



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 8, 2022

Brad Bingham  
Closure Manager  
Grants Reclamation Project  
Homestake Mining Co. of CA  
P.O. Box 98/Highway 605  
Grants, NM 87020

SUBJECT: HOMESTAKE MINING COMPANY OF CALIFORNIA, GRANTS RECLAMATION PROJECT, 2021 ANNUAL SURETY UPDATE AND GROUNDWATER MONITORING PLAN REVISION, AMENDMENT NUMBER 58 TO SOURCE MATERIALS LICENSE, SUA-1471, DOCKET NUMBER 40-8903

Dear Brad Bingham:

Enclosed, please find the U.S. Nuclear Regulatory Commission (NRC) Safety Evaluation Report (SER) for the Homestake Mining Company of California (HMC) Grants Reclamation Project (GRP) 2021 financial surety update and SER for amending the approved Groundwater Monitoring Plan. Also enclosed is Amendment 58, to Source Materials License SUA-1471, which revises the amount of the surety to reflect the current cost estimate for decommissioning and reclamation and amends the approved Groundwater Monitoring Plan for the GRP.

By letter dated March 30, 2021,<sup>1</sup> HMC submitted its annual financial surety update for the GRP, as required by Title 10 of the *Code of Federal Regulations* (10 CFR) 40.36, and 10 CFR Part 40, Appendix A, II. Financial Criteria, Criteria 9 and 10, and to revise the financial surety amount in License Condition (LC) 28 of HMC's source materials license. The NRC staff has completed its review of the proposed 2021 surety for the GRP. The NRC has evaluated the detailed individual elements of the decommissioning and reclamation costs for the GRP and considers HMC's estimates to be comprehensive, reasonably derived, and appropriate. All estimated decommissioning and reclamation costs for contractor and consultant services include the costs for labor and equipment, overhead, and profit. The NRC finds that the surety portion for minimum long-term surveillance is appropriate. The HMC 2021 surety for the GRP is \$87,807,343.

Additionally, 10 CFR 40.36 allows for the use of a Parent Company Guarantee (PCG) of funds for decommissioning costs based on a financial test if the guarantee and test are as contained in 10 CFR Part 30, Appendix A, II. Financial Test, and III. Parent Company Guarantee. The NRC staff finds that HMC has established an acceptable financial assurance mechanism based

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<sup>1</sup> Agencywide Documents Access and Management System (ADAMS) Accession No. ML21090A167.

on the requirements in 10 CFR Part 30, Appendix A and that the current financial surety reasonably includes funds sufficient to cover the estimated current costs of the facility. The HMC surety update submission includes a commitment by HMC to maintain the trust fund amount for NRC-approved cost estimates for the standby trust agreement (STA) and the submission includes a demonstration that it meets the financial test required in 10 CFR Part 30, Appendix A, when using a PCG. Upon approval, HMC will provide the NRC with a finalized and updated version of the STA in the amount of \$87,807,343 to replace the current STA held by NRC in the amount of \$83,455,824.<sup>2</sup> The NRC staff findings are documented in the financial surety update SER (enclosed).

The NRC staff requests the updated and signed STA in the amount of \$87,807,343 be provided within 45 days of the date of this letter.

By letter dated April 22, 2021,<sup>3</sup> HMC submitted a request to remove well CF4 from the GRP Groundwater Monitoring Plan. HMC revised its request in a letter dated October 29, 2021,<sup>4</sup> and proposed that well CE7 replace well CF4 in the Groundwater Monitoring Plan. The NRC staff reviewed this request and finds that the removal of well CF4 is appropriate because the well is compromised. Replacement well CE7 is acceptable because it is located near and screened within the same aquifer as well CF4 and will provide similar aquifer contamination and hydrologic data. The NRC staff findings are documented in the Groundwater Monitoring Plan SER (enclosed).

The NRC staff grants the requested Amendment 58 to Source Materials License SUA-1471. License Condition 28 is revised to require that HMC's surety shall be continuously maintained in an amount no less than \$87,807,343 until a replacement is authorized by the NRC. Additionally, LC 35 revises Tables 2-1 and 2-2 as described in the License Amendment 58 approval package. The modifications to LC 28 and LC 35 are provided as Amendment No. 58 to Source Materials License SUA-1471 (enclosed). During its environmental review, the NRC staff determined that the surety update is categorically excluded under 10 CFR 51.22(c)(10) and the Groundwater Monitoring Plan revision is categorically excluded under 10 CFR 51.22(c)(11) as documented in the categorical exclusion memorandum (enclosed).

The licensee accepted changes to LC 28 and 35 in correspondence dated December 16, 2021.<sup>5</sup>

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

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<sup>2</sup> ADAMS Accession No. ML19105B201.

<sup>3</sup> ADAMS Accession No. ML21112A266.

<sup>4</sup> ADAMS Accession No. ML21305A875.

<sup>5</sup> ADAMS Accession No. ML21355A292.

If you have any questions regarding this letter or the enclosure, please contact Mr. Ron C. Linton at (301) 415-7777 or by e-mail to [Ron.Linton@nrc.gov](mailto:Ron.Linton@nrc.gov).

Sincerely,



Signed by Von Till, Randolph  
on 02/08/22

Bill Von Till, Chief  
Uranium Recovery and Materials  
Decommissioning Branch  
Division of Decommissioning, Uranium Recovery  
and Waste Programs  
Office of Nuclear Materials Safety  
and Safeguards

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

Enclosures:

Safety Evaluation Report (Surety)  
Safety Evaluation Report (Monitoring Plan)  
Categorical Exclusion Memorandum  
License Amendment No. 58

cc: via ListServ  
A.Maurer (NMED)  
D. Crosby (OSE)  
M.Purcell (EPA)  
B.Tsosie (DOE)

## **SAFETY EVALUATION REPORT**

DATE: February 8, 2022

DOCKET: 040-08903

LICENSEE: Homestake Mining Company of California, License No. SUA-1471

FACILITY: Grants Reclamation Project

TECHNICAL REVIEWERS: Steve McCarthy, Kenneth Kline

PROJECT MANAGER: Ron Linton

SUBJECT: 2021 Financial Surety Update to License Condition 28

### **SUMMARY AND CONCLUSIONS**

By letter dated March 30, 2021,<sup>1</sup> the Homestake Mining Company of California (HMC, Homestake, or the licensee) submitted to the U.S. Nuclear Regulatory Commission (NRC), its annual financial surety regarding the estimated closure guarantee for 2021 for the Homestake's Grants Reclamation Project (GRP), required by Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40, Appendix A, II. Financial Criteria, Criterion 9(e) and Criterion 10. The licensee also requested changes to License Condition (LC) 28 to reflect changes to the financial surety. The NRC staff has determined the HMC's annual 2021 surety update for the GRP, in the amount of \$87,807,343, is acceptable because it meets the regulatory requirements and it applies an appropriate inflationary factor to the NRC-approved HMC's 2021 surety estimate.

The NRC staff reviewed the information provided in the application, evaluated the surety estimate and assessed whether the surety meets the financial test requirements in 10 CFR Part 40. The NRC staff concludes that the current financial surety reasonably includes funds sufficient to cover the estimated costs to decommission the GRP required by 10 CFR 40.36. In addition, the submission includes a commitment by HMC to update the trust fund amount and the submission includes demonstration that it meets the financial test required in 10 CFR Part 30, Appendix A, when using a PCG. Upon approval, Homestake will provide the NRC staff with a finalized and updated version of the standby trust agreement (STA) in the amount of \$87,807,343 to replace the current STA held by NRC in the amount of \$83,455,824.<sup>2</sup> Therefore, the financial surety and financial test for the current surety period is acceptable.

The NRC staff is requesting the updated STA be submitted within 45 days of approval of this amendment.

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<sup>1</sup> Agencywide Documents Access and Management System (ADAMS) Accession No. ML21090A167.

<sup>2</sup> ADAMS Accession No. ML19105B201.

## BACKGROUND

HMC, a subsidiary of Barrick Gold Corporation (Barrick), is the holder of NRC License No. SUA-1471 for its former conventional uranium mill near Grants, New Mexico, known as the GRP. HMC has been a licensee since the late 1950's. The GRP ceased active uranium recovery operations in 1990. The GRP is currently under U.S. Environmental Protection Agency Superfund status and has a groundwater discharge permit from the State of New Mexico. Upon closure, the GRP will most likely be transferred to the U.S. Department of Energy for long-term care and maintenance.

## REGULATORY REQUIREMENTS

HMC's license was issued under 10 CFR Part 40, "Domestic Licensing of Source Material." The regulations at 10 CFR 40.36 contain the requirements for providing financial assurance and recordkeeping for decommissioning the GRP. The regulations in 10 CFR 40.36(d)(1)(A) require that the decommissioning plan be updated annually and provide a cost estimate that reflects the cost of an independent contractor to perform all decommissioning activities. The regulations in 10 CFR 40.36(e)(2) provide the requirements that a licensee must meet to use a PCG as the financial instrument. Additionally, 10 CFR Part 40, Appendix A, II. Financial Criteria, Criterion 9 requires the licensee to maintain an NRC-approved financial surety arrangement to cover estimated costs for decommissioning and decontamination activities. Criterion 9(e) provides that the Commission will review the surety mechanism to assure that sufficient funds would be available for completion of reclamation if the activities had to be performed by a third party. License Condition 28 requires that the cost estimate be updated annually and that the annual surety update be submitted to the NRC by March 31.

In addition, 10 CFR 40, Appendix A, II. Financial Criteria, Criterion 10, requires that a minimum charge of \$250,000 (1978 dollars) must be paid by each mill operator to the general treasury or appropriate State agency, prior to uranium mill license termination, to account for costs associated with long-term surveillance.

Section 40.36(e)(2) of 10 CFR allows for the use of a PCG of funds for decommissioning costs based on a financial test if the guarantee and test are as contained in 10 CFR Part 30, Appendix A. Part 30 Appendix A, II. Financial Test requires licensees who use a PCG to demonstrate that the parent company can pass the required annual financial test. Appendix A, III. Parent Company Guarantee, paragraphs A. and B. also require that the terms of the PCG state it "will remain in force unless the guarantor sends notice of cancellation.... If the licensee fails to provide alternate financial assurance ... within 90 days after ... notice of cancellation ... the guarantor will provide alternative financial assurance that meets the provisions of the Commission's regulations ...."

In addition, Part 30, Appendix A, III. Parent Company Guarantee, paragraph C. states "The parent company guarantee and financial test provisions must remain in effect until the Commission has terminated the license, accepted in writing the parent company's alternate financial assurances, or accepted in writing the licensee's financial assurances." Part 30, Appendix A, III. Parent Company Guarantee, paragraph D. states "A standby trust ... must be established for decommissioning costs before the parent company guarantee agreement is submitted."

The NRC staff reviewed HMC's annual financial assurance update using the guidance in NUREG-1620, Rev. 1, Appendix C, "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,” dated June 2003.<sup>3</sup>

## TECHNICAL EVALUATION

### *HMC Demonstrated the Sufficiency of the Cost Estimate*

The HMC surety was last adjusted in 2018 in the amount of \$83,455,824.<sup>4</sup> The HMC financial surety maintains the status quo of the previously approved surety amount with an increase for inflation and a small decrease for completed work. The NRC staff notes there has been little change at the GRP site in the last three years, except that shallow wells have been abandoned on the Large Tailings Pile (LTP). During the review of HMC surety submission, the NRC staff observed discrepancies in the number of abandoned wells on the LTP in various HMC reports submitted to the NRC. In a letter dated August 9, 2021, the NRC staff requested clarification of the number of abandoned wells in a request for additional information.<sup>5</sup> In a letter dated September 30, 2021, HMC responded to the NRC staff and confirmed that the correct number of completed (abandoned) wells was 347 in 2020.<sup>6</sup>

HMC’s 2021 surety submittal includes a request to amend its license to increase its surety amount from:

2018 Approved Financial Surety Amount: \$83,455,824

Inflation rate of 1.06 (CPI-based) \$5,007,349 + \$83,455,824 (2018 surety) = \$88,463,173

Work Performed in 2020 (347 wells abandoned at \$1,890 per well = \$655,830)

Proposed 2021 Adjusted Financial Surety Amount \$88,463,173 - \$655,830 = \$87,807,343

The 2021 surety is based on a 6.11 percent increase in the consumer price index for all urban consumers (CPI-U) from the end of January 2018 through the end of February 2021; the CPI-U for this period ranged from 247.867 to 263.014. Staff confirmed the accuracy of the January 2018 to February 2021 CPI-U by consulting <https://www.bls.gov/cpi/tables/supplemental-files/historical-cpi-u-202102.pdf>. The NRC staff notes the 2019 surety was reviewed but not increased.<sup>7</sup> The 2020 surety was also not increased.<sup>8</sup> The staff performed the following calculation to confirm the licensee’s inflationary factor is reasonable:

$$263.014 - 247.867 = 15.15$$

$$15.15 / 247.867 = .0611$$

$$.0611 \times 100 = 6.11 \text{ or } 6.11 \text{ percent}$$

<sup>3</sup> ADAMS Accession No. ML032250190.

<sup>4</sup> ADAMS Accession Package No. ML18323A179.

<sup>5</sup> ADAMS Accession No. ML21215A578.

<sup>6</sup> ADAMS Accession No. ML21274A080.

<sup>7</sup> ADAMS Accession Package No. ML19239A107.

<sup>8</sup> ADAMS Accession No. ML21033A573.

In determining whether an adjustment to increase the surety amount based solely on CPI-U would be adequate, the NRC staff looked at the previously approved 2018 surety adjustment,<sup>9</sup> which included several factors for adjusting the cost estimate as outlined in 10 CFR 40 Appendix A, II. Financial Criteria, Criterion 9(f)(4). These factors are:

- Inflation
- Spills, leakage, or migration of radioactive material leading to additional contamination
- Waste inventory increase above previous estimate
- Facility modifications
- Any changes to authorized possession limits
- Actual remediation costs above previous cost estimate
- Any other conditions that affected the costs

HMC submitted its annual financial assurance update on March 30, 2021. The regulatory requirements that are relevant to the Homestake financial surety are memorialized in LC 28 of the Materials License SUA-1471. The NRC staff has determined that the submittal meets the requirement for an annual update to the surety as required by 10 CFR 40.36(d)(1) and LC 28. License Condition 28 also requires the annual update to be submitted by the due date, March 31.

The costs in the 2021 surety cost estimate are estimated based upon third party costs to reclaim, remediate, and decommission facilities and lands affected by past project operations. All unit costs, labor and equipment, and other fees were included. Also, the licensee added 15 percent for contingencies as well as costs for long-term surveillance fees based on \$250,000 (1978 dollars). Therefore, the NRC staff has determined that the cost estimate is based upon third party costs, includes an adequate contingency factor of 15 percent, and accounts for long-term surveillance fees as required by 10 CFR 40.36 and 10 CFR Part 40, Appendix A, II. Financial Criteria, Criterion 9 and Criterion 10. The NRC also finds the surety estimate meets Criterion 9 of 10 CFR 40, Appendix A, II. Financial Criteria which requires, in part, that “[t]he amount of surety liability should be adjusted to recognize any increase or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs.”

### ***HMC Demonstrated the Sufficiency of the Financial Test***

In order for Barrick, Homestake’s parent company, to qualify for use of a PCG, it must satisfy the criteria found in 10 CFR Part 30, Appendix A, Section II.A.1 or A.2. Homestake’s submission demonstrates compliance with 10 CFR Part 30, Appendix A, Section II.A.1 (the “Financial Test”). The financial test requires, in pertinent parts, that the parent company, Barrick, must have:

- (i) Two of the following three ratios: A ratio of total liabilities to total net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and
- (ii) Net working capital and tangible net worth at least six times the amount of decommissioning funds being assured by the PCG for all nuclear facilities or parts thereof (or prescribed amount if a certification is used); and

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<sup>9</sup> ADAMS Accession Package No. ML18323A179.

- (iii) Tangible net worth of at least \$21 million; and
- (iv) Assets located in the United States amounting to at least 90 percent of the total assets or at least six times current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used).

In its submission, Barrick's latest independently audited year-end financial statements as of December 31, 2020, state that its total liabilities divided by its total net worth is less than 2.0 (\$14.7 billion / \$31.8 billion = 0.46). Moreover, its net income plus depreciation divided by total liabilities is greater than 0.1 (\$5.8 billion / \$14.7 billion = 0.39). Furthermore, its current assets divided by current liabilities is greater than 1.5 (\$ 8.1 billion / \$ 2.2 billion = 3.7).

Additionally, Barrick's net working capital of \$5.9 billion and tangible net worth of \$26.9 billion are greater than six times the total of all decommissioning funds being assured (\$88 million x 6 = \$528 million). Barrick's tangible net worth of \$26.9 billion exceeds the requirement of at least \$21 million. Homestake's total assets in the United States of \$16.2 billion is greater than six times the current decommissioning cost estimates for the total of all facilities of \$528 million. These calculations were reviewed and verified by Barrick's independent auditor PricewaterhouseCoopers and documented in its revised auditor's special report dated March 29, 2021.

### ***HMC Demonstrated the Appropriateness of the Financial Instrument***

Homestake's updated financial assurance instrument is a PCG. The PCG submission, which included language that the current decommissioning cost estimate amount, expressly stated that the PCG would remain in force unless cancelled and replaced with alternative financial assurance; the submission also stated that the PCG and financial test would stay effective until alternative financial assurance was approved by NRC. For these reasons, the NRC staff finds PCG submission included all the elements of the financial test as set forth in 10 CFR Part 30, Appendix A.

In addition, licensees who use a PCG are required to have an STA in place, to meet 10 CFR Part 40, Appendix A, Criterion 9, which states, "[I]f a trust is not used, then a standby trust fund must be set up to receive funds in the event the Commission or State regulatory agency exercises its right to collect the surety." The purpose of an STA is to provide a separate account to hold decommissioning funds in the event of a default. Homestake currently has a STA in place to hold funds in event of a default by the licensee in the amount of \$83,455,824.<sup>10</sup> The HMC surety update submission includes a commitment by HMC to maintain the trust fund amount for NRC-approved cost estimates for the STA. Upon NRC approval, a final executed copy of the STA will be provided to NRC. Therefore, the NRC staff finds that Homestake has established an acceptable financial assurance mechanism based on the requirements in 10 CFR Part 30, Appendix A.

## **ENVIRONMENTAL REVIEW**

A license amendment to reflect an update in the amount of financial assurance or corrective revisions belongs to a category of actions that the NRC has determined do not individually or cumulatively have a significant effect on the environment. Such actions qualify for a categorical exclusion under 10 CFR 51.22(c) and do not require an environmental assessment.

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<sup>10</sup> ADAMS Accession No. ML19105B201.



Specifically, the NRC staff has determined that the financial assurance (surety) update is categorically excluded from further environmental review under 10 CFR 51.22(c)(10)(i).

## **AGENCIES AND PERSONS CONSULTED**

The NRC staff has determined that the proposed action will not affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Likewise, the NRC staff has determined that the proposed action is not the type of activity that has the potential to cause effects on historic properties. Therefore, in accordance with 36 CFR 800.3(a)(1), no further obligation is required under Section 106 of the National Historic Preservation Act.

## **PROPOSED LICENSE AMENDMENT**

Revise License Condition 28 to change the required surety amount to read: \$87,807,343.  
Revise License Condition 28 to clarify 10 CFR Part 40, Appendix A, II. Financial Criteria, Criteria 9 and 10, in two locations, and 10 CFR Part 40, Appendix A, II. Financial Criteria, Criteria 9 in one location.

## **SAFETY EVALUATION REPORT**

DATE: February 8, 2022

DOCKET: 040-08903

LICENSEE: Homestake Mining Company of California, License No. SUA-1471

FACILITY: Grants Reclamation Project

PROJECT MANAGER: Ron Linton

TECHNICAL REVIEWER: George Alexander

SUBJECT: Groundwater Monitoring Plan License Amendment Request to License Condition 35

### **SUMMARY AND CONCLUSIONS**

By letter dated April 22, 2021,<sup>1</sup> the Homestake Mining Company of California (HMC, Homestake, or the licensee) submitted a license amendment request (LAR) to the U.S. Nuclear Regulatory Commission (NRC) for review and approval. In its letter, HMC proposed the removal of well CF4 from the monitoring program specified in Table 2-1 of the Groundwater Monitoring Plan for the Grants Reclamation Project (GRP). The licensee revised its request in a letter dated October 29, 2021,<sup>2</sup> and proposed that well CE7 replace well CF4 in the Groundwater Monitoring Program. The NRC staff reviewed this request and finds that the removal of well CF4 and the addition of well CE7 is appropriate.

### **BACKGROUND**

The licensee is the holder of NRC License No. SUA-1471 for its former conventional uranium mill near Grants, New Mexico, known as the GRP. Homestake Mining Company of California has been a licensee since the late 1950's. The GRP ceased active uranium recovery operations in 1990. The GRP is currently under U.S. Environmental Protection Agency Superfund status and has a groundwater discharge permit from the State of New Mexico. Upon closure, the GRP will be most likely transferred to the U.S. Department of Energy for long-term care and maintenance.

### **TECHNICAL EVALUATION**

The HMC LAR dated April 22, 2021, and revised October 29, 2021, proposes the removal of well CF4 as specified in Table 2-1 of the Groundwater Monitoring Plan and adding well CE7 as a replacement well in the Groundwater Monitoring Plan. The current Groundwater Monitoring Plan contained in License Condition 35 A was submitted by HMC on November 20, 2017,<sup>3</sup> updated on October 8, 2019,<sup>4</sup> and was approved by the NRC on November 12, 2019.<sup>5</sup>

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<sup>1</sup> Agencywide Documents Access and Management System (ADAMS) Accession No. ML21112A266.

<sup>2</sup> ADAMS Accession No. ML21305A875.

<sup>3</sup> ADAMS Accession No. ML18018A102.

In HMC's Materials License SUA-1471, License Condition 35 states that, "[t]he licensee shall implement a groundwater compliance monitoring program to assess the performance of the groundwater restoration program." Well CF4 is located on the Large Tailings Pile (LTP) at HMC's GRP and is one of several monitoring wells for the Upper Chinle aquifer (UCA). In its April 22, 2021, letter, HMC discussed the recent changes in the water level and water quality in well CF4 that indicated the well casing was compromised. For these reasons, HMC recommended that well CF4 be plugged and abandoned. In addition, HMC discussed the reasons the remaining UCA wells listed in Table 2-1 of the Groundwater Monitoring Plan are sufficient to define the extent and severity of impacts to the UCA and to show changes in water quality.

By letter dated June 15, 2021,<sup>6</sup> the NRC staff provided an acceptance review letter and a request for additional information (RAI). The NRC staff reviewed the application and found that the water-elevation change observed in well CF4 was indicative of the well casing being compromised. As a result, the NRC staff requested that HMC propose an alternate well or alternate wells to monitor the effectiveness of groundwater corrective actions in the UCA because of the potential risk of significant concentration of contaminants in the UCA underlying the LTP.

In response to the RAI dated August 27, 2021,<sup>7</sup> HMC proposed using the existing CE series wells that are already in the license (i.e., CE2, CE8, and CE15) to demonstrate the effectiveness of the correction actions. The licensee stated that these wells are located within the mixing zone, as is well CF4, and are downgradient of well CF4 and the LTP. In addition, HMC proposed the use of wells CE7, CE13, and CE17 because they are routinely monitored, provide comparable information to well CF4, and do not require well completions through the tailings.

By letter dated October 7, 2021,<sup>8</sup> the NRC stated:

*The NRC staff has reviewed the existing monitoring wells located near and adjacent to the LTP that are completed in the UCA for a possible replacement well or wells for well CF4 in the Groundwater Monitoring Plan in NRC license SUA-1471, Condition 35 A, and to comply with 10 CFR Part 40, Appendix A, Criterion 7A, that states in part, "The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in groundwater continue to comply with the standards set by the Commission."*

*Wells CE7, CE13, and CE17 are located at the downgradient edge of the LTP and provide more direct monitoring data regarding the performance of the groundwater corrective actions than other wells currently in the Groundwater Monitoring Plan. The 2020 Annual Monitoring Report / Performance Review shows well CE7, in particular, with higher concentrations of several constituents of concern (e.g., uranium, selenium, and molybdenum). Accordingly, wells at the downgradient edge of the LTP should*

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<sup>4</sup> ADAMS Accession No. ML19281C055.

<sup>5</sup> ADAMS Accession Package No. ML19217A352.

<sup>6</sup> ADAMS Accession No. ML21160A216.

<sup>7</sup> ADAMS Accession No. ML21242A450.

<sup>8</sup> ADAMS Accession No. ML21270A075.

*provide earlier indication of compliance with the groundwater protection standards and effectiveness of corrective actions than other UCA wells located further downgradient. While wells CE7, CE13, and CE17 have been monitored regularly by the licensee, none of these wells are in the Groundwater Monitoring Plan in Condition 35 A, and monitoring could be discontinued at any time. The NRC staff requests HMC evaluate adding well CE7 into the Groundwater Monitoring Plan as a replacement for well CF4.*

By letter dated October 29, 2021,<sup>9</sup> HMC proposed that well CE7 replace well CF4 in the Groundwater Monitoring Plan with the same parameter list and frequency of monitoring and be incorporated into the license.

The NRC staff has reviewed the proposed replacement of well CF4 with well CE7 in the groundwater compliance monitoring plan. Because well CE7 is located downgradient of well CF4, at the immediate downgradient edge of the LTP, and completed in the same zone of the UCA, the NRC staff concludes that replacing well CF4 with well CE7 will allow for the adequate evaluation of the effectiveness of the groundwater corrective action program. Accordingly, the NRC staff approves HMC's request to amend the groundwater compliance monitoring plan at the GRP site as provided in Appendix A of this report.

## **ENVIRONMENTAL REVIEW**

### **Background**

The Commission addressed whether this type of change requires an environmental review in the Final Rule to 10 CFR Parts 2, 30, 40, 50, 51, 61, 70, 72, and 110, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments (49 FR 9352, March 12, 1984) which states:

*Some requests for amendment to these types of licenses are administrative, organizational, or procedural in nature or involve changes in process operations and equipment which do not result in any significant adverse incremental impacts to the environment from the licensed activity. Implementation of these minor or routine types of changes do not significantly alter the previously evaluated environmental impacts associated with the licensed operation, taking into account construction impacts, types and amounts of effluents released by the operation, occupational exposure of employees, or potential accidents. Furthermore, these amendments do not affect the scope or nature of the licensed activity.*

### **Categorical Exclusion**

The categorical exclusion in 10 CFR 51.22(c)(11) applies to the issuance of certain amendments to materials licenses issued for the possession and use of source material for uranium milling. The 10 CFR 51.22(c)(11) categorical exclusion applies when the proposed action meets the criteria listed in 10 CFR 51.22(c)(11)(i)-(iv). An analysis of these provisions is provided below:

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<sup>9</sup> ADAMS Accession No. ML21305A875.

- (a) 10 CFR 51.22(c)(11)(i)—There is no significant change in the types or significant increase in the amounts of any effluents that may be released off-site.

The proposed action would not involve any changes to effluents. The proposed action is to replace a compliance monitoring well with a compromised well casing, well CF4, with another compliance monitoring well that already exists, well CE7. Therefore, there is no significant change in the types or increase in the amounts of effluents that may be released off-site.

- (b) 10 CFR 51.22(c)(11)(ii)—There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed action would not involve any significant changes to public or occupational radiation exposures. The replacement of Well CF4 with Well CE7 in The Groundwater Monitoring Plan does not involve the placement of a new well, as both wells are currently being monitored and will continue to be monitored. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

- (c) 10 CFR 51.22(c)(11)(iii)—There is no significant construction impact.

The proposed action would not involve any significant construction activities. The replacement well, CE7 has already been installed and monitored for several years. Well CF4 may be abandoned in the future, but the activities related to abandoning well CF4 would be minimal. Therefore, there is no significant construction impact.

- (d) 10 CFR 51.22(c)(11)(iv)—There is no significant increase in the potential for or consequences from radiological accidents.

The proposed action is to replace one compliance monitoring well with another well due to a compromised well casing. Therefore, there is no significant increase in the potential for or consequences from radiological accidents.

This proposed action meets all of the provisions in 10 CFR 51.22(c)(11). The NRC staff has determined that the change requested to the Groundwater Monitoring Plan meets the eligibility for the categorical exclusion set forth in 10 CFR 51.22(c)(11) and is a category of actions that does not result in any significant effect, either individually or cumulatively, on the human environment. Therefore, the preparation of an environmental assessment or environmental impact statement is not required.

#### **Agencies and Persons Consulted**

The NRC staff has determined that the proposed action will not affect listed species or critical habitat. Therefore, no further consultation is required under Section 7 of the Endangered Species Act. Likewise, the NRC staff has determined that the proposed action is not the type of activity that has the potential to cause effects on historic properties. Therefore, in accordance with 36 CFR 800.3(a)(1), no further obligation is required under Section 106 of the National Historic Preservation Act.

**PROPOSED LICENSE AMENDMENT**

35. Unchanged

A. Implement the groundwater monitoring shown in Tables 2-1 and 2-2 of the Groundwater Monitoring Plan submitted by the licensee dated November 20, 2017 (ADAMS Accession No. ML18018A102), as updated by the licensee in correspondence dated October 8, 2019 (ADAMS Accession No. ML19281C055), and updated in correspondence dated December 16, 2021 (ADAMS Accession No. ML21355A292).

B. Unchanged

C. Unchanged

D. Unchanged

E. Unchanged

## Appendix A

<b>Table 2-1. Groundwater Monitoring at the Grants Site</b>		
<b>Well</b>	<b>Parameter List Code</b>	<b>Frequency of Monitoring</b>
<i>Alluvial Background Wells</i>		
P, Q, 921	B, F	Annual
<i>Operational Monitoring</i>		
Collection system wells	Total Volume	Monthly
Injection system wells	Total Volume	Monthly
Reversal wells B, BA, KZ, DZ, SM, SN, S2, S5	Water Level	Weekly
<i>San Andres Wells</i>		
Deep #1R, Deep #2R, 943M, 951R	B, F H	Annual Semiannual
<i>Alluvial Compliance Monitoring Wells</i>		
On-Site Monitoring Wells (Evap. Ponds) DD, DD2, X	B, F plus Mn H	Annual Quarterly
Additional On-Site Monitoring Wells 1A, 1K, 639, 802, B11, D1, F, FB, GH, GN, L, L5, K9, M3, MX, MB, MQ, NC, S4, SUB3, T2, T19, T23, T41, T54	B, F	Annual
South Off-Site Wells 490, 497, 540, 631, 643#, 644, 864, 869, Q5, R3, SUB2	B, F	Annual
Section 34 Land application wells 555, 556, 557, 844, 845, 846	B, F	Annual
North Off-Site Wells (includes Section 28 Land application wells) 688, 881, 882, 883, 884, 886, 888, 893, 659, H2A, MR, H55, MO	B, F	Annual
Western Portion of North Off-Site Wells (Includes Section 33 Land application wells) 541, 551, 647, 649, 654, 899, 996	B, F	Annual
<i>Chinle Compliance Monitoring Wells</i>		
Upper Chinle Wells 494, CE2, CE7, CE8, CE9, CE15, CW3, CW13#, CW18, CW25#	B, F	Annual
Middle Chinle Wells 493, ACW, CW17, CW2, CW28, CW45, CW55, CW62, CW76, R3, Y7	B, F	Annual
Lower Chinle Wells CW29, CW32, CW41, CW42, CW43, V6	B, F	Annual

Note: # Monitoring will start after well ceasing to be used for injection

## Appendix B

Table 2-2. Site Analytical Suites

Parameter List Code	Included Parameters (Dissolved)	Method	Reporting Limits	Units
B	Water level			
	pH	A4500-HB	0.01	s.u.
	Total dissolved solids (TDS)	A2540 C	20	mg/L
	Sulfate (SO <sub>4</sub> )	E300.0	4	mg/L
	Chloride (Cl)	E300.0	1	mg/L
	Bicarbonate (HCO <sub>3</sub> )	A2320 B	5	mg/L
	Carbonate (CO <sub>3</sub> )	A2320 B	5	mg/L
	Sodium (Na)	E200.7	0.9	mg/L
	Calcium (Ca)	E200.7	0.5	mg/L
	Magnesium (Mg)	E200.7	0.5	mg/L
	Potassium (K)	E200.7	0.5	mg/L
	Nitrate (NO <sub>3</sub> )	E353.2	0.1	mg/L
	Uranium (U)	E200.8	0.0003	mg/L
	Selenium (Se)	E200.8	0.005	mg/L
	Molybdenum (Mo)	E200.8	0.03	mg/L
	Radium-226 (Ra-226)	E903.0	Precision Variable	pCi/L
F	Vanadium (V)	E200.8	0.01	mg/L
	Radium-228 (Ra-228)	RA-05	Precision Variable	pCi/L
	Thorium-230 (Th-230)	E908.0	Precision Variable	pCi/L
H	Water Level			
	TDS	A2540 C	20	mg/L
	SO <sub>4</sub>	E300.0	4	mg/L
	U	E200.8	0.0003	mg/L
	Se	E200.8	0.005	mg/L
	Mo	E200.8	0.03	mg/L
	Cl	E300.0	1	mg/L



Homestake Mining Company NRC License Amendment 58, SUA-1471 DATE February 8, 2022

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