

**From:** [Brad Bingham](#)  
**To:** [Linton, Ron](#); [Jennifer Ortega](#)  
**Cc:** [Alexander, George](#); [McCarthy, Steve](#); [Jennifer Ortega](#); [Daniel Lattin](#)  
**Subject:** [External\_Sender] RE: HMC Surety and GW Monitoring Plan Amendments  
**Date:** Thursday, December 16, 2021 8:58:29 AM  
**Attachments:**

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Ron,

The proposed table changes are appropriate and acceptable. Also, the new surety amount of \$87,807,343 is acceptable.

Respectfully,

**BARRICK**

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**Brad R. Bingham**  
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**From:** Linton, Ron <Ron.Linton@nrc.gov>  
**Sent:** Friday, December 10, 2021 12:52 PM  
**To:** Brad Bingham <bbingham@barrick.com>; Jennifer Ortega <Jennifer.Ortega@barrick.com>  
**Cc:** Alexander, George <George.Alexander@nrc.gov>; McCarthy, Steve <Steve.McCarthy@nrc.gov>  
**Subject:** EXT: HMC Surety and GW Monitoring Plan Amendments

Brad:

Attached is the proposed change to Table 2-1 & 2-2 for the Groundwater Monitoring Plan. Please review and let us know if accurate and acceptable.

The proposed surety is \$87,807,343, which is \$88,830 higher than proposed in the HMC March 30, 2021, surety update. The increase was due to the well calculations as reported in the September 30, 2021, response to RAI correspondence that 347 wells were abandoned in 2020 vs. 394 wells as reported and used in the March 30, 2021, update. The additional 47 wells @ \$1890/well = \$88,830.

Please let us know that \$87,807,343 is acceptable.

Thanks



Ron C. Linton  
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U.S. Nuclear Regulatory Commission  
Office of Nuclear Material Safety and Safeguards  
Division of Decommissioning, Uranium Recovery, and Waste Programs  
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<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

**Table 2-2. Site Analytical Suites**

<b>Parameter List Code</b>	<b>Included Parameters (Dissolved)</b>	<b>Method</b>	<b>Reporting Limits</b>	<b>Units</b>
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