Evans, Ph.D., P.E., C.H.P., Senior Health Physicist<br>Repository and Spent Fuel Safety Branch<br>Division of Nuclear Materials Safety<br>Region IV<br><br>Jack D. Parrott, Project Manager<br>Reactor Decommissioning Branch<br>Decommissioning and Uranium Recovery Licensing Directorate<br>Division of Waste Management and Environmental Protection<br>Office of Federal and State Materials and Environmental Management Programs |
| Approved by: | Ray L. Kellar, P.E., Chief<br>Repository and Spent Fuel Safety Branch<br>Division of Nuclear Material Safety<br>Region IV |
| Attachment: | Supplemental Inspection Information<br>Photographs taken at the Homestake Mining Facility |

Enclosure

## EXECUTIVE SUMMARY

Homestake Mining Company's Former Uranium Mill
NRC Inspection Report 040-08903/14-001

This U.S. Nuclear Regulatory Commission (NRC) inspection included a review of site status, management organization and controls, radiation protection, operator training, effluent control and environmental protection, and radioactive waste management. The licensee conducted decommissioning safely and in accordance with regulatory and license requirements.

Management Organization and Controls

- The organizational structure and staffing levels were sufficient for the work in progress. Site procedures were established and were being maintained up-to-date. The licensee conducted annual audits of the radiation protection program, and the audits were determined to be thorough reviews of site radiation protection activities. (Section 1)

- The licensee had established a procedure for evaluation of site changes required by License Condition 16. However, the inspectors noted that the licensee had not included the scope of all relevant environmental reviews in the evaluation. This finding did not affect current site activities as the activities previously evaluated had not yet been implemented. The licensee informed the inspectors that it would review and revise these evaluations prior to implementing major construction activities in the field. (Section 1)

Radiation Protection

- The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license conditions. Occupational exposures were small fractions of the regulatory limit. Bioassay sampling and contamination survey results suggest that the licensee was controlling contamination at the site. (Section 2)

- The licensee was controlling instrument calibrations in accordance with license conditions. (Section 2)

Operator Training and Retraining

- Radiation protection training was provided to licensee employees and contractors as required by regulations and the license. (Section 3)

Effluent Control and Environmental Protection

- The licensee had established groundwater and environmental monitoring programs as required by the license. Doses to members of the public were below the regulatory limit. The environmental and groundwater monitoring reports were submitted to the NRC as required by the license. (Section 4)

Inspection of Transportation Activities and Radioactive Waste Management

- The licensee was conducting waste disposal operations in accordance with license requirements. (Section 5)

## Report Details

Summary of Plant Status

The Homestake mill operated from 1958-1990. The conventional uranium mill was decommissioned in 1993-1994. All mill buildings were removed and the wind-blown tailings cleanup was completed in 1995. Two tailings piles remain onsite. The side slopes of the main tailings pile and the mill yard have been covered with a permanent radon barrier and erosion protection layer. An interim cover is being maintained on top of the large tailings pile. Two lined evaporation ponds are situated on top of the small tailings pile. The remainder of the small tailings pile is covered with an interim cover. In addition, two water collection ponds were constructed adjacent to the small tailings pile.

The licensee completed construction of Evaporation Pond EP-3 to enhance its water evaporation capabilities. The construction of the 25-acre pond began in 2010, and the pond was placed into service in 2011. The pond has a planned life of 10 to 12 years at which time it will be decommissioned. Closure will include moving remaining sediments, pond liners, and any other contaminated materials to Evaporation Pond EP-1 for final disposal.

Activities conducted at the site since the previous inspection included operation of a reverse osmosis unit that supports the groundwater restoration program, drilling of additional wells on the large tailings pile, operation of the dewatering system for the large tailings pile, and maintaining the groundwater restoration system. The licensee also continued to dispose of water through enhanced evaporation in the three evaporation ponds on a seasonal basis.

In recent months, the licensee conducted four pilot studies in an effort to expand its capacity for cleaning the groundwater. The first study involved the currently operating reverse osmosis plant. The reverse osmosis system operates at approximately 300 gallons per minute. The licensee plans to replace the existing sand filters with a microfiltration pretreatment system. The licensee expects that it will be able to increase the capacity of the reverse osmosis system by a factor of two.

The licensee also conducted a pilot test using zeolite to remove uranium from the groundwater. The licensee constructed and operated the zeolite water treatment pilot plant on the eastern end of the large tailings pile. The zeolite pilot plant results were positive, and the licensee plans to expand the capacity of the zeolite treatment facility from roughly 300 gallons per minute to 1,200 gallons per minute. The licensee plans to complete the standard operating procedures, as required by License Condition 23, and task training prior to placing the equipment into service.

The licensee also conducted a groundwater pilot study using electric coagulation, but these test results were not promising, and the licensee is not considering this cleanup method at this time. The fourth pilot study involved tripolyphosphate injections. The test results were considered to be promising, and the licensee plans to continue with pilot testing of this cleanup process.

### 1 Management Organization and Controls (88005)

1.1 Inspection Scope

Determine if the licensee had established an organization to administer the technical programs and a program to perform internal reviews, self-assessments, and audits.

1.2 Observations and Findings

The inspectors reviewed site staffing to ensure that the licensee had sufficient staff to conduct decommissioning work. Since the previous inspection, the ranking site manager retired and a new individual was assigned to the position. As discussed below, the licensee also replaced the radiation protection administrator (radiation safety officer). At the time of the inspection, site staffing consisted of eight employees including the closure manager/radiation protection administrator, site supervisor, senior project engineer, three utility operators, senior accountant, and community relations specialist.

Contractors were used to drill wells, develop wellfields, install piping, conduct electrical work, and conduct site maintenance. Consultants were used as necessary to implement portions of the radiation protection, training, environmental monitoring, and annual audit programs. The licensee estimated that it had about 20 contractors on site on any given day. In summary, the licensee had sufficient staff for implementing the requirements of the license.

License Condition 21 specifies the training and experience requirements for the site radiation protection administrator. By letter dated May 20, 2013, the licensee informed the NRC that a new individual had assumed the duties of the radiation protection administrator. The licensee also provided the individual's position qualifications to the NRC. The inspectors reviewed the individual's training for the position of radiation protection administrator. The inspectors confirmed that the new radiation protection administrator had the required education, training, and experience in uranium recovery industry or equivalent.

License Condition 23 requires, in part, that standard operating procedures be established for all operational activities involving radioactive materials. In addition, written procedures must be established for environmental monitoring, bioassay analysis, and instrument calibrations. The inspectors reviewed the licensee's procedure list along with selected procedures and determined that the procedures had been adequately established and implemented.

Regulation 10 CFR 20.1101(c) requires licensees to conduct annual radiation protection program reviews. License Condition 32 provides details about the audit requirements, and License Condition 42 requires the licensee to submit a copy of the audit to the NRC in the annual report. A third-party contractor conducted the annual As Low As Reasonably Achievable (ALARA) audits on behalf of the licensee. The most recent audit was submitted to the NRC by letter dated March 31, 2014. The inspectors concluded that the annual ALARA audit was a comprehensive, independent review of the licensee's radiation protection program.

License Condition 16 allows the licensee to use a risk-informed, performance-based approach for determining if proposed changes to any licensed site activities, or any new activities, could result in an environmental impact greater than that evaluated in the current licensing basis for the site. Related to the implementation of this license condition, the licensee recently established a procedure entitled, "Procedures for Evaluating Changes, Tests, and Experiments at the Grants Project," to provide its staff with instructions for evaluating these changes. This procedure describes the Safety and Environmental Review Panel (SERP) process commonly used by uranium recovery licensees to review changes to their facilities.

The inspectors found that the licensee had adequately documented a method to implement the SERP process as generally used at uranium recovery facilities. The NRC inspectors determined that the licensee had established an organization to review proposed changes to site activities for safety or environmental impacts greater than those identified in the licensing basis for the site. The inspectors reviewed three evaluations that the licensee had completed using the new procedure. These reviews were implemented for a proposed change to the existing reverse osmosis system to increase its pre-treatment filtration capacity by installation of a microfiltration system, a proposed increase of overall reverse osmosis system capacity by adding a parallel train to the reverse osmosis system, and the proposed addition of a zeolite water treatment system. These new or upgraded systems are intended to treat water contaminated with uranium to the remediation level established in the license.

The inspectors found that the licensee's evaluations did not fully capture the requirements of the procedure. In particular, the licensee didn't evaluate the proposed changes against all of the relevant safety and environmental evaluations previously completed for the current licensing basis. As a result of this NRC observation, the licensee informed the inspectors that it planned to review and revise its evaluations as necessary for the three proposed water treatment system changes prior to implementation of major construction activities to verify that the impact of implementing these activities will not be outside the current licensing basis of the site. The inspectors concluded that this finding was of minor significance because the licensee had failed to fully implement a procedural review of a proposed change that had not been implemented in the field. Although this issue should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with section 2 of the Enforcement Policy. The NRC inspectors will continue to evaluate the licensee's implementation of License Condition 16 during the next inspection.

### 1.3 Conclusions

The organizational structure and staffing levels were sufficient for the work in progress. Site procedures were established and were being maintained up-to-date. The licensee conducted annual audits of the radiation protection program, and the audits were determined to be thorough reviews of site radiation protection activities.

The licensee had established a procedure for evaluation of site changes required by License Condition 16. However, the inspectors noted that the licensee had not included the scope of all relevant environmental reviews in the evaluation. This finding did not affect current site activities as the activities previously evaluated had not yet been implemented. The licensee informed the inspectors that it would review and revise these evaluations prior to implementing major construction activities in the field.

## 2 Radiation Protection (83822)

### 2.1 Inspection Scope

Determine if the licensee's radiation protection program was in compliance with license and 10 CFR Part 20 requirements.

2.2 Observations and Findings

The licensee's Manual of Standard Practices provides instructions for implementing the various aspects of the radiation protection program. At the time of the inspection, the radiation protection program consisted of occupational dose assessments, bioassay sampling, contamination surveys, radiation work permits, and instrument calibrations. Based on the limited work in progress, the licensee suspended the respiratory protection and breathing zone air sampling programs.

External occupational exposures were monitored using optically-stimulated dosimeters that were exchanged quarterly. The inspectors reviewed the licensee's records for 2012-2013. During 2012, the licensee monitored 73 employees and contractors with no individual receiving an external dose. During 2013, the licensee monitored 65 employees and contractors with the highest external exposure recorded as 4 millirems for the year. Based on the types of work being conducted at the site, and since the tailings material remained covered, the licensee chose not to conduct internal exposure assessments using air monitoring.

The licensee implemented an extensive bioassay program that consisted of collection of urine samples for analysis of uranium content. During 2012, the licensee collected 127 employee samples. In August 2012, one sample result exceeded the action level with a concentration of 62 micrograms of uranium per liter of uranium. This individual was sampled two weeks later, and the sample result was less than the lowest action level of 5 micrograms per liter. The licensee attributed this sample result to a contaminated urine sample. The type of work being conducted by the individual did not involve radioactive material that could have resulted in an internal contamination. The licensee reported this action level exceedance to the NRC in the annual report for 2012. In 2013, the licensee collected 123 samples with no sample exceeding the lowest action level.

In summary, the licensee's monitoring program indicates that occupational exposures were small fractions of the regulatory limits. The highest external exposure, 4 millirems per year, was well below the regulatory limit of 5,000 millirems per year. The licensee chose to suspend internal dose monitoring as allowed by 10 CFR 20.1502 requirements. The licensee's bioassay results confirm that site workers' intake of uranium was effectively controlled by the licensee.

The contamination control requirements are provided in License Conditions 14 and 32. The licensee conducted contamination surveys of clean areas, personnel, and equipment releases. The inspectors reviewed the licensee's survey results for 2012-2014. The licensee surveyed the offices and lunch rooms on an annual basis. No removable contamination was identified during the 2012 and 2013 surveys. The licensee also conducted equipment release and personnel surveys, primarily for drillers who worked at the tailings piles. These surveys were conducted under guidance provided in radiation work permits. Based on a review of selected records, the inspectors concluded that no individual or item was released with contamination above the release limits. In summary, the licensee implemented its contamination control program in accordance with license requirements. The results of the licensee's survey program indicated that the site does not have widespread contamination problems.

License Condition 24 specifies the requirements for radiation work permits. All work involving tailings material, such as drilling into the large tailings pile, is required to be conducted under a radiation work permit. The inspectors reviewed the licensee's radiation work permits for 2012-2014. The radiation work permits included safety instructions, survey requirements, and work precautions. The work that required radiation work permits included transfer of sediments from one pond to another, repair of a pond liner, repair of erosion on the large tailings pile, and probe insertions into the tailings material. In summary, the radiation work permits provided sufficient guidance for protection of personnel from potential exposures to radioactive tailings material.

License Conditions 22, 23, and 32 provide instructions for conducting and recording instrument calibrations. The inspectors reviewed the licensee's calibration records and determined that survey instruments and high volume air samplers were being routinely calibrated. The inspectors reviewed survey meters in service during the inspection, and the survey meters appeared operable with up-to-date calibrations.

In response to questions raised by the inspectors, the licensee conducted an audit of one of its instrument calibration vendors after the conclusion of the onsite inspection. This vendor was performing meter calibrations using exempt quantity sources. The licensee's audit confirmed that the vendor was using procedures based on guidance provided in industry standard ANSI N323A-1997, "American National Standard Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments." The licensee concluded that the vendor's calibration program specifically met the requirement of License Condition 32 which referenced industry standard ANSI N323. The inspectors reviewed the audit and concluded that the licensee had conducted a comprehensive review of the vendor's calibration program.

The NRC inspectors conducted radiological surveys using a Ludlum Model 19 microRoentgen survey meter (NRC No. 015546, calibration due date of 07/22/15, calibrated to radium-226). The inspectors conducted measurements at various locations on the top of the large tailings pile. With a background of 8-10 microRoentgens per hour, the ambient gamma radiation levels on top of the large tailings pile was at or near background levels, indicating that the interim cover was sufficient. The inspectors also surveyed the area of the large tailings pile cover where previous erosion damage was observed and repaired (see discussion below). This area also exhibited ambient gamma radiation levels essentially at background levels. Background levels were also observed in the water treatment building where the reverse osmosis system was located. The evaporation pond areas measured around 20 microRoentgens per hour. These areas were restricted areas and access to the areas was controlled with fences and gates.

## 2.3 Conclusions

The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license conditions. Occupational exposures were small fractions of the regulatory limit. Bioassay sampling and contamination survey results indicate that the licensee was controlling contamination at the site. The licensee was controlling instrument calibrations in accordance with license conditions.

## 3 Training (88010)

3.1 Inspection Scope

Determine whether the licensee was complying with regulations and license requirements related to the training of employees.

3.2 Observations and Findings

Site worker training requirements are provided in regulation 10 CFR 19.12 as well as License Conditions 22, 23, and 32. In addition, the licensee's Manual of Standard Practices states that proper training will be provided to all personnel who will be exposed to occupational radiation. The licensee's records indicate that it provided new employee training to 105 contractors and refresher training to site employees annually in 2012-2013. The licensee's records indicated that refresher training was last conducted in January 2014.

3.3 Conclusions

Radiation protection training was provided to licensee employees and contractors as required by regulations and the license.

## 4 Effluent Control and Environmental Protection (88045)

4.1 Inspection Scope

Determine if the environmental and effluent monitoring programs were effective to monitor the impacts of site activities on the local environment.

4.2 Observations and Findings

a. Environmental Monitoring

License Conditions 10, 15, and 23 specify the environmental monitoring program requirements. Details about the program are provided in the licensee's Manual of Standard Practices. The program consists of air particulate, radon gas, and direct radiation sampling. The licensee received NRC approval to discontinue soil and vegetation sampling in 1996. The inspectors compared the program in operation at the time of the inspection to the requirements specified in the license. The inspectors confirmed that the licensee was implementing the environmental monitoring program as required by the license.

The licensee conducted air sampling at seven locations including nearest residences and background locations. The licensee also measured ambient gamma radiation levels at eight locations, and the licensee measured radon gas concentrations at 10 locations including site offices. The licensee conducted calculations of potential dose to a member of the public using this sampling information. For calendar years 2011, 2012 and 2013, the highest potential total effective does equivalent for a member of the public was calculated to be 71, 72 and 83 millirems, respectively. The licensee's calculated doses for the last three years remained below the annual dose limit of 100 millirems as specified in regulation 10 CFR 20.1301(a).

By letter dated September 23, 2013, the licensee has requested a change in the background location for measuring radon. The NRC requested additional information, and the licensee responded with additional information by letter dated July 14, 2014. At the end of the onsite inspection, the NRC had not approved the licensee's proposed change in locations for background radon measurements.

License Condition 36.E states, in part, that the licensee is to verify compliance with the radon flux standard of 20 picocuries per square meter-second by performing an annual radon flux survey on the two tailings piles. The licensee reported these survey results in annual reports to the NRC. The licensee is required to sample radon at 100 points. The licensee collected 64 sample points from the large tailings pile and 36 sample points from the small tailings pile. The results for 2012-2013 indicate that the average sample results for the two tailings piles were below the licensed limit.

License Condition 42 specifies that a land use survey be conducted and presented in the annual report to the NRC. The inspectors confirmed that the licensee conducted the land use survey and reported the results to the NRC in 2012 and 2013.

b. Groundwater Compliance Monitoring Program Review

License Condition 35 specifies that the licensee shall implement a groundwater compliance monitoring program to assess the performance of the groundwater restoration program. The inspectors reviewed the status of the groundwater compliance monitoring program during the inspection. In summary, the inspectors concluded that the licensee was complying with the current requirements specified in the license regarding the reporting of groundwater monitoring and restoration activities. The NRC staff reviewed these routine reports. The NRC staff concluded that the groundwater restoration program continues to make progress and no negative trends exist based on the licensee's groundwater monitoring results. During the inspection, the licensee noted that an updated groundwater corrective action plan and decommissioning plan have been submitted to the NRC for review and approval.

The inspectors reviewed the licensee's plans to increase the flow rate and capacity of its groundwater remediation systems. The inspectors found that the licensee was ready to begin retrofitting the reverse osmosis system with microfiltration to increase the throughput of the system and to begin construction of the operational scale zeolite water treatment system. Both changes will increase the volume of water that can be treated for uranium contamination. The implementation of these system changes will allow the licensee to depend less on extracting water from the regional San Andres aquifer for its large tailing pile flushing and alluvium aquifer injection programs.

The inspectors also attempted to determine if spills, leaks, or excursions that may impact the environment are properly reported and determine if new activities not previously reviewed are being evaluated for impacts on cultural resources. With regards to event reporting, the inspectors evaluated the licensee's implementation of License Condition 41. This license condition requires the licensee to report any spills, leaks, or excursions of source, 11e.(2) byproduct material, and process chemicals that may have an impact on the environment, or any other incidents/events, to State or Federal Agencies including the NRC. The inspectors reviewed the licensee's implementing procedure entitled "HMC Water Spill Reporting and Response Procedure (EM-4)," Revision 1 dated March 2007. The inspectors found that the procedure did not address

the requirement of reporting to the NRC, only a requirement to report to the State of New Mexico under their State discharge permits DP-200 and DP-725. The licensee's manual of Standard Operation Procedures and Policy Guidance Documents requires the radiation safety officer to ensure compliance with regulatory and license requirements under the section entitled "Authority to Implement." The licensee acknowledged this deficiency and stated that it would update the procedure to ensure compliance with the requirements of License Condition 41. The NRC inspectors did not identify any example where the licensee did not report an event to the NRC because of this deficient procedure. The inspectors will review the revised procedure during a future inspection.

The inspectors also evaluated the implementation of License Condition 43 which requires in part that "[b]efore engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory." The inspectors reviewed the document entitled, "Cultural Resource Survey for Proposed Recovery and Injections Wells at Homestake Mine, Cibola County, New Mexico," dated February 2014. The inspectors determined that the report demonstrated that License Condition 43 had been implemented.

The licensee could not identify a specific procedural requirement to do the types of cultural resource surveys required by License Condition 43 before engaging in any unassessed developmental activity. The inspectors discussed with licensee staff the advantages of the licensee developing specific procedural requirements to address this license condition in order to ensure the same outcome each time it engaged in unassessed developmental activity. The inspectors also discussed the licensee's need to evaluate all of its NRC requirements to ensure that each requirement is addressed in the licensee's policies and procedures such that consistent implementation is assured.

### 4.3 Conclusions

The licensee had established groundwater and environmental monitoring programs as required by the license. Doses to members of the public were below the regulatory limit. The environmental and groundwater monitoring reports were submitted to the NRC as required by the license. The licensee did not always have specific procedures for addressing license condition requirements. While the inspectors found no examples of non-compliance with its license conditions, the licensee agreed to review its policy and procedures to ensure compliance with NRC requirements.

## 5 Inspection of Transportation Activities and Radioactive Waste, Processing, Handling, Storage and Transporation (86740 and 88035)

### 5.1 Inspection Scope

Determine if transportation and waste disposal activities were being conducted in compliance with license requirements.

### 5.2 Observations and Findings

License Condition 12 specifies that the licensee shall conduct periodic embankment inspections and document these inspections in the annual report. The most recent embankment inspection was conducted in November 2013 and documented in the annual report dated March 31, 2014. The embankment inspector concluded that the

tailings impoundments and three evaporation ponds were in generally good condition and were being maintained within the operating limits of the NRC license and respective facility designs.

The embankment inspector recommended repair of slumping subgrade fill on the south in-slope of Evaporation Pond EP-1 to protect the pond liner from future damage. The licensee continued to monitor the embankment of Pond EP-1 on a daily basis and planned to repair the slumping subgrade fill at a later date.

In January 2014, the embankment inspector visually reviewed a washout that occurred in late December 2013 near the top of the north out-slope of the large tailings pile. Apparently, rainfall resulted in a washout that was reported as 30 feet long, 15 feet wide, and 5 feet deep at its deepest point. The washout was attributed to runoff from a broken drain line, releasing water directly onto the rock cover near the top of the out-slope. The licensee subsequently replaced the damaged piping and repaired the washed out area.

The licensee and NRC staff discussed this incident by telephone in June 2014. The NRC questioned whether the washout resulted in exposed tailings or whether the event was reportable to the NRC. The licensee responded that no tailings material was exposed as a result of the washout and the event was not reportable. By letter dated July 10, 2014, the licensee formally informed the NRC that tailings material was not observed and the event was not reportable in accordance with License Condition 41 requirements.

During the onsite inspection, the NRC inspectors visually observed the formerly washed-out area. The area was noted to have been repaired. The inspectors measured the ambient gamma radiation levels in the area, and the measurements were equivalent to background for the area (approximately 15-20 microRoentgens per hour). The inspectors confirmed that residual tailings material was not present at the time of the inspection, in agreement with the licensee's assessment that was reported to the NRC in its letter dated July 10, 2014. In summary, the inspectors agreed with the licensee's assessment that the event was not reportable in accordance with the license.

License Condition 26 specifies, in part, that the licensee shall keep records of transfers of all mill tailings. The licensee stated that, since the previous inspection, there were no outgoing shipments of tailings material and no incoming shipments of waste material for disposal. Further, the licensee does not expect to ship any mill tailings or receive material for disposal in the future.

### 5.3 Conclusions

The licensee was conducting waste disposal operations in accordance with license requirements.

## 6 Exit Meeting Summary

The inspectors presented the inspection results to the licensee's representatives at the conclusion of the onsite inspection on August 22, 2014. The final inspection findings were presented to the licensee by telephone on October 17, 2014. During the inspection, the licensee did not identify any information reviewed by the inspectors as proprietary.

## SUPPLEMENTAL INSPECTION INFORMATION

### Partial List of Persons Contacted

Licensee

J. Toepfer, Closure Manager
D. Kump, Senior Project Engineer
A. Venable, Site Supervisor

### Items Opened, Closed, and Discussed

Open

None

Closed

None

Discussed

None

### Inspection Procedures Used

| | |
|---|---|
| IP 83822 | Radiation Protection |
| IP 86740 | Inspection of Transportation Activities |
| IP 88005 | Management Organization and Control |
| IP 88010 | Training |
| IP 88035 | Radioactive Waste Processing, Handling, Storage and Transportation |
| IP 88045 | Effluent Control and Environmental Protection |

### List of Acronyms Used

| | |
|---|---|
| ALARA | As Low As is Reasonably Achievable |
| NRC | U.S. Nuclear Regulatory Commission |
| SERP | Safety and Environmental Review Panel |
| URI | Unresolved Item |

Figure 1: Top of Large Tailings Pile with zeolite-based pilot water treatment system in background

Figure 2: One of three zeolite pilot test system treatment cells

Figure 3: Water treatment facility in service with reverse osmosis equipment

Figure 4: Evaporation pond sprayers in service