



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

April 20, 2021

EA-16-114  
EA-20-097

Brad Bingham  
Closure Manager  
Homestake Mining Company of California  
P.O. Box 98, Hwy 605  
Grants, NM 87020

SUBJECT: NRC INSPECTION REPORT 040-08903/2021-001 AND NOTICE OF VIOLATION

Dear Mr. Bingham:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) inspection conducted from February 16-19, 2021, of the Grants Reclamation Project in Cibola County, New Mexico. This inspection was an examination of activities conducted under your license as they relate to 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, representative records, and interviews with personnel. The inspection was conducted remotely, with records being reviewed offsite and interviews with site staff being conducted by telephone.

The preliminary inspection findings were presented to you and members of your staff at the conclusion of the inspection on February 19, 2021. The final inspection results were presented to your staff on April 7, 2021, after the NRC had completed its in-office review of documents related to the inspection findings. The enclosed report presents the results of the inspection.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation involves the discharge of liquid effluents containing byproduct material to the ground surface in a manner not approved by the NRC. This violation was evaluated in accordance with the NRC Enforcement Policy included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because it was identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosures, and your response will be made available electronically for

public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC website 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 Austin Roberts at 817-200-1209 or the undersigned at 817-200-1156.

Sincerely,

A handwritten signature in black ink, appearing to read "Heather J. Gepford". The signature is fluid and cursive, with a large loop at the end.

Heather J. Gepford, PhD, CHP, Chief  
Materials Licensing & Decommissioning Branch  
Division of Nuclear Materials Safety

Docket No.: 040-08903  
License No.: SUA-1471

Enclosures:

1. Notice of Violation
2. NRC Inspection Report 040-08903/2021-001

cc w/enclosures: See next page

NRC INSPECTION REPORT 040-08903/2021-001 AND NOTICE OF VIOLATION –  
DATED APRIL 20, 2021

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ADAMS ACCESSION NUMBER: ML21096A200

<input checked="" type="checkbox"/> SUNSI Review By: ACR	ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Sensitive <input checked="" type="checkbox"/> Non-Sensitive	<input type="checkbox"/> Non-Publicly Available <input checked="" type="checkbox"/> Publicly Available	Keyword NRC-002
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NAME	ARoberts	GAlexander	RLinton	HJGepford
SIGNATURE	ACR	GA	RCL	HJG
DATE	4/15/21	04/14/21	04/15/21	04/20/21

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## NOTICE OF VIOLATION

Homestake Mining Co. of California  
Grants, New Mexico

Docket No. 040-08903  
License No. SUA-1471

During an NRC inspection conducted on February 16-19, 2021, one violation of NRC requirements was identified. In accordance with the NRC's Enforcement Policy, the violation is listed below:

10 CFR 40.41(c) requires, in part, that each person licensed by the Commission pursuant to the regulations in this part shall confine his possession and use of source or byproduct material to the locations and purposes authorized in the license.

Materials License SUA-1471, Amendment 56, License Condition 23, states, in part, that standard procedures shall be established for all activities involving radioactive materials that are handled, processed, or stored, that procedures shall enumerate pertinent radiation safety practices to be followed, and written procedures shall be established for environmental monitoring.

The licensee's Standard Operating Procedure 17, "Groundwater Monitoring," Revision 5, establishes the procedure for well sampling, while Step 9 of the procedure enumerates pertinent radiation safety practices to be followed. Step 9 of the procedure states, in part, that all well purging water generated during groundwater sampling must be contained and disposed of onsite in a lined holding pond or evaporation pond.

Contrary to the above, from 2018 to 2020, the licensee failed to ensure all well purging water generated during groundwater sampling was contained and disposed of onsite in a lined holding pond or evaporation pond. Specifically, the licensee released 11.e(2) byproduct material in the form of purge water from impacted wells directly to the ground surface, including outside the licensed site boundary, effectively resulting in a disposal of licensed material not authorized by the license or NRC regulations.

This is a Severity Level IV violation (Section 6.3.d.3).

Pursuant to the provisions of 10 CFR 2.201, Homestake Mining Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region IV, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued requiring information as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Enclosure 1

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management 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, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 20<sup>th</sup> day of April 2021

**U.S. NUCLEAR REGULATORY COMMISSION  
Region IV**

Docket No.: 040-08903

License No.: SUA-1471

Report No.: 040-08903/2021-001

Licensee: Homestake Mining Company of California

Facility: Grants Reclamation Project

Location: Cibola County, New Mexico

Dates: February 16-19, 2021

Inspectors: Austin Roberts, Health Physicist  
Materials Licensing and Decommissioning Branch  
Division of Nuclear Materials Safety, Region IV

George Alexander, Risk Analyst  
Risk and Technical Analysis Branch  
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Approved by: Heather J. Gepford, PhD, CHP, Chief  
Materials Licensing and Decommissioning Branch  
Division of Nuclear Materials Safety, Region IV

Attachment: Supplemental Inspection Information

## **EXECUTIVE SUMMARY**

Homestake Mining Company of California  
NRC Inspection Report 040-08903/2021-001

This inspection was a routine, announced U.S. Nuclear Regulatory Commission (NRC) remote inspection of decommissioning activities being conducted at the Grants Reclamation Project, Homestake Mining Company's former mill in Cibola County, New Mexico. In summary, the inspectors concluded that Homestake Mining Company of California (the licensee) was conducting decommissioning activities in accordance with license and regulatory requirements.

### Management Organization and Controls

- The licensee had sufficient staff for the work in progress, although the availability of contractor support had been impacted by the COVID-19 virus. The licensee had not conducted a Safety and Environmental Review Panel (SERP) since the previous inspection. A violation was identified for the discharge of purge water containing byproduct material collected during groundwater sampling directly to the ground. (Section 1.2)

### Radiation Protection

- The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and of the license. Occupational exposures were small fractions of the regulatory limits. Bioassay sampling and air sampling were performed as required by the radiation work permits. Radiological survey results indicated that the licensee was controlling contamination. The licensee conducted instrument calibration in accordance with the license and site procedures. The licensee relied on designated, specially-trained individuals to conduct daily walkthroughs, in addition to the radiation safety technician and radiation safety officer. (Section 2.2)

### Radioactive Waste Processing, Handling, Storage and Transportation

- The NRC reviewed the performance of the evaporation and collection ponds. Although Evaporation Pond 1 (EP-1) was drawn down in anticipation of relining, the licensee has been able to run the evaporators. Accordingly, the overall evaporative capacity of the Grants Reclamation Project has only been reduced by approximately 5 percent. (Section 3.2)

### Effluent Control and Environmental Protection

- The licensee appears to have implemented its environmental and effluent monitoring program in accordance with license requirements. The licensee implemented a groundwater monitoring and corrective action program as required by the license. However, groundwater treatment rates have been limited due to the delays in relining EP-1. The licensee verbally committed to proceeding with groundwater treatment as expeditiously as is reasonably achievable, per License Condition 36.B. A violation concerning the licensee's failure to submit a complete groundwater corrective action program (GCAP) by the required due date was closed. (Section 4.2)

### Emergency Preparedness

- The licensee established and implemented emergency response procedures, including spill response, firefighting, and evacuation. The licensee also implemented semi-annual fire drills as required. (Section 5.2)

### Follow-up of Confirmatory Action Letters or Orders

- The inspectors reviewed the status of Confirmatory Order EA-16-114. The licensee's response to Condition 10 was evaluated and determined to satisfy the condition. Confirmatory Order Conditions 1, 3, 4, 9, 10, 11, 12, and 13 have been evaluated and are determined to be satisfied. Confirmatory Order Conditions 2, 5, 6, 7, 8, 14, 15, and 16 remain open with pending actions and will continue to be evaluated by the NRC. (Section 6.2)



## Report Details

### Site Status

The Homestake facility was a conventional uranium mill that operated from 1958-1990. Tailings generated from milling operations were placed in two impoundments—the large tailings pile (LTP) and the small tailings pile (STP). The mill was decommissioned in 1993-1994, and the cleanup of wind-blown tailings was completed in 1995.

The side slopes of the LTP have been covered with the final radon barrier and erosion protection layer. An interim cover is being maintained on top of the LTP. Two lined evaporation ponds are situated on top of the STP. The remainder of the STP is covered with an interim cover. In addition, two water collection ponds were constructed adjacent to the STP. A third evaporation pond was constructed in 2011 to the north of the LTP.

At the time of the inspection, the licensee continued to implement its GCAP. The licensee operated injection and recovery wells as well as the reverse osmosis (RO) system and zeolite system. However, both the RO and zeolite systems were operating significantly below capacity, as was the case throughout 2020. Evaporation Pond 1 (EP-1) remains at a lower level; the reduced volume of the pond has only slightly reduced the overall evaporative capacity for the Grants Reclamation Project (GRP). The licensee continued to dispose of wastewater into all three evaporation ponds.

## **1 Management Organization and Controls (Inspection Procedure 88005)**

### **1.1 Inspection Scope**

The inspectors reviewed the licensee's oversight and control of licensed activities.

### **1.2 Observations and Findings**

#### **a. Site Staffing**

The inspectors reviewed site staffing to ensure that the licensee had sufficient staff to implement license requirements. At the time of the inspection, site staffing consisted of 11 employees, including the closure manager, community relations specialist, senior shift supervisor, RO plant operator, health and safety superintendent, project engineer, hydrologist, administrative assistant, environmental specialist, radiation safety technician (RST), and one environmental technician.

There were two open environmental technician positions at the time of the inspection. Site management had an offer out to fill one of the open positions, and interviews were scheduled for the second open position. Contractors were used as needed for site support and projects, as well as to fill the radiation safety officer (RSO) and assistant radiation safety officer positions. Contractors were also used for construction, drilling, electrical, and routine site work. The inspectors determined that the licensee had sufficient management and support staff for the work in progress.

The inspectors discussed with licensee staff the impacts of the COVID-19 virus on site operations. As a result of the virus, some work was delayed or conducted at a reduced rate. Travel restrictions and quarantine requirements continued to present a difficulty in obtaining contractor support for projects, including the re-lining of EP-1. Other impacts

included implementation of new work controls, social distancing rules, and use of remote work as appropriate.

b. Review of Licensee's Change Process

License Condition 16 of the NRC Materials License SUA-1471, Amendment 56, dated June 24, 2020, states, in part, that before engaging in any activity not previously assessed by the NRC, the licensee shall prepare and record an environmental evaluation of such activity. The licensee's program to evaluate changes was described in Standard Operating Procedure (SOP) 10, "Procedure for Conducting a Safety and Environmental Review Panel," Revision 6. Since the previous inspection, conducted July 22-30, 2020, (ADAMS Accession No. ML20241A110), the licensee had not conducted any SERP evaluations.

Based on the licensee's self-assessment (ADAMS Accession Package ML18248A265) as required by the Confirmatory Order EA-16-114, and the NRC audit of the self-assessment (ADAMS Accession No. ML19120A145), both the licensee and the NRC staff identified that the NRC Materials License SUA-1471 does not contain a condition that provides a facility change mechanism using the SERP process. The licensee has submitted a license amendment request (ADAMS Accession No. ML20225A280) to add a performance-based license condition. The licensee responded to NRC requests for additional information by letter dated January 11, 2021 (ADAMS Accession No. ML21015A588). The license amendment request is currently under NRC review.

c. Review of Operational Procedures

License Condition 23 states, in part, that procedures shall be established for all activities involving radioactive materials that are handled, processed, or stored. As this inspection was a remote inspection, the inspectors did not review all recently-revised operating procedures for completeness. This program area will be reviewed during a future onsite inspection, to allow the inspectors to compare the operating procedures to the as-built features of the facility.

The inspectors reviewed Standard Operating Procedure SOP-17, "Groundwater Monitoring", Revision 5. This SOP directs the purging of a quantity of water from each well prior to drawing a sample. During an interview, the licensee acknowledged that SOP-17, as written, contained contradictory guidance as to whether the purged well water was to be disposed of onsite in a holding pond or onto the ground. The licensee acknowledged that in practice, purge water had generally been discharged onto the ground. At the time of the inspection, the licensee was in the process of revising SOP-17; the new revision, which was in draft status, will clarify that purged well water is to be disposed of in a lined holding pond or evaporation pond.

Based on the above, the NRC staff concluded that the licensee routinely discharged well purge water containing byproduct material directly to the ground surface as part of its groundwater sampling procedure. This effectively resulted in a disposal of licensed material not authorized by the license or NRC regulations. Specifically, in the course of purging water from impacted wells prior to taking samples, the licensee discharged water containing byproduct material inappropriately, including areas located outside of the licensed site boundary.

Title 10 CFR 40.41(c) requires the licensee to confine its possession and use of source or byproduct material to the locations and purposes authorized in the license. License Condition 23 of Materials License SUA-1471, Amendment 56, requires that standard procedures shall be established for all activities involving radioactive materials that are handled, processed, or stored, and that procedures shall enumerate pertinent radiation safety practices to be followed. The licensee's Standard Operating Procedure (SOP) 17, "Groundwater Monitoring," Revision 5, Step 9, stated that all well purging water generated during groundwater sampling must be contained and disposed of onsite in a lined holding pond or evaporation pond.

The NRC staff concluded that the discharge of purging water from impacted wells directly to the ground surface represented a use of 11.e(2) byproduct materials not authorized by the license and was contrary to the pertinent radiation safety practices enumerated in SOP-17. Therefore, this practice was determined to be a violation (VIO 040-08903/2021-01-001).

d. Audits, Inspections, and Reviews

An annual radiation protection and ALARA audit is required by 10 CFR 20.1101(c) and License Condition 32. In addition, License Condition 42 requires the licensee to submit the ALARA audit to the NRC as part of the annual report. The most recent ALARA audit was conducted in December 2020 and will be submitted to the NRC as an appendix to the licensee's Annual Monitoring Report and Performance Review, due on March 31, 2021. A draft of the annual ALARA audit was not available for review during this inspection. The inspectors reviewed the monthly ALARA reports since the July 2020 inspection. The inspectors concluded the reports were appropriately detailed and met license and regulatory requirements.

1.3 Conclusions

The licensee had sufficient staff for the work in progress, although the availability of contractor support had been impacted by the COVID-19 virus. The licensee had not conducted a SERP since the previous inspection. A violation was identified for the discharge of purge water containing byproduct material collected during groundwater sampling directly to the ground.

**2 Radiation Protection (Inspection Procedure 83822)**

2.1 Inspection Scope

The inspectors reviewed the licensee's radiation protection program, including instrument calibrations, to verify compliance with 10 CFR Part 20 and license requirements.

2.2 Observations and Findings

The licensee's Manual of Standard Practices provides the instructions for implementing the various aspects of the radiation protection program. At the time of the inspection, the radiation protection program consisted of external occupational dose monitoring, bioassays, contamination surveys, radiation work permits (RWPs), and instrument calibrations.

The NRC inspectors reviewed the status of the following RWP that were issued prior to the previous inspection and remained open:

RWP-6-2020	Evaporation Pond 1 Clean Fill Movement
RWP-7-2020	Cleaning of 1,200 gallon per minute Zeolite System

The NRC inspectors reviewed the following RWPs issued since the previous inspection:

RWP-8-2020	Inspection of Clarifier #2
RWP-9-2020	Removal of columns from shed atop LTP
RWP-10-2020	Well abandonment atop LTP
RWP-11-2020	Draining and removal of high-density polyethylene pipes from atop LTP

The inspectors reviewed the RWP documentation, controls, and personnel protective equipment requirements and concluded that the requirements were appropriate for the scope of work described. Required training was documented and surveys (personnel and equipment/materials) were conducted as specified in the RWP. Air sampling was conducted and documented for any RWP that required air sampling.

The inspectors reviewed the licensee's personnel monitoring program. During calendar year 2020, employees, contractors, and vendors were monitored for external doses using optically stimulated luminescent dosimeters. The maximum recorded dose for calendar year 2020 was 8 millirem, received by the senior shift supervisor. Measured doses to contractors were routinely reported as below the minimal reporting capabilities of the dosimeter. The licensee periodically, based on the RWP requirements, collected bioassay samples from employees and contractors. Bioassay records were reviewed, and the inspectors determined that none of the bioassay results were above the action level.

The licensee maintained radiological survey instruments to implement its radiation protection program. This equipment was used to measure exposure rates, surface contamination, and removable contamination levels. The inspectors reviewed the calibration records and determined the instruments were calibrated at the appropriate interval. Radiological survey records were reviewed. All surveys were conducted with calibrated instruments, and each instrument used was appropriate for the type of survey being performed. No issues or concerns associated with instrument calibrations or surveys were identified by the NRC inspectors.

During an interview with the inspectors, the RSO and assistant RSO provided an update on the ongoing effort to train staff designated by the RSO to perform daily walkdowns. Four individuals had met the qualification requirements, which included completion of three practical training exercises. These qualified designees performed daily walkdowns on weekends and at other times when the RST was not available.

## 2.3 Conclusions

The licensee implemented a radiation protection program that met the requirements of 10 CFR Part 20 and the license. Occupational exposures were small fractions of the regulatory limits. Bioassay sampling and air sampling were performed as required by the RWPs. Radiological survey results indicated that the licensee was controlling contamination. The licensee conducted instrument calibration in accordance with the

license and site procedures. The licensee relied on designated, specially-trained individuals to conduct daily walkthroughs, in addition to the RST and RSO.

### 3 **Radioactive Waste Processing, Handling, Storage and Transportation (Inspection Procedure 88035)**

#### 3.1 Inspection Scope

The inspectors interviewed licensee representatives and reviewed applicable records to determine if the licensee had established and maintained an effective program for managing radioactive wastes.

#### 3.2 Observations and Findings

##### a. Site Inspections

As this inspection was a remote inspection, the inspectors did not conduct site tours or perform independent radiological measurements. These activities will be conducted during a future, onsite inspection.

##### b. Status of Ponds

The licensee had planned to reline EP-1 because of the age of the single-liner pond. However, by letter dated June 2, 2020 (ADAMS Accession No. ML20154K730), the licensee notified the NRC that they were deferring the relining due to the COVID-19 pandemic. The licensee closure manager has more recently discussed with NRC staff that they are currently reevaluating relining EP-1 based on a potential change in site strategy.

The level of pond EP-1 was drawn down in anticipation of relining, which reduced groundwater treatment capacity. However, the water level in EP-1 was subsequently increased such that the salts are covered, and the use of evaporators has resumed. The licensee stated the drawing down of EP-1 reduced the surface area of the water by approximately 12 percent; however, it only reduced the total evaporative capacity of the GRP by approximately 5 percent. This is discussed further in Section 4 of this report.

The licensee discussed that during the relining of the West Collection Pond in 2020, the liner on the south berm of EP-1 was torn during the placement of sludge from the West Collection Pond into EP-1. The licensee used clay from the borrow pit to patch the liner. Once the temperature increases this spring, the licensee plans on inspecting and repairing, as necessary, any other tears identified.

Through interviews with the licensee, the inspectors determined that there had been no observation of leakage detected at wells located adjacent to the evaporation ponds. The licensee also discussed the sumps with the inspectors. As discussed during previous inspections, the pumps in EP-3 were not able to be reinstalled to the bottom of the sumps. Accordingly, not all of the water was able to be removed from between the primary and secondary liners. However, the sump pumps run and pump water back to ponds.

The licensee discussed that they currently do not have plans to reline the East Collection Pond. They are maintaining a water level in the pond to cover the salts. As to whether

not relining the East Collection Pond would limit the RO capacity, the licensee indicated that the RO capacity is not limited by the lack of use of the East Collection Pond.

### 3.3 Conclusions

The NRC reviewed the performance of the evaporation and collection ponds. Although EP-1 was drawn down in anticipation of relining, the licensee has been able to run the evaporators. Accordingly, the overall evaporative capacity of the GRP has only been reduced by approximately 5 percent.

## 4 **Effluent Control and Environmental Protection (Inspection Procedure 88045)**

### 4.1 Inspection Scope

The inspectors reviewed the licensee's effluent monitoring, environmental protection, and groundwater corrective action program to ensure compliance with license and regulatory requirements.

### 4.2 Observations and Findings

#### a. Effluent and Environmental Monitoring Program

License Condition 15 requires the licensee to report the results of the effluent and environmental monitoring program to the NRC on a semi-annual basis. At the time of inspection, the semi-annual report had not been submitted for review. The inspectors will review the report during the next inspection.

#### b. Annual Radon Flux Measurements

License Condition 36.E requires the licensee to conduct annual radon flux measurements on the LTP and STP. The results of the 2020 sampling event will be published as an attachment to the forthcoming semi-annual report. The inspectors will review the report during the next inspection.

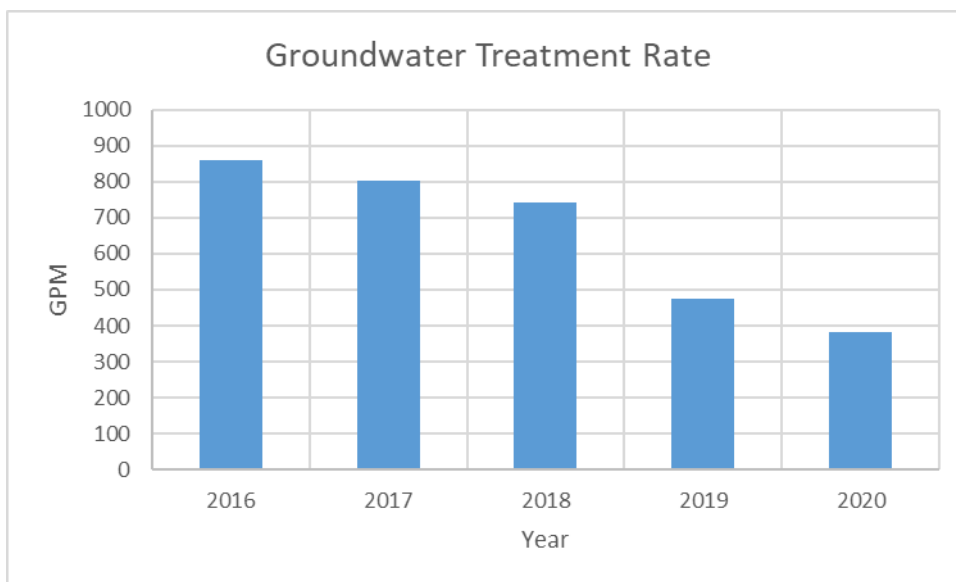
#### c. Groundwater Monitoring and Corrective Action Program

License Condition 35 states that the licensee shall implement a groundwater compliance monitoring program to assess the performance of the groundwater restoration program. The inspectors reviewed the licensee's control and operation of various site systems used to implement the GCAP.

The licensee continued to operate a series of extraction and injection wells. The groundwater from onsite and offsite extraction wells was routed to the RO and zeolite treatment systems, respectively. The treated water from the treatment systems was mixed with fresh water from the San Andres-Glorieta aquifer in the post-treatment tank and injected into the subsurface aquifers.

During the inspection, the licensee discussed that the RO system operated at an average of 340 gallons per minute (gpm) on an annualized basis for 2020. The zeolite system operated at an average annual flow rate of 43 gpm. These flow rates were well below the total design capacity of 2,700 gpm and effective capacity of 1,950 gpm. The groundwater treatment rate at the GRP is limited by the evaporative capacity of the site.

During the inspection, the licensee discussed that the annualized average evaporation rate for 2020 was 219 gpm. In Section 7.6.1.2 of the revised Groundwater Corrective Action Program submitted on November 13, 2020 (ADAMS Accession No. ML20358A152), the licensee discussed that the assumed recovery efficiencies of the RO and zeolite treatment systems are 75 percent and 85 percent, respectively. In other words, 25 percent and 15 percent of the incoming groundwater to be treated by the RO and zeolite systems goes to the evaporation ponds as either brine or acidic rinse solution, respectively. Depending on the proportion of groundwater treated by the RO versus the zeolite system, that would equate to a groundwater treatment capacity of approximately 900 gpm. For 2020, the licensee operated at approximately 42 percent of their evaporative capacity. The current groundwater treatment rate of 383 gpm for 2020 is significantly below the evaporative capacity and recent groundwater treatment rates, as shown below.



In the 2019 and 2020 Annual Monitoring Reports, the licensee cites the relining of EP-1 as the basis for limiting groundwater treatment to 300 gpm/yr in the “Future Operations” section. While this explains the reduction in groundwater treatment for 2019 and 2020, as compared to previous years, the NRC staff has determined these rates should be increased if the relining of EP-1 does not proceed as of April 1, 2021, or soon thereafter. If the relining does not take place as planned, the NRC staff has determined that the licensee shall continue groundwater treatment as per License Condition 36.B, which states, in part, that:

Reclamation, to ensure required longevity of the covered tailings and ground-water protection, shall be completed as expeditiously as is reasonably achievable...”

The NRC staff understands that the licensee has concluded, in their recently submitted GCAP, that groundwater corrective actions will not provide reasonable assurance that the groundwater protection standards will be met, and that alternate concentration limits are necessary. However, as discussed in 10 CFR 40 Criterion 5D:

The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater standard. The Commission will determine when the licensee may terminate corrective action measures based on data from the groundwater monitoring program and other information that provide reasonable assurance that the groundwater protection standard will not be exceeded.

NRC staff are currently conducting an acceptance review of the revised GCAP. In an interview with the inspection team, licensee management discussed the groundwater reclamation flow rate and their obligations under License Condition 36.B, and verbally committed to proceeding with groundwater reclamation as expeditiously as is reasonably achievable. NRC staff will evaluate groundwater treatment rates with respect to the GRP treatment capacity in future inspections.

Since the previous inspection, there have been several minor developments related to the RO system: (1) the blowdown pump seal issue has been resolved, (2) a replacement seal is onsite, (3) Clarifier 1 is in operation, and (4) Clarifier 2 is ready for operation upon the licensee's inspection. The licensee discussed that they were not aware of any equipment limitations regarding an increase in RO operating rates above the recent treatment rates. The licensee also discussed that they have not used any polymer to aid in flocculation.

For the zeolite system, the licensee discussed that aeration has had limited effect on reducing algae growth. Raking during operation and manual removal after operation has been the most effective solution.

d. Land Use Survey

License Condition 42 specifies that a land use survey be conducted and submitted in the annual report to the NRC. At the time of inspection, the annual monitoring report had not been completed. The inspectors will review the report during the next inspection.

e. (Closed) Violation EA-20-097: Failure to Submit Complete GCAP by Required Due Date

On August 31, 2020, the NRC issued EA-20-097, "Homestake Mining Company of California – Notice of Violation and Approval of Request for 60-Day Extension to Provide Response," and accompanying Severity Level IV violation (ADAMS Accession No. ML20212L627). The violation was issued for the licensee's failure to submit a complete GCAP by the December 18, 2019, due date. Specifically, on December 18, 2019, Homestake Mining Company (HMC) submitted a license amendment request including HMC's updated GCAP but did not include the required Environmental Report. The Notice of Violation required that the licensee submit a letter including: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved.

By letter dated October 9, 2020 (ADAMS Accession No. ML20283A460), the licensee responded by stating in the letter:

HMC acknowledges that an extension request should have been requested prior to the submittal date and that informing the NRC that the required ER



[Environmental Report] would be submitted later in the transmittal letter was insufficient. As part of our corrective action, HMC has a newly developed Standard Operating Procedure 38 (SOP-38) which assigns responsibilities for the control and administration of incoming and outgoing written correspondence with regulatory agencies, including guidance for evaluating incoming correspondence and for identifying regulatory commitments in outgoing correspondence. Training to the new SOP is ongoing as it was developed within the last 30 days. HMC expects to provide training and be compliant by October 31, 2020.

NRC staff reviewed SOP-38, "Regulatory Correspondence Review & Approval," which assigns responsibilities for the control and administration of incoming and outgoing written correspondence with regulatory agencies, including guidance for evaluating incoming correspondence and for identifying regulatory commitments in outgoing correspondence. The SOP contains a procedure and the titles of the individuals responsible for tracking incoming and outgoing correspondence. The SOP specifically requires that the Document Control Manager record receipt of all incoming correspondence and the Safety Health and Environmental Compliance designee should carefully review incoming correspondence to identify new obligations for the GRP. Procedure SOP-38 was developed on September 16, 2020, and updated on January 15, 2021.

The inspectors concluded that the corrective actions taken by the licensee, including the information and procedures contained with SOP-38, adequately addressed the violation.

#### 4.3 Conclusions

Based on the inspectors' review, the licensee appears to have implemented its environmental and effluent monitoring program in accordance with license requirements. The licensee implemented a groundwater monitoring and corrective action program as required by the license. However, groundwater treatment rates have been limited due to the delays in relining EP-1. If the relining does not take place as planned, the NRC staff has determined that the licensee shall continue groundwater treatment as expeditiously as is reasonably achievable as per License Condition 36.B. A previously cited violation concerning the licensee's failure to submit a complete GCAP by the required due date was closed.

### 5 **Emergency Preparedness (Inspection Procedure 88050)**

#### 5.1 Inspection Scope

The inspectors evaluated the licensee's emergency preparedness program to determine whether it was adequate to protect the safety and health of employees, members of the public, and the environment.

#### 5.2 Observations and Findings

The licensee's emergency response procedures were outlined in SOP-1, "Emergency Response Procedure," Revision 3, dated January 15, 2021. The licensee maintained a procedure for evacuations, SOP-7, "Evacuation Procedure," Revision 1, and firefighting instructions in SOP-6, "Firefighting Procedure," Revision 1. The inspectors reviewed the

changes to these SOPs since the previous inspection and identified no issues or concerns.

The inspectors reviewed the licensee's safety meeting records since the previous NRC inspection and determined that semi-annual fire drills had been conducted as required.

### 5.3 Conclusions

The licensee established an emergency response program in accordance with procedure requirements.

## **6 Follow-up of Confirmatory Action Letters or Orders (Inspection Procedure 92703)**

### 6.1 Inspection Scope

On March 28, 2017, the licensee agreed to, and was issued, Order EA-16-114 (ADAMS Accession Package No. ML17060A752) as a result of alternative dispute resolution mediation. Section V of the Order includes 16 conditions with actions the licensee is required to implement. Provided below is a summary of the status of the 16 conditions.

### 6.2 Observations and Findings

#### a. Condition 1

Condition 1 requires, in part, that the licensee submit its root cause protocol (RCP) to an independent third-party consultant with expertise in root cause analysis (RCA) and provide a copy of the independent third-party reviewed analysis protocol to the NRC within 120 days of issuance of the Order. The RCP submitted to the NRC will identify any changes made by the independent third-party reviewer and include a qualification statement of the third-party reviewer. This protocol will be used to complete Conditions 2, 3 and 4 of the Order.

Condition 1 of the Order was determined to be satisfied during inspection 040-08903/2018-002 dated November 26, 2018 (ADAMS Accession No. ML18303A199).

#### b. Condition 2

Condition 2 requires, in part, that within 30 days of submitting the RCP to the NRC, the licensee will use the RCP to analyze the reasons for the five apparent violations documented in the NRC's October 4, 2016 letter (ADAMS Accession No. ML16251A526). In addition, the licensee will submit any proposed corrective actions to the NRC for review and approval within 60 days of completing the RCA.

The licensee requested an extension in submission of the RCA of the five apparent violations by letter dated August 23, 2017 (ADAMS Accession No. ML17237C046). The NRC granted approval to extend the submittal due date to September 15, 2017, by email dated August 24, 2017 (ADAMS Accession No. ML17243A234). The NRC subsequently provided formal approval of the extension request by letter dated October 19, 2017 (ADAMS Accession No. ML17241A299). The October 19, 2017, letter also acknowledged receipt of the licensee's September 15, 2017, RCA of the five apparent violations (ADAMS Accession No. ML17263A125). The licensee concluded that the

common root cause for each of the five apparent violations was lack of communications by licensee management to other licensee staff and corporate managers and a lack of understanding of regulatory compliance by licensee management.

The licensee submitted the corrective action plan for the five apparent violations to the NRC by letter dated November 14, 2017 (ADAMS Accession Package No. ML17320A118). The licensee also provided an update for the corrective action plan by letter dated July 17, 2018 (ADAMS Accession No. ML18200A068).

Condition 2 of the Order will remain open until the NRC has reviewed and approved the licensee's proposed corrective actions associated with this condition and Condition 6.

c. Condition 3

Condition 3 of the Order requires, in part, the licensee to complete an assessment of all activities to determine whether the activities are authorized and are being conducted in compliance with NRC requirements. The assessment will identify areas where clarity could be added to the license.

Condition 3 of the Order was determined to be satisfied during inspection 040-08903/2020-001 dated August 28, 2020 (ADAMS Accession No. ML20241A110).

d. Condition 4

Condition 4 of the Order requires, in part, the licensee to engage an independent third -party consultant to review and evaluate the self-assessment as described in Condition 3 of the Order. Condition 4a states that the licensee must submit the name and qualifications of the consultant for NRC approval within 30 days of issuance of the Order; Condition 4b requires the licensee to provide the consultant with a copy of the self-assessment within 120 days of the self-assessment; and Condition 4c requires the licensee to provide the consultant's review of the self-assessment within 120 days when the consultant received it for review. Condition 4d states that the NRC will perform an audit of the assessment and the consultant's report. The licensee will be required to incorporate any NRC audit findings. Finally, Condition 4e states that the licensee will maintain copies of all reports at the site for NRC inspection.

Condition 4 of the Order was determined to be satisfied during inspection 040-08903/2020-001 dated August 28, 2020 (ADAMS Accession No. ML20241A110).

e. Condition 5

Condition 5 of the Order, requires, in part, that any changes or additions to the license or procedures resulting from this Order will be submitted to the NRC as a license amendment request for NRC approval or an update to the appropriate licensee procedure after notification to the NRC. Condition 5 requires that the licensee submit to NRC all license amendment requests resulting from the Confirmatory Order within 60 days of receiving the results of the NRC audits. The Order requires three NRC audits under Conditions 4d, 8, and 10.

The NRC staff audit of the licensee's self-assessment submitted in response to Condition 4d was completed on March 19, 2020 (ADAMS Accession No. ML19120A145), and included eight recommendations. The NRC's audit of the

licensee's mass balance methodology results, submitted in response to Condition 8, were provided to the licensee by letter dated October 29, 2019 (ADAMS Accession No. ML19221B533), and included three recommendations. The NRC audit results for the impact of exceedances submitted in response to Condition 10 were provided to the licensee by letter dated October 29, 2019 (ADAMS Accession No. ML19289B451), and included one recommendation. In the March 19, 2020, self-assessment audit letter, the NRC staff reminded the licensee that the appropriate corresponding license amendment requests to Materials License SUA-1471 were required to be submitted within 60 days of receipt of the letter. By letter dated May 5, 2020 (ADAMS Accession No. ML20128J233), the licensee requested a 120-day extension to submit its proposed amendment requests or make procedural changes as required by Condition 5. By letter dated May 15, 2020 (ADAMS Accession No. ML20134H851), the NRC approved the extension to submit proposed amendment requests or make procedural changes under Condition 5 to September 19, 2020. By letter dated September 18, 2020 (ADAMS Accession No. ML20262H284), HMC submitted its "Response to recommendations included in the October 29, 2019 NRC Letter concerning the audit of the 'Collection for Re-Injection Mass Balance/Removal Analysis' report submitted pursuant to Condition 8 of the Confirmatory Order EA-16-114," for review. By letter dated September 18, 2020 (ADAMS Accession No. ML20262H286), HMC submitted its "Completion of Corrective Actions Pursuant to Condition 5 of Confirmatory Order EA-16-114" for review. The NRC staff is in the process of reviewing the responses to recommendations in both letters. The NRC staff has not completed its review of HMC's responses to recommendations in the NRC audits.

Condition 5 of the Order remains open.

f. Condition 6

Condition 6 of the Order requires, in part, the licensee to submit a revised GCAP to the NRC by the end of calendar year 2018, including amendments to the license approved by that date. The licensee's November 17, 2017, letter (see Condition 3 above) expressed uncertainty in meeting the current due date of December 31, 2018, for submission of the revised corrective action program due to the extended time frame needed to complete the self-assessment discussed in Condition 3 of the Order.

On October 11, 2018, the licensee requested that the due date for the revised GCAP be extended from January 1, 2019, to December 18, 2019 (ADAMS Accession No. ML18289A400). Based on a review of the information provided by the licensee, the NRC granted the extension request to allow the GCAP to be submitted on or before December 18, 2019 (ADAMS Accession No. ML18355A893). By letter dated December 18, 2019 (ADAMS Accession No. ML19354B960), HMC submitted a license amendment request to the NRC as a license tie-down document for groundwater corrective action at the GRP, to replace the 1989 GCAP and the 1998 update to the GCAP specified in License Condition 35C. In addition, the letter stated that the ER associated with the license amendment request identified in Criterion 9 of 10 CFR 40, Appendix A, and needed for NRC to meet its obligations under 10 CFR 51, would be provided as a separate submittal by February 28, 2020. The licensee submitted the ER by letter dated February 28, 2020 (ADAMS Accession No. ML20080M078). The NRC staff reviewed the GCAP and ER and responded to the licensee with a request for supplemental information by letter dated June 18, 2020 (ADAMS Accession No. ML20142A195). The licensee submitted a revised GCAP and ER dated

November 13, 2020 (ADAMS Accession Package No. ML20358A192), that is currently under review by NRC staff.

Condition 6 of the Order remains open.

g. Condition 7

Condition 7 of the Order requires, in part, that the licensee conduct initial and annual refresher training for all individuals (employees and vendors, commensurate with their duties) engaged in licensed activities. Section (a) of this condition required initial and annual training to address awareness and understanding of regulatory and license requirements, including but not limited to informing licensee employees of the jurisdiction of the NRC, the U.S. Environmental Protection Agency, and the New Mexico Environment Department over the GRP. Section (b) of this condition required the licensee to maintain documentation for each training session conducted, which will include a summary of the contents of the training and individual attendance.

The inspectors reviewed the status of the licensee's training program. The licensee conducted Regulatory Framework training as part of its Health, Safety and Environmental (HSE) Orientation training given annually to licensee employees. The licensee provided sign-in sheets for several sessions of "HSE Orientation" that have occurred between September 2020 and January 2021 attended by licensee staff and contractors. The HSE Orientation presentation contains Regulatory Framework training as one of its components. The NRC determined that the licensee had made reasonable efforts to comply with the requirements of Condition 7.

Condition 7 of the Order remains open. The licensee will continue to provide refresher training and the NRC staff will review its training requirements under Condition 7 until the Confirmatory Order has been terminated by the NRC.

h. Condition 8

Condition 8 of the Order requires, in part, the licensee to use the mass balance methodology described in the revised 2012 GCAP submittal to complete an analysis of the re-injection system's impact to the time estimate for completion of the GCAP. The analysis was required to be completed within 120 days of issuance of the Order, and the licensee was required to discuss the methodology, data, and analysis with the NRC, no less than 30 days prior to its finalization of the re-injection analysis.

The licensee and the NRC discussed the methodology, data, and analysis during a teleconference on June 26, 2017, and during a follow-up teleconference on June 27, 2017. Notes summarizing the discussions during the teleconferences on June 26 and 27, 2017, as well as the licensee's presentations are publicly available (ADAMS Accession No. ML17352B067).

The licensee submitted the impact analysis for the re-injection system and exceedance apparent violations by letter dated July 26, 2017 (ADAMS Accession Package No. ML17212A010). Condition 8 of the Order requires NRC to perform an audit of the analysis and provide, in writing, the NRC audit results, including any recommended changes. The NRC staff completed an audit of the July 26, 2017, submission and documented the results of its audit in a letter dated October 29, 2019 (ADAMS Accession No. ML19221B533). The NRC audit resulted in three recommendations.

The license responded to the three recommendations in a letter dated September 18, 2020 (ADAMS Accession No. ML20262H284). The NRC is currently reviewing the September 18, 2020, response in conjunction with the GCAP that was submitted on November 13, 2020 (ADAMS Accession Package No. ML20358A192).

Condition 8 of the Order remains open pending the NRC staff review of the licensee's September 18, 2020, and November 13, 2020, submissions.

i. Condition 9

Condition 9 of the Order requires, in part, that within 30 days from issuance of the Order, the licensee will perform adjustments to the operations of the RO plant to ensure compliance with the groundwater protection standards. The licensee was also required to evaluate the procedure required by License Condition 23 to ensure the process is adequate to reduce constituent concentrations to values below the groundwater protection standards listed in License Condition 35.B before discharge.

Condition 9 of the Order was determined to be satisfied during inspection 040-08903/2017-002 dated December 20, 2017 (ADAMS Accession No. ML17353A414).

j. Condition 10

Condition 10 of the Order requires, in part, an analysis by the licensee using the methodology described in 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," to determine the impact of exceedances discharged from the RO plant as documented in the NRC's October 4, 2016, letter (ADAMS Accession No. ML16251A526). The analysis was to be completed within 120 days of issuance of the Order, and the licensee was required to discuss the methodology, data, and analysis with the NRC, no less than 30 days prior to its finalization of the re-injection analysis. The NRC would then perform an audit of the analysis, and provide the licensee with the audit results, including any recommended changes. The licensee would incorporate NRC audit results as described in Condition 5 of the Order.

The licensee discussed the methodology, data, and analysis with the NRC during a teleconference on June 26, 2017, and during a follow-on teleconference on June 27, 2017. Notes summarizing the discussions during the teleconferences on June 26 and 27, 2017, as well as the licensee's presentations are publicly available (ADAMS Accession No. ML17352B067). The licensee submitted the impact analysis for the re-injection system and exceedance apparent violations by letter dated July 26, 2017 (ADAMS Accession Package No. ML17212A010). Condition 10 of the Order requires the NRC to perform an audit of the analysis and provide in writing the NRC audit results, including any recommended changes. The NRC staff completed its audit of the July 26, 2017, submission in a letter dated October 29, 2019 (ADAMS Accession No. ML19289B451) and provided one recommendation:

The additional monitoring with increased frequency to provide early indications on potential exceedances, including: (1) daily conductivity measurements, (2) weekly measurements using a kinetic phosphorescence analyzer to detect uranium, (3) monitoring of molybdenum concentrations with a Hach meter, and (4) the review of preliminary laboratory results to

mitigate exceedances of the GWPS [Groundwater Protection Standards] in injection water, as documented in NRC Inspection Report 040-08903/2018-002 dated November 26, 2018, should be reflected in HMC's onsite procedures.

The NRC staff reviewed HMC's SOP-4, "Reverse Osmosis Operations Monitoring," and SOP-15, "Post-Treatment Tank (SP-2) Water Sampling, Analysis and Reporting Requirements." The NRC staff determined that these SOPs adequately address NRC's recommendations. SOP-15 includes weekly analysis of uranium using a kinetic phosphorescence analyzer and analysis of pH and conductivity of samples from Sampling Point 2 (SP-2). If an exceedance of the standards is observed in the laboratory sample of SP-2, the SOP states that the Closure Manager shall conduct a series of preliminary investigations while awaiting the results of the confirmation analysis. In addition to the analyses conducted at SP-2, SOP-4 includes daily measurements of pH, turbidity, and hardness from the RO plant. NRC staff determined that these additional measures will provide earlier indication of potential exceedances and reduce the chance of exceedances of injection water at SP-2.

Condition 10 of the Order was determined to be satisfied during this inspection (040-08903/2021-001).

k. Condition 11

Condition 11 of the Order directly modified License Condition 35.C when the Order was issued on March 28, 2017.

Condition 11 of the Order was determined to be satisfied during inspection 040-08903/2017-002 dated December 20, 2017 (ADAMS Accession No. ML17353A414).

l. Condition 12

Condition 12 of the Order requires, in part, that the licensee develop written procedures to ensure that monthly composite samples are obtained from Sampling Point 2 (SP-2), and to ensure that results of those monthly composite samples are reported in the semi-annual and annual reports as required by License Conditions 15 and 42. The licensee was required to submit these procedures to the NRC within 120 days of issuance of the Order.

Condition 12 of the Order was determined to be satisfied during inspection 040-08903/2018-001 dated May 3, 2018 (ADAMS Accession No. ML18115A480).

m. Condition 13

Condition 13 of the Order directly modified License Condition 15 when the Order was issued on March 28, 2017. This change provided clarifying language for when the semi-annual effluent and environmental monitoring reports are due.

Condition 13 of the Order was determined to be satisfied during inspection 040-08903/2017-002 dated December 20, 2017 (ADAMS Accession No. ML17353A414).

n. Condition 14

Condition 14 of the Order requires, in part, that the licensee identify sources of supply water, soil and groundwater data, and associated reports, and use that data to develop a land application assessment of any impacts due to the use of the irrigation water containing byproduct material to past, current, or foreseeable future uses of the land application areas. Homestake Mining Company's land application assessment was required to be submitted within 180 days of issuance of the Order. Additionally, the licensee was required to take immediate action to ensure that the land application areas were not being used to produce crops for human consumption.

As described in Section 4.2 of NRC Inspection Report 040-08903/2018-002 dated November 26, 2018 (ADAMS Accession No. ML18303A199), the licensee submitted the land application assessment to the NRC by letter dated September 25, 2017 (ADAMS Accession No. ML17270A066). By memorandum dated June 16, 2017 (ADAMS Accession No. ML17328A507), the licensee provided verification that they were not using the former irrigation areas to produce crops for human consumption. A proposed final status survey plan for release of the former land application areas was submitted by letter dated November 14, 2017 (ADAMS Accession No. ML17340A406). The data obtained for the final status survey was intended to augment the existing soil data within the land application impact assessment that was submitted on September 25, 2017. The licensee subsequently submitted the final status survey report, documenting the results of the final status survey, to the NRC by letter dated July 2, 2018 (ADAMS Accession Nos. ML18186A567 and ML18186A568).

The NRC issued a request for additional information by letter dated August 17, 2018 (ADAMS Accession No. ML18205A460), in part, to ask the licensee about the radiological status of the piping and equipment used to support the irrigation activities. The licensee responded to the NRC request by letter dated September 20, 2018 (ADAMS Accession No. ML18269A123).

During the week of August 27, 2018, an NRC inspector and contractors from the Oak Ridge Institute of Science and Education performed a confirmatory survey of the land application areas. The results from this survey were provided to the NRC staff in a report dated February 12, 2019 (ADAMS Accession No. ML19046A072). The NRC staff reviewed the licensee's land application assessment reports and the confirmatory survey report submitted by the NRC's contractor. The NRC staff requested additional information by letter dated April 20, 2020 (ADAMS Accession No. ML20107J517). The licensee responded to the request for additional information by letter dated July 31, 2020, and the licensee's letter is currently under NRC staff review (ADAMS Accession No. ML20227A055).

Condition 14 of the Order remains open pending completion of NRC review of the licensee's submittals, the results of the final status survey, and the results of the NRC's confirmatory survey.

o. Condition 15

Condition 15 of the Order requires, in part, that if the results of the analysis discussed in Condition 14 of the Order indicate that radiological doses and non-radiological risks are in excess of the NRC-approved remedial action levels, the licensee will propose appropriate measures to control both use and access to the impacted areas, a corrective



action plan if necessary to achieve the NRC-approved remedial action levels, and final status survey plans to demonstrate that the radiological doses and non-radiological risks are below NRC-approved remedial action levels.

Condition 15 of the Order remains open pending NRC review of the licensee's response to NRC's request for additional information noted in Condition 14 and completion of NRC review of the licensee's submittals, the results of the final status survey, and the results of the NRC's confirmatory survey.

p. Condition 16

Condition 16 of the Order requires the licensee to provide an integrated table that sets forth all actions taken pursuant to the Order. An updated integrated table will be provided semi-annually, until all license and procedure changes under the Order are completed. The last two integrated tables were provided to the NRC by letters dated April 8, 2020 (ADAMS Accession No. ML20099F534) and October 10, 2020 (ADAMS Accession No ML20282A782).

Condition 16 of the Order will remain open until all license and procedure changes under the Order are completed.

6.3 Conclusions

The inspectors reviewed the status of Confirmatory Order EA-16-114. The licensee's response to Condition 10 was evaluated and determined to satisfy the condition. Confirmatory Order Conditions 1, 3, 4, 9, 10, 11, 12, and 13 have been evaluated and are determined to be satisfied. Confirmatory Order Conditions 2, 5, 6, 7, 8, 14, 15, and 16 remain open with pending actions and will continue to be evaluated by the NRC.

**7 Exit Meeting Summary**

The inspectors presented the preliminary inspection results to the licensee's representatives at the conclusion of the inspection on February 19, 2021. The final inspection results were presented to the licensee's representatives on April 7, 2021, after the NRC had completed its in-office review of documents related to the inspection findings. During the inspection, the licensee did not identify any information reviewed by the inspectors as proprietary that was included in the report.

## **SUPPLEMENTAL INSPECTION INFORMATION**

### **Partial List of Persons Contacted**

#### Licensee

W. Archuleta, Senior Shift Supervisor  
A. Arguello, Hydrologist  
B. Bingham, Closure Manager  
C. Farr, Assistant Radiation Safety Officer,  
Environmental Restoration Group, Inc.  
J. Ortega, Health and Safety Superintendent  
R. Shirley, Project Engineer  
R. Whicker, Radiation Safety Officer,  
Environmental Restoration Group, Inc.

### **Inspection Procedures (IPs) Used**

IP 83822	Radiation Protection
IP 88005	Management Organization and Controls
IP 88035	Radioactive Waste Processing, Handling, Storage, and Transportation
IP 88045	Effluent Control and Environmental Protection
IP 88050	Emergency Preparedness
IP 92703	Follow-up of Confirmatory Action Letters or Orders

### **Items Opened, Closed and Discussed**

#### Opened

040-08903/2021-01-001	VIO	Discharge of liquid effluents containing byproduct material to the ground surface in a manner not approved by NRC
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#### Closed

EA-20-097	VIO	Failure to submit complete GCAP by required due date
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#### Discussed

None

### **List of Acronyms Used**

ADAMS	Agencywide Documents Access and Management System
ALARA	as low as is reasonably achievable
CFR	Code of Federal Regulations
CO	Confirmatory Order
EP	evaporation pond
ER	Environmental Report
GCAP	Groundwater Corrective Action Program
gpm	gallons per minute
GRP	Grants Reclamation Project
GWPS	Groundwater Protection Standards
HMC	Homestake Mining Company
HSE	Health, Safety and Environmental
IP	Inspection Procedure
LTP	large tailings pile
NRC	U.S. Nuclear Regulatory Commission
RCA	root cause analysis
RCP	root cause protocol
RO	reverse osmosis
RSO	radiation safety officer
RST	radiation safety technician
RWP	radiation work permit
SERP	Safety and Environmental Review Panel
SOP	standard operating procedure
STP	small tailings pile
VIO	violation