

Star Andre

BILL RICHARDSON GOVERNOR

State of New Mexico ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Christy Morris PO Box 3575 Milan, NM 87021

Subject: Analytical reports for water sample RW-19 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935), Milan, New Mexico.

Dear Ms. Morris:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical reports for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-19". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the Federal drinking water standard (MCL) for total selenium, secondary Federal drinking water standards for total aluminum and iron, and State and secondary Federal drinking water

Ms. C. Morris

RE: Analytical reports for water sample RW-19 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

.

November 1, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)	Total aluminum (mg/L)	Total iron (mg/L)	Total manganese (mg/L)	Total selenium (mg/L)
Sample RW-19	683	1370	1.34	1.79	1.37	0.062
EPA MCL	250 (a)	500 (a)	0.05 - 0.2 (a)	0.3 (a)	0.05 (a)	0.05
NMWQCC (b)	600	1000	None	None	None	None

standards for sulfate and total dissolved solids (TDS).

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

According to the Agency for Toxic Substances and Disease Registry (ATSDR), selenium in trace amounts is necessary for good health, but can be harmful in high concentrations. Based on the exceedance of the primary drinking water standard for selenium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes selenium, such as reverse osmosis. Please review the enclosed fact sheets for additional information pertaining to the health effects of selenium.

The secondary drinking water standards for aluminum, iron, manganese, sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to ATSDR, exposure to high concentrations of aluminum and manganese may be harmful. According to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of aluminum, iron, manganese, sulfate, and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. Vavid L. Maverson

Superfund Oversight Section

Ms. C. Morris

RE: Analytical reports for water sample RW-19 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

a de serve

November 1, 2006

Enclosures: Laboratory analytical report from Energy Laboratories (2 pages) Fact Sheets:

ToxFAQs[™] for aluminum (ATSDR)
 ToxFAQs[™] for manganese (ATSDR)
 ToxFAQs[™] for selenium (ATSDR)
 Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)
 Sulfate in Drinking Water (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-002 Client Sample ID: RW-19 Report Date: 06/06/06 Collection Date: 05/02/06 14:50 Date Received: 05/03/06 Matrix: Aqueous

				M	CL/	
Analy	ses	Result	Units	Qual RL Q	CL Method	Analysis Date / By
META	LS - TOTAL					
	Numinum	1.34	mg/L	0.001	E200.8	05/04/06 17:12 / sml
119 A	Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 17:12 / sml
124 B	Barium	0.043	mg/L	0.001	E200.8	05/04/06 17:12 / sml
126 C	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 17:12 / sml
101 C	Calcium	177	mg/L	0.5	E200.7	05/12/06 15:32 / ts
120 C	Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 17:12 / sml
128 C	Cobalt	0.002	mg/L	0.001	E200.8	05/04/06 17:12 / sml
129 C	Copper	0.033	mg/L	0.001	E200.8	05/04/06 17:12 / sml
121 In	on	1.79	mg/L	0.01	E200.7	05/12/06 15:32 / ts
133 L	ead	0.018	mg/L	0.001	E200.8	05/04/06 17:12 / sml
102 M	lagnesium	42.3	mg/L	0.5	E200.7	05/12/06 15:32 / ts
134 M	langanese	1.37	mg/L	0.001	E200.8	05/04/06 17:12 / sml
135 M	lercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 17:12 / sml
136 M	lolybdenum	0.003	mg/L	0.001	E200.8	05/04/06 17:12 / sml
137 N	ickel	0.003	mg/L	0.001	E200.8	05/04/06 17:12 / sml
103 P	otassium	4.2	mg/L	0.5	E200.7	05/12/06 15:32 / ts
140 S	elenium	0.062	mg/L	0.001	E200.8	05/04/06 17:12 / sml
141 Si	ilver	<0.001	mg/L	0.001	E200.8	05/04/06 17:12 / sml
104 Se	odium	216	mg/L	0.5	E200.7	05/12/06 15;32 / ts
115 U	ranium	0.0228	mg/L	0.0003	E200.8	05/04/06 17:12 / sml
142 Va	anadium	0.005	mg/L	0.001	E200.8	05/04/06 17:12 / sml
143 Zi	nc ²	0.433	mg/L	D.001	E200.8	05/04/06 17:12 / sml
RADIO	NUCLIDES - DISSOLVED					
045 Ra	adium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 11:52 / trs
057 Ra	adium 228	<1.0	pCI/L	1.0	RA-05	05/22/06 11:21 / pj
048 Th	norium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
ΔΑΤΑ (QUALITY					
	C Balance (± 5)	2.07	%		Calculation	05/15/06 11:43 / cp
	nions	21.2	meg/L		Calculation	05/15/06 11:43 / cp
195 Ca	ations	22.1	meq/L		Calculation	05/15/06 11:43 / cp
079 Sc	blids, Total Dissolved Calculated	1360	mg/L		Calculation	05/15/06 11:43 / cp
	DS Balance (0.80 - 1.20)	1.01	dec. %		Calculation	05/15/06 11:43 / cp

Report RL - Ar Definitions: QCL - 0

RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-002 Client Sample ID: RW-19 Report Date: 06/06/06 Collection Date: 05/02/06 14:50 Date Received: 05/03/06 Matrix: Aqueous -

					MCL	1	
Ana	alyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JORIONS						
075	Alkalinity, Total as CaCO3	265	mg/L		1	A2320 B	05/11/06 11:30 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:30 / th
005	Bicarbonate as HCO3	323	mg/L		1	A2320 B	05/11/06 11:30 / th
007	Chloride	76	mg/L		1	A4500-CI B	05/04/06 15:20 / jl
139	Nitrogen, Nitrate as N	1.0	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.1	mg/L		0.1	E353.2	05/04/06 10:13 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:22 / jal
800	Sulfate	683	mg/L	D	30	A4500-SO4 E	05/09/06 16:27 / th
РΗγ	SICAL PROPERTIES						
009	pН	7.97	s.u.		0.01	A4500-H B	05/04/06 13:53 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1370	mg/L		10	A2540 C	05/05/06 14:55 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.026	mg/L		0.001	E200.8	05/05/06 03:20 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
024	Barium	0.015	mg/L		0.001	E200.8	05/05/06 03:20 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
001	Calcium	170	mg/L		0.5	E200.7	05/10/06 16:37 / ts
027	Chromium	<0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
028	Cobalt .	0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
029	Copper	0.002	mg/L		0.001	E200.8	05/05/06 03:20 / bws
032	Iron	0.04	mg/L		0.01	E200.7	05/10/06 16:37 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
002	Magnesium	43.3	mg/L		0.5	E200.7	05/10/06 16:37 / ts
034	Manganese	0.453	mg/L		0.001	E200.8	05/05/06 03:20 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 03:20 / bws
036	Molybdenum	0.003	mg/L		0.001	E200.8	05/05/06 03:20 / bws
037	Nickel	0.002	mg/L		0.001	E200.8	05/05/06 03:20 / bws
003	Potassium	5.0	mg/L		0.5	E200.7	05/10/06 16:37 / ts
040	Selenium	0.063	mg/L		0.001	E200.8	05/05/06 03:20 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
004	Sodium	218	mg/L		0.5	E200.7	05/10/06 16:37 / ts
015	Uranium	0.0202	mg/L		0.0003	E200.8	05/05/06 03:20 / bws
)42	Vanadium	0.001	mg/L		0.001	E200.8	05/05/06 03:20 / bws
)43	Zinc	0.081	mg/L		0.001	E200.8	05/05/06 03:20 / bws

Report

RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

TEAALH AAAAAA



State of New Mexico ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

BILL RICHARDSON GOVERNOR

November 2, 2006

Ms. Elizabeth Dobbs 4200 San Mateo Road Grants, NM 87020

Subject: Analytical report for water sample RW-47 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Dobbs:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-47". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the secondary Federal drinking water standard for total dissolved solids (TDS).

Ms. E. Dobbs

RE: Analytical reports for water sample RW-47 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	TDS (mg/L)
Sample RW-47	658
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not a health-based standard, and therefore the presence of this analyte only affects the aesthetic qualities of the water such as taste, color and odor. According to the Environmental Protection Agency (EPA), consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

David L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Ms. E. Dobbs

RE: Analytical reports for water sample RW-47 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-009 Client Sample ID: RW-47
 Report Date:
 06/06/06

 Collection Date:
 05/02/06 09:40

 Date Received:
 05/03/06

 Matrix:
 Aqueous

				MC	 L/	
An	alyses	Result	Units	Qual RL QC		Analysis Date / By
ME	TALS - TOTAL					
122	Aluminum	0.021	mg/L	0.001	E200.8	05/09/06 03:14 / bws
119	Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 20:59 / sml
124	Barium	0.017	mg/L	0.001	E200.8	05/04/06 20:59 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
101	Calcium	7.4	mg/L	0.5	E200.7	05/12/06 16:12 / ts
120	Chromium	0.002	mg/L	0.001	E200.8	05/04/06 20:59 / sml
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
129	Copper	0.002	mg/L	0.001	E200.8	05/04/06 20:59 / sml
121	Iron	0.01	mg/L	0.01	E200.7	05/12/06 16:12 / ts
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
102	Magnesium	2.2	mg/L	0.5	E200.7	05/12/06 16:12 / ts
134	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 20:59 / smì
136	Molybdenum	0.002	mg/L	0.001	E200.8	05/04/06 20:59 / sml
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
103	Potassium	1.7	mg/L	0.5	E200.7	05/12/06 16:12 / ts
140	Selenium	0.012	mg/L	0.001	E200.8	05/04/06 20:59 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 20:59 / sml
104	Sodium	228	mg/L	0.5	E200.7	05/12/06 16:12 / ts
115	Uranium	0.0166	mg/L	0.0003	E200.8	05/04/06 20:59 / sml
142	Vanadium	0.013	mg/L	0.001	E200.8	05/04/06 20:59 / sml
143	Zinc	0.006	mg/L	0.001	E200.8	05/04/06 20:59 / sml
RΔΓ	DIONUCLIDES - DISSOLVED					
045	Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 18:55 / trs
057	Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 13:44 / pi
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
דאח						
192	A/C Balance (± 5)	-1.67	%		Calculation	05/15/06 11:45 /
192	Anions	10.9	™eq/L		Calculation	05/15/06 11:45 / cp 05/15/06 11:45 / cp
195	Cations	10.5	meq/L		Calculation	
079	Solids. Total Dissolved Calculated	670	mg/L			05/15/06 11:45 / cp
	•	0.980	dec. %		Calculation	05/15/06 11:45 / cp
200	TDS Balance (0.80 - 1.20)	0.900	uec. %		Calculation	05/15/06 11:45 / cp



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-009 Client Sample ID: RW-47 **Report Date:** 06/06/06 **Collection Date:** 05/02/06 09:40 **Date Received:** 05/03/06 **Matrix:** Aqueous

		. .		<u> </u>	MCL/		
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	255	mg/L		1	A2320 B	05/11/06 12:40 / th
006	Carbonate as CO3	6	mg/L		1	A2320 B	05/11/06 12:40 / th
005	Bicarbonate as HCO3	301	mg/L		1	A2320 B	05/11/06 12:40 / th
007	Chloride	48	mg/L		1	A4500-CI B	05/04/06 15:36 / jl
139	Nitrogen, Nitrate as N	1.5	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.5	mg/L		0.1	E353.2	05/04/06 10:38 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:23 / jal
008	Sulfate	222	mg/L	D	6	A4500-SO4 E	05/09/06 16:57 / th
РНҮ	SICAL PROPERTIES				,		
009	pH .	8.56	s.u.		0.01	A4500-H B	05/04/06 14:11 / jdh
010	Solids, Total Dissolved TDS @ 180 C	658	mg/L		10	A2540 C	05/05/06 14:57 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.003	mg/L		0.001	E200.8	05/05/06 05:18 / bws
023	Arsenic	0.002	mg/L		0.001	E200.8	05/05/06 05:18 / bws
024	Barium	0.016	mg/L		0.001	E200.8	05/05/06 05:18 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
001	Calcium	7.6	mg/L		0.5	E200.7	05/12/06 15:06 / ts
027	Chromium	0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
029	Copper	0.002	mg/L		0.001	E200.8	05/05/06 05:18 / bws
032	Iron	<0.01	mg/L		0.01	E200.7	05/12/06 15:06 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
002	Magnesium	2.3	mg/L		0.5	E200.7	05/12/06 15:06 / ts
034	Manganese	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 05:18 / bws
036	Molybdenum	0.002	mg/L		0.001	E200.8	05/05/06 05:18 / bws
)37	Nickel	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
003	Potassium	1.9	mg/L		0.5	E200.7	05/12/06 15:06 / ts
40	Selenium	0.011	mg/L		0.001	E200.8	05/05/06 05:18 / bws
)41	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 05:18 / bws
004	Sodium	236	mg/L		0.5	E200.7	05/12/06 15:06 / ts
)15	Uranium	0.0155	mg/L		0.0003	E200.8	05/05/06 05:18 / bws
)42	Vanadium	0.013	mg/L		0.001	E200.8	05/05/06 05:18 / bws
)43	Zinc	0.003	mg/L		0.001	E200.8	05/05/06 05:18 / bws

Report

RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918

> Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Fidel and Ms. Leticia Edwinas 1901 E. Santa Fe Avenue Grants, NM 87020

Subject: Analytical reports for water samples RW-36A and RW-36B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935), Milan, New Mexico.

Dear Mr. and Ms. Edwinas:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical reports for the water samples collected from your well on May 1, 2006. For tracking purposes, the samples from your well were designated as "RW-36A" and RW-36B. Sample RW-36A was collected very early in the sampling process, while sample RW-36B was collected after the water had run for several minutes. The samples were analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

Analytical results that do exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for these samples show that the late sample of water from your well exceeds the State and secondary Federal drinking water standards for sulfate and total dissolved Mr. and Ms. Edwinas

RE: Analytical reports for water samples RW-36A and RW-36B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

solids (TDS). Additionally, both samples indicate that your well water exceeds secondary Federal drinking water standards for aluminum, iron, and manganese.

SAMPLE	Sulfate (mg/L)	TDS (mg/L)	Total aluminum (mg/L)	Total iron (mg/L)	Total manganese (mg/L)
Sample RW-36A	149 (no exceedance)	380 (no exceedance)	2.96	15.0	0.096
Sample RW-36B	299	710	5.20	7.61	0.373
EPA MCL	250 (a)	500 (a)	0.05 – 0.2 (a)	0.3 (a)	0.05 (a)
NMWQCC (b)	600	1000	None	None	None

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate, TDS, aluminum, iron, and manganese are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as orange staining. According to the Agency for Toxic Substances and Disease Registry (ATSDR), consumption of manganese also usually has no harmful effects, except in very high quantities. Consumption of manganese also usually has no harmful effects, except in very high quantities over a long period of time. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate, TDS, aluminum, iron, and manganese.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and Agency for Toxic Substances and Disease Registry (ATSDR) to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

 ~ 10 W_{\odot}

Mr. and Ms. Edwinas

RE: Analytical reports for water samples RW-36A and RW-36B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

- 1 SC

November 1, 2006

Sincerely,

David L. Mayerson Superfund Oversight Section

Enclosures: Laboratory analytical report from Energy Laboratories (4 pages) Fact Sheets:

ToxFAQs[™] for Aluminum (ATSDR) ToxFAQs[™] for Manganese (ATSDR) Sulfate in Drinking Water (EPA) Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-012 Client Sample ID: RW-36A
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 09:40

 Date Received:
 05/02/06

 Matrix:
 Aqueous

		(1		MC		
Ana	lyses	Result	Units	Qual	RL QC	L Method	Analysis Date / By
MA.	IOR IONS						
075	Alkalinity, Total as CaCO3	121	mg/L		1	A2320 B	05/08/06 10:50 / th
006	Carbonate as CO3	2	mg/L		1	A2320 B	05/08/06 10:50 / th
005	Bicarbonate as HCO3	144	mg/L		1	A2320 B	05/08/06 10:50 / th
007	Chloride	37	mg/L		1	A4500-CI B	05/02/06 13:55 / ji
139	Nitrogen, Nitrate as N	0.7	mg/L		0.1	E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	0.7	mg/Ĺ		0.1	E353.2	05/02/06 15:30 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/Ĺ		0.1	A4500-NO2 B	05/02/06 13:20 / jal
800	Sulfate	149	mg/L	D	6	A4500-SO4 E	05/08/06 15:54 / th
PHY	SICAL PROPERTIES		,				
009	рН	8.45	s.u. '		0.01	A4500-H B	05/03/06 14:49 / jdh
010	Solids, Total Dissolved TDS @ 180 C	380	mg/L		10	A2540 C	05/03/06 16:55 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	0.006	mg/Ļ		0.001	E200.8	05/03/06 17:59 / sml
023	Arsenic	<0.001	mg/Ĺ		0.001	E200.8	05/03/06 17:59 / sml
024	Barium	0.017	mg/L		0.001	E200.8	05/03/06 17:59 / sml
026	Cadmium	<0.001	mg/Ĺ		0.001	E200.8	05/03/06 17:59 / sml
001	Calcium	27.5	mg/Ľ		0.5	E200.7	05/16/06 14:12 / cp
027	Chromium	0.001	mg/L		0.001	E200.8	05/03/06 17:59 / sml
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/03/06 17:59 / sml
029	Copper	<0.001	mg/L		0.001	E200.8	05/03/06 17:59 / sml
032	Iron	0.02	mg/Ľ		0.01	E200.7	05/16/06 14:12 / cp
033	Lead	<0.001	mg/Ļ		0.001	E200.8	05/03/06 17:59 / sml
002	Magnesium	13.8	mg/Ľ		0.5	E200.7	05/16/06 14:12 / cp
034	Manganese	0.018	mg/Ļ		0.001	E200.8	05/03/06 17:59 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 17:59 / sml
036	Molybdenum	0.007	mg/L		0.001	E200.8	05/03/06 17:59 / sml
)37	Nickel	<0.001	mg/Ľ		0.001	E200.8	05/03/06 17:59 / sml
003	Potassium	3.4	mg/L		0.5	E200.7	05/16/06 14:12 / cp
)40	Selenium	0.002	mg/Ļ		0.001	E200.8	05/03/06 17:59 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 17:59 / sml
)04	Sodium	85.1	mg/Ļ		0.5	E200.7	05/16/06 14:12 / cp
)15	Uranium	0.0014	mg/L		0.0003	E200.8	05/03/06 17:59 / sml
42	Vanadium	0.002	mg/L		0.001	E200.8	05/03/06 17:59 / sml
)43	Zinc	0.005	mg/L		0.001	E200.8	05/03/06 17:59 / sml

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-012 Client Sample ID: RW-36A
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 09:40

 Date Received:
 05/02/06

 Matrix:
 Aqueous

				Ν	MCL/	
Analys	ses	Result	Units	Qual RL		Analysis Date / By
METAI	LS - TOTAL					
	Juminum	2.96	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	rsenic	0.008	mg/L	0.001	E200.8	05/04/06 19:25 / smł
124 B	arium	0.063	mg/L	0.001	E200.8	05/04/06 19:25 / sml
126 C	admium	<0.001	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	alcium	25.1	mg/L	0.5	E200.7	05/16/06 15:44 / cp
	hromium	0.002	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	obalt	0.001	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	opper	0.007	mg/L	0.001	. E200.8	05/04/06 19:25 / sml
	on	15.0	mg/L	0.01	E200.7	05/16/06 15:44 / cp
	ead	0.020	mg/L	0.001	E200.8	05/04/06 19:25 / sml
102 M	lagnesium	7.4	mg/L	0.5	E200.7	05/16/06 15:44 / cp
	langanese	0.096	mg/L	0.001	E200.8	05/04/06 19:25 / smi
	lercury	<0.0002	mg/L	0.0002	E200,8	05/04/06 19:25 / sml
	lolybdenum	0.013	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	ickel	0.003	mg/L	0.001	E200.8	05/04/06 19:25 / sml
	otassium	4.8	mg/L	0.5	E200.7	05/16/06 15:44 / cp
	elenium	<0.001	mg/L	0.001	E200.8	05/04/06 19:25 / sml
141 Si	llver	<0.001	mg/L	0.001	E200.8	05/04/06 19:25 / sml
104 So	odium	75.2	mg/L	0.5	E200.7	05/16/06 15:44 / cp
	ranium	0.0007	mg/L	0.0003	E200.8	05/04/06 19:25 / sml
	anadium	0.007	mg/L	0.001	E200.8	05/04/06 19:25 / sml
143 Zi	inc	0.299	mg/L	0.001	E200.8	05/04/06 19:25 / sml
RADIO	NUCLIDES - DISSOLVED					
045 Ra	adium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs
	adium 226 precision (±)	0.4	pCi/L		E903.0	05/22/06 16:16 / trs
057 Ra	adium 228	1.9	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257 Ra	adium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
	norium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DATA (QUALITY					
192 A/	C Balance (± 5)	-4.33	%		Calculation	05/17/06 12:57 / cp
	nlons	6.86	meq/L		Calculation	05/17/06 12:57 / cp
	ations	6.29	meq/L		Calculation	05/17/06 12:57 / cp
079 Sc	olids, Total Dissolved Calculated	400	mg/L		Calculation	05/17/06 12:57 / cp
200 TC	DS Balance (0.80 - 1.20)	0.950	dec. %		Calculation	05/17/06 12:57 / cp

Report RL - / Definitions: OCL

RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-013

Client Sample ID: RW-36B

 Report Date:
 06/06/06

 Collection Date:
 05/01/06 09:50

 Date Received:
 05/02/06

 Matrix:
 Aqueous

		·			MC		
Ana	lyses	Result	Units	Qual	RL QC	L Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	220	mg/L		1	A2320 B	05/08/06 10:54 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/08/06 10:54 / th
005	Bicarbonate as HCO3	268	mg/L		1	A2320 B	05/08/06 10:54 / th
007	Chloride	47	mg/L		1	A4500-CI B	05/02/06 13:55 / jl
139	Nitrogen, Nitrate as N	3.1	mg/L		0.1	E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	3.2	mg/L		0.1	E353.2	05/02/06 15:32 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/02/06 13:20 / jal
800	Sulfate	299	mg/L	D	6	A4500-SO4 E	05/08/06 15:55 / th
РНҮ	SICAL PROPERTIES			•	·		
009	рН	7.74	s.u.		0.01	A4500-H B	05/03/06 14:51 / jdh
010	Solids, Total Dissolved TDS @ 180 C	710	mg/L		10	A2540 C	05/03/06 16:56 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	0.006	mg/L		0.001	E200.8	05/03/06 18:06 / sml
023	Arsenic	0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
024	Barium	0.089	mg/L		0.001	E200.8	05/03/06 18:06 / sml
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
001	Calcium	96.4	mg/L		0.5	E200.7	05/16/06 14:15 / cp
027	Chromium	0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
028	Cobalt	0.001	mg/L		0.001	E200.8	05/03/06 18:06 / smł
029	Copper	<0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
032	Iron	0.01	mg/L		0.01	E200.7	05/16/06 14:15 / cp
033	Lead	<0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
002	Magnesium	32.6	mg/L		0.5	E200.7	05/16/06 14:15 / cp
034	Manganese	0.301	mg/L		0.001	E200.8	05/03/06 18:06 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 18:06 / sml
036	Molybdenum	0.002	mg/L		0.001	E200.8	05/03/06 18:06 / sml
037	Nickel	0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
003	Potassium	4.0	mg/L		0.5	E200.7	05/16/06 14:15 / cp
040	Selenium	0.010	mg/L		0.001	E200.8	05/03/06 18:06 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 18:06 / sml
004	Sodium	86.0	mg/L		0.5	E200.7	05/16/06 14:15 / cp
015	Uranium	0.0081	mg/L		0.0003	E200.8	05/03/06 18:06 / sml
)42	Vanadium	0.003	mg/L		0.001	E200.8	05/03/06 18:06 / sml
)43	Zinc	0.003	mg/L		0.001	E200.8	05/03/06 18:06 / sml
			-				

Report Definitions: MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-013

Client Sample ID: RW-36B

Report Date: 06/06/06 **Collection Date:** 05/01/06 09:50 **Date Received:** 05/02/06 **Matrix:** Aqueous

					MCL/		
An	alyses	Result	Units	Qual RI	QCL	Method	Analysis Date / By
ME	TALS - TOTAL						
122	Aluminum	5.20	mg/L	0.00		E200.8	05/04/06 19:32 / sml
119	Arsenic	0.007	mg/L	0.00	l	E200.8	05/04/06 19:32 / sml
124	Barium	0.132	mg/L	0.001	ļ	E200.8	05/04/06 19:32 / smi
126	Cadmium	< 0.001	mg/L	0.001		E200.8	05/04/06 19:32 / sml
101	Calcium	98.2	mg/L	0.5		E200.7	05/16/06 16:07 / cp
120	Chromium	0.004	mg/L	0.001		E200.8	05/04/06 19:32 / sml
128	Cobalt	0.003	mg/L	0.001		E200.8	05/04/06 19:32 / sml
129	Copper	0.009	mg/L	0.001		E200.8	05/04/06 19:32 / sml
121	lron	7.61	mg/L	0.01		E200.7	05/16/06 16:07 / cp
133	Lead	0.006	mg/L	0.001		E200.8	05/04/06 19:32 / sml
102	Magnesium	33.6	mg/L	0.5		E200.7	05/16/06 16:07 / cp
134	Manganese	0.373	mg/L	0.001		E200.8	05/04/06 19:32 / sml
135	Mercury	<0.0002	mg/L	0.0002	2	E200.8	05/04/06 19:32 / sml
36	Molybdenum	0.001	mg/L	0.001		E200.8	05/04/06 19:32 / sml
37	Nickel	0.006	mg/L	0.001		E200.8	05/04/06 19:32 / sml
03	Potassium	4.9	mg/L	0.5		E200.7	05/16/06 16:07 / cp
40	Selenium	0.009	mg/L	0.001		E200.8	05/04/06 19:32 / sml
41	Silver	<0.001	mg/L	0.001		E200.8	05/04/06 19:32 / sml
04	Sodium	86.9	mg/L	0.5		E200.7	05/16/06 16:07 / cp
15	Uranium	0.0090	mg/L	0.0003	ł	E200.8	05/04/06 19:32 / sml
42	Vanadium	0.011	mg/L	0.001		E200.8	05/04/06 19:32 / sml
43	Zinc	0.096	mg/L	0.001		E200.8	05/04/06 19:32 / sml
A۲)	DIONUCLIDES - DISSOLVED			·			
45	Radium 226	1.6	pCi/L	1.0		E903.0	05/22/06 16:16 / trs
45	Radium 226 precision (±)	0.6	pCi/L			E903.0	05/22/06 16:16 / trs
57	Radium 228	1.6	pCi/L	1.0		RA-05	05/17/06 12:05 / pj
57	Radium 228 precision (±)	0.9	pCI/L			RA-05	05/17/06 12:05 / pj
48	Thorium 230	<1.0	pCi/L	1.0		E907.0	05/16/06 09:30 / df
AT	A QUALITY						
92	A/C Balance (± 5)	-2.20	%			Calculation	05/17/06 12:58 / cp
94	Anions	11.9	meq/L			Calculation	05/17/06 12:58 / cp
95	Cations	11.4	meq/L	,		Calculation	05/17/06 12:58 / cp
'9	Solids, Total Dissolved Calculated	693	mg/L			Calculation	05/17/06 12:58 / cp
00	TDS Balance (0.80 - 1.20)		dec. %			Calculation	05/17/06 12:58 / cp

Report Definitions:

RL - Analyte reporting limit. QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Andy Hendrix PO Box 31 Grants, NM 87020

Subject: Analytical reports for water sample RW-34 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935), Milan, New Mexico.

Dear Mr. Hendrix:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical reports for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-34". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

Analytical results that do exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standards for sulfate and total dissolved solids (TDS).

Mr. A. Hendrix

RE: Analytical reports for water sample RW-34 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)
Sample RW-34	253	814
EPA MCL	250 (a)	500 (a)
NMWQCC (b)	600	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and Agency for Toxic Substances and Disease Registry (ATSDR) to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

David L. Mayerson Superfund Oversight Section

Enclosures: Laboratory analytical report from Energy Laboratories (2 pages) Fact Sheets:

> Sulfate in Drinking Water (EPA) Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Mr. A. Hendrix

RE: Analytical reports for water sample RW-34 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures: Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-013 Client Sample ID: RW-34
 Report Date:
 06/06/06

 Collection Date:
 05/02/06 10:20

 Date Received:
 05/03/06

 Matrix:
 Aqueous

Ana	alyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	279	mg/L		1	A2320 B	05/11/06 12:47 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 12:47 / th
005	Bicarbonate as HCO3	340	mg/L		1	A2320 B	05/11/06 12:47 / th
007	Chloride	34	mg/L		1	A4500-CI B	05/04/06 15:43 /
139	Nitrogen, Nitrate as N	4.6	mg/L		0.1	E353.2	05/05/06 08:49 / sec
039	Nitrogen, Nitrate+Nitrite as N	4.6	mg/L	D	0.2	E353.2	05/04/06 10:53 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:24 / jai
800	Sulfate	253	mg/L	D	30	A4500-SO4 E	05/09/06 17:02 / th
РНү	SICAL PROPERTIES						
009	рН	7.87	s.u.		0.01	A4500-H B	05/04/06 14:20 / jdh
010	Solids, Total Dissolved TDS @ 180 C	814	mg/L		10	A2540 C	05/05/06 15:01 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
023	Arsenic	0.002	mg/L		0.001	E200,8	05/05/06 05:54 / bws
024	Barium	0.037	mg/L		0.001	E200.8	05/05/06 05:54 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
001	Calcium	154	mg/L		0.5	E200.7	05/12/06 15:19 / ts
027	Chromium	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
029	Copper	0.002	mg/L		0.001	E200.8	05/05/06 05:54 / bws
032	iron	<0.01	mg/L		0.01	E200.7	05/12/06 15:19 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
002	Magnesium	42.6	mg/L		0.5	E200.7	05/12/06 15:19 / ts
034	Manganese	0.003	mg/L		0.001	E200.8	05/05/06 05:54 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 05:54 / bws
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
037	Nickel	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
003	Potassium	3.4	mg/L		0.5	E200.7	05/12/06 15:19 / ts
)40	Selenium	0.013	mg/L		0.001	E200.8	05/05/06 05:54 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 05:54 / bws
004	Sodium	59.6	mg/L		0.5	E200.7	05/12/06 15:19 / ts
)15	Uranium	0.0092	mg/L		0.0003	E200.8	05/05/06 05:54 / bws
)42	Vanadium	0.003	mg/L		0.001	E200.8	05/05/06 05:54 / bws
)43	Zinc	0.014	mg/L		0.001	E200.8	05/05/06 05:54 / bws

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050172-013

Client Sample ID: RW-34

 Report Date:
 06/06/06

 Collection Date:
 05/02/06 10:20

 Date Received:
 05/03/06

 Matrix:
 Aqueous

ژب

·								
An	alyses	Result	Units	Qual		MCL/ QCL	Method	Analysis Date / By
	TALS - TOTAL							
122		<0.001	mg/L		0.001		E200.8	05/09/06 03:51 / bws
119		0.002	mg/L		0.001		E200.8	05/04/06 21:59 / smi
124	Barium	0.040	mg/L	1	0.001		E200.8	05/04/06 21:59 / smł
126		<0.001	mg/L	1	0.001		E200.8	05/04/06 21:59 / sml
101	Calcium	151	mg/L	'	0.5		E200.7	05/12/06 16:34 / ts
120	Chromium	<0.001	mg/L	:	0.001		E200.8	05/04/06 21:59 / sml
128	Cobalt	<0.001	mg/L		0.001		E200.8	05/04/06 21:59 / sml
129	Copper	0.002	mg/L	l	0.001		E200.8	05/04/06 21:59 / sml
121	iron	0.06	mg/L	ĺ	0.01		E200.7	05/12/06 16:34 / ts
133	Lead	<0.001	mg/L	I	0.001		E200.8	05/04/06 21:59 / sml
102	Magnesium	41.6	mg/L		0.5		E200.7	05/12/06 16:34 / ts
134	Manganese	0.003	mg/L		0.001		E200.8	05/04/06 21:59 / sml
135	Mercury	<0.0002	mg/L	1	0.0002		E200.8	05/04/06 21:59 / sml
136	Molybdenum	<0.001	mg/L	1	0.001		E200.8	05/04/06 21:59 / sml
137	Nickel	0.001	mg/L		0.001		E200.8	05/04/06 21:59 / sml
103	Potassium	3.3	mg/L	i,	0.5		E200.7	05/12/06 16:34 / ts
140	Selenium	0.012	mg/L	I	0.001		E200.8	05/04/06 21:59 / sml
141	Silver	<0.001	mg/L	i	0.001		E200.8	05/04/06 21:59 / sml
104	Sodium	58,9	mg/L	I	0.5		E200.7	05/12/06 16:34 / ts
115	Uranium	0.0100	mg/L	i	0.0003		E200.8	05/04/06 21:59 / sml
142	Vanadium	0.004	mg/L	1	0.001		E200.8	05/04/06 21:59 / smł
143	Zinc	0.010	mg/L		0.001		E200.8	05/04/06 21:59 / sml
RAI	DIONUCLIDES - DISSOLVED							
045	Radium 226	<1.0	pCi/L	;	1.0		E903.0	05/27/06 22:56 / trs
)57	Radium 228	<1.0	pCi/L		1.0		RA-05	05/22/06 13:44 / pj
)48	Thorium 230	<1.0	pCi/L	1	1.0		E907.0	05/18/06 10:00 / df
τΑς	A QUALITY			-				
92	A/C Balance (± 5)	0.760	%				Calculation	05/15/06 11:47 / cp
94	Anions	13.4	meq/L	:			Calculation	05/15/06 11:47 / cp
95	Cations	13.6	meq/L	!			Calculation	05/15/06 11:47 / cp
)79	Solids, Total Dissolved Calculated	820	mg/L				Calculation	05/15/06 11:47 / cp
200	TDS Balance (0.80 - 1.20)	0.990	dec. %	Í.			Calculation	05/15/06 11:47 / cp



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Aaron Dean P.O. Box 3001 Milan, NM 87021

Subject: Analytical report for water sample RW-9 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

1 1 4 4 C

Dear Mr. Dean:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 3, 2006. For tracking purposes, the sample from your well was designated as "RW-9". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the secondary Federal drinking water standards for sulfate and total dissolved solids (TDS).

Mr. A. Dean

RE: Analytical reports for water sample RW-9 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)		
Sample RW-9	323	852		
EPA MCL	250 (a)	500 (a)		
NMWQCC (b)	600	1000		

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

David L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Mr. A. Dean

RE: Analytical reports for water sample RW-9 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Copies without enclosures: Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-002 Client Sample ID: RW-9 **Report Date:** 06/06/06 **Collection Date:** 05/03/06 08:25 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/							
Ana	alyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By		
MA.	JOR IONS								
075	Alkalinity, Total as CaCO3	215	mg/L		1	A2320 B	05/11/06 13:27 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 13:27 / th		
005	Bicarbonate as HCO3	262	mg/L		1	A2320 B	05/11/06 13:27 / th		
007	Chloride	91	mg/L		1	A4500-CI B	05/08/06 13:01 / jl		
139	Nitrogen, Nitrate as N	7.5	mg/L		0.1	E353.2	05/08/06 10:42 / sec		
039	Nitrogen, Nitrate+Nitrite as N	7.5	mg/L	D	0.2	E353.2	05/05/06 10:12 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:57 / jal		
800	Sulfate	323	mg/L	D	6	A4500-SO4 E	05/10/06 10:28 / th		
РНΥ	SICAL PROPERTIES								
009	pН	7.93	s.u.		0.01	A4500-H B	05/05/06 12:09 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	852	mg/L		10	A2540 C	05/05/06 15:08 / jdh		
MEI	ALS - DISSOLVED		•						
022	Aluminum	0.002	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
023	Arsenic	0.002	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
024	Barium	0.040	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
001	Calcium	129	mg/L		0.5	E200.7	05/17/06 15:07 / cp		
027	Chromium	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
029	Copper	0.002	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
032	Iron	0.08	mg/L		0.01	E200.7	05/17/06 15:07 / cp		
033	Lead	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
002	Magnesium	34.0	mg/L		0.5	E200.7	05/17/06 15:07 / cp		
034	Manganese	0.004	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 17:12 / sml		
036	Molybdenum	0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
037	Nickel	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
003	Potassium	3.0	mg/L		0.5	E200.7	05/17/06 15:07 / cp		
040	Selenium	0.026	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
041	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 17:12 / sml		
004	Sodium	104	mg/L		0.5	E200.7	05/17/06 15:07 / cp		
015	Uranium	0.0111	mg/L		0.0003	E200.8	05/08/06 17:12 / sml		
042	Vanadium	0.005	mg/L		0.001	E200.8	05/08/06 17:12 / smł		
043	Zinc	0.040	mg/L		0.001	E200.8	05/08/06 17:12 / sml		

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050216-002

Client Sample ID: RW-9

 Report Date:
 06/06/06

 Collection Date:
 05/03/06 08:25

 Date Received:
 05/04/06

 Matrix:
 Aqueous

Analyses Result Units METALS - TOTAL 122 Aluminum 0.004 mg/L 119 Arsenic 0.002 mg/L	Qual RL QCL 0.001 0.001 0.001	Method E200.8 E200.8	Analysis Date / By 05/08/06 17:18 / sml
122 Aluminum 0.004 mg/L	0.001		05/08/06 17:18 / sml
	0.001		05/08/06 17:18 / sml
119 Arsenic 0.002 mg/l		E200.8	
	0.001		05/08/06 17:18 / sml
124 Barium 0.040 mg/L		E200.8	05/08/06 17:18 / sml
126 Cadmium <0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
101 Calcium 123 mg/L	0.5	E200.7	05/17/06 16:10 / cp
120 Chromium 0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
128 Cobalt <0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
129 Copper 0.002 mg/L	0.001	E200.8	05/08/06 17:18 / sml
121 Iron 0.19 mg/L	0.01	E200.7	05/17/06 16:10 / cp
133 Lead <0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
102 Magnesium 32.5 mg/L	0.5	E200.7	05/17/06 16:10 / cp
134 Manganese 0.006 mg/L	0.001	E200.8	05/08/06 17:18 / sml
135 Mercury <0.0002 mg/L	0.0002	E200.8	05/08/06 17:18 / sml
136 Molybdenum 0.002 mg/L	0.001	E200.8	05/08/06 17:18 / smł
137 Nickel <0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
103 Potassium 3.0 mg/L	0.5	E200.7	05/17/06 16:10 / cp
140 Selenium 0.025 mg/L	0.001	E200.8	05/08/06 17:18 / sml
141 Silver <0.001 mg/L	0.001	E200.8	05/08/06 17:18 / sml
104 Sodium 103 mg/L	0.5	E200.7	05/17/06 16:10 / cp
115 Uranium 0.0109 mg/L	0.0003	E200.8	05/08/06 17:18 / sml
142 Vanadium 0.005 mg/L	0.001	E200.8	05/08/06 17:18 / sml
143 Zinc 0.050 mg/L	0.001	E200.8	05/08/06 17:18 / sml
RADIONUCLIDES - DISSOLVED			
045 Radium 226 <1.0 pCi/L	1.0	E903.0	05/24/06 12:11 / trs
057 Radium 228 <1.0 pCi/L	1.0	RA-05	05/19/06 13:09 / pj
048 Thorium 230 <1.0 pCi/L	1.0	E907.0	05/22/06 11:00 / df
DATA QUALITY			
192 A/C Balance (± 5) -1.83 %		Calculation	05/18/06 15:48 / cp
194 Anions 14.3 meq/L		Calculation	05/18/06 15:48 / cp
195 Cations 13.8 meq/L		Calculation	05/18/06 15:48 / cp
079 Solids, Total Dissolved Calculated 853 mg/L		Calculation	05/18/06 15:48 / cp
200 TDS Balance (0.80 - 1.20) 1.00 dec. %		Calculation	05/18/06 15:48 / cp



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Lewis and Bonnie Bennet 4293 San Mateo Rd. Grants, NM 87020

Subject: Analytical report for water sample RW-11 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. and Ms. Bennet:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-11". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standards for sulfate, total aluminum, and total iron, and both the secondary Federal and State drinking water standards for total dissolved solids (TDS).

Mr. and Ms. Bennet

Analytical reports for water sample RW-11 collected by New Mexico Environment RE: Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)	Total aluminum (mg/L)	Total iron (mg/L)
Sample RW-11	297	1010	0.157	1.02
EPA MCL	250 (a)	500 (a)	0.05 - 0.2 (a)	0.3 (a)
NMWQCC (b)	600	1000	None	None

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate, TDS, iron, and aluminum are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as orange staining. According to the Agency for Toxic Substances and Disease Registry (ATSDR), consumption of aluminum usually has no harmful effects, except in very high quantities. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate, TDS, aluminum, and iron.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. 1211

David L. Mayerson Superfund Oversight Section

Enclosures:

Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets: Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

ToxFAQs[™] for Aluminum (ATSDR)

1997年1月1日(1997年1月) 1997年1月1日(1997年1月)

.

Sulfate in Drinking Water (EPA)

Mr. and Ms. Bennet

Ŧ

RE: Analytical reports for water sample RW-11 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico November 2, 2006

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-006 Client Sample ID: RW-11 **Report Date:** 06/06/06 **Collection Date:** 05/02/06 09:20 **Date Received:** 05/03/06 **Matrix:** Aqueous

MCL/							
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	379	mg/L		1	A2320 B	05/11/06 11:42 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:42 / th
005	Bicarbonate as HCO3	462	mg/L		1	A2320 B	05/11/06 11:42 / th
007	Chloride	83	mg/L		1	A4500-CI B	05/04/06 15:24 / jl
139	Nitrogen, Nitrate as N	1.3	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.3	mg/L		0.1	E353.2	05/04/06 10:30 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:23 / jal
008	Sulfate	297	mg/L	D	30	A4500-SO4 E	05/09/06 16:38 / th
РНҮ	SICAL PROPERTIES						
009	pН	7.77	s.u.		0.01	A4500-H B	05/04/06 14:06 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1010	mg/L		10	A2540 C	05/05/06 14:56 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.004	mg/L		0.001	E200.8	05/05/06 04:12 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
024	Barium	0.015	mg/L		0.001	E200.8	05/05/06 04:12 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
001	Calcium	113	.mg/L		0.5	E200.7	05/12/06 13:52 / ts
027	Chromium	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
029	Copper	0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
032	Iron	0.44	mg/L		0.01	E200.7	05/12/06 13:52 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
002	Magnesium	34.4	mg/L		0.5	E200.7	05/12/06 13:52 / ts
034	Manganese	0.004	mg/L		0.001	E200.8	05/05/06 04:12 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 04:12 / bws
036	Molybdenum	0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
037	Nickel	0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
003	Potassium	3.7	mg/L		0.5	E200.7	05/12/06 13:52 / ts
040	Selenium	0.018	mg/L		0.001	E200.8	05/05/06 04:12 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 04:12 / bws
004	Sodium	198	mg/L		0.5	E200.7	05/12/06 13:52 / ts
015	Uranium	0.0151	mg/L		0.0003	E200.8	05/05/06 04:12 / bws
042	Vanadium	0.005	mg/L		0.001	E200.8	05/05/06 04:12 / bws
043	Zinc	0.013	mg/L		0.001	E200.8	05/05/06 04:12 / bws

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050172-006

Client Sample ID: RW-11

Report Date: 06/06/06 **Collection Date:** 05/02/06 09:20 **Date Received:** 05/03/06 **Matrix:** Aqueous

		MCL/						
Analyses		Result	Units	Qual RL	QCL Method	Analysis Date / By		
MET	ALS - TOTAL							
122	Aluminum	0.157	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
119	Arsenic	0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
124	Barium	0.018	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
101	Calcium	114	mg/L	0.5	E200.7	05/12/06 15:55 / ts		
120	Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
129	Copper	0.002	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
121	Iron	1.02	mg/L	0.01	E200.7	05/12/06 15:55 / ts		
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
102	Magnesium	34.3	mg/L	0.5	E200.7	05/12/06 15:55 / ts		
134	Manganese	0.010	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 17:25 / sml		
136	Molybdenum	0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
137	Nickel	0.002	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
103	Potassium	3.2	mg/L	0.5	E200.7	05/12/06 15:55 / ts		
140	Selenium	0.017	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
104	Sodium	193	mg/L	0.5	E200.7	05/12/06 15:55 / ts		
115	Uranium	0.0155	mg/L	0.0003	E200.8	05/04/06 17:25 / sml		
142 `	Vanadium	0.005	mg/L	0.001	E200.8	05/04/06 17:25 / sml		
143	Zinc	0.015	mˈg/L	0.001	E200.8	05/04/06 17:25 / sml		
RADI	ONUCLIDES - DISSOLVED							
045 I	Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 15:53 / trs		
057 f	Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj		
048 -	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df		
DATA	QUALITY							
192 /	VC Balance (± 5)	2.59	%		Calculation	05/15/06 11:44 / cp		
194 /	Anions	16.2	meq/L		Calculation	05/15/06 11:44 / cp		
195 (Cations	17.1	meq/L		Calculation	05/15/06 11:44 / cp		
079 \$	Solids, Total Dissolved Calculated	993	mg/L		Calculation	05/15/06 11:44 / cp		
200 1	DS Balance (0.80 - 1.20)	1.02	dec. %		Calculation	05/15/06 11:44 / cp		

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Kathy and Mr. Chuck Lange P. O. Box 2863 Milan, NM 87021

Subject: Analytical reports for water samples RW-49 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. and Ms. Lange:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-49". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the Federal primary drinking water standard for total selenium (EPA MCL), the State standard for dissolved selenium, and secondary Federal drinking water and State standards for sulfate and total dissolved solids (TDS).

Mr. and Ms. Lange

RE: Analytical reports for water samples 'RW-49 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Se	lenium	Sulfate	TDS (mg/L)	
	Total	Dissolved	(mg/L)		
Sample RW-49	0.105	0.101	408	1120	
EPA MCL	0.05	None	250 (a)	500 (a)	
NMWQCC (b)	None	0.05	600	1000	

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

According to the Agency for Toxic Substances and Disease Registry (ATSDR), selenium in trace amounts is necessary for good health, but can be harmful in high concentrations. Based on the exceedance of the primary drinking water standard for selenium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes selenium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of selenium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

1.1.1.1.

コール、新聞など

Sincerely, David L. Maverson

Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals

Mr. and Ms. Lange

RE: Analytical reports for water samples RW-49 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

(EPA) Sulfate in Drinking Water (EPA) ToxFAQs[™] for selenium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

4 (*

. . .

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-012 Client Sample ID: RW-49 **Report Date:** 06/06/06 **Collection Date:** 05/02/06 16:40 **Date Received:** 05/03/06 **Matrix:** Aqueous

				MCI			
Ana	lyses	Result	Units	Qual	RL QCI	- Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	245	mg/L		1	A2320 B	05/11/06 12:45 / th
006	Carbonate as CO3	4	mg/L		1	A2320 B	05/11/06 12:45 / th
005	Bicarbonate as HCO3	292	mg/L		1 '	A2320 B	05/11/06 12:45 / th
007	Chloride	101	mg/L		1	A4500-CI B	05/04/06 15:41 / jl
139	Nitrogen, Nitrate as N	1.7	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.8	mg/L		0.1	E353.2	05/04/06 10:50 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:24 / jal
800	Sulfate	408	mg/L	D	30	A4500-SO4 E	05/09/06 17:01 / th
РНҮ	SICAL PROPERTIES						
009	рН	8.43	s.u.		0.01	A4500-H B	05/04/06 14:18 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1120	mg/L		10	A2540 C	05/05/06 15:01 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
024	Barium	0.011	mg/L		0.001	E200.8	05/05/06 05:47 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
001	Calcium	19.8	mg/L		0.5	E200.7	05/12/06 15:16 / ts
027	Chromium	0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
029	Copper	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
032	Iron	0.05	mg/L		0.01	E200.7	05/12/06 15:16 / ts
033	Lead	<0.001	mg/L	•	0.001	E200.8	05/05/06 05:47 / bws
002	Magnesium	5.2	mg/L		0.5	E200.7	05/12/06 15:16 / ts
034	Manganese	0.004	mg/L		0.001	E200.8	05/05/06 05:47 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 05:47 / bws
036	Molybdenum	0.003	mg/L		0.001	E200.8	05/05/06 05:47 / bws
037	Nickel	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
003	Potassium	2.5	mg/L		0.5	E200.7	05/12/06 15:16 / ts
040	Selenium	0.101	mg/L		0.001	E200.8	05/05/06 05:47 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 05:47 / bws
004	Sodium	361	mg/L		0.5	E200.7	05/12/06 15:16 / ts
015	Uranium	0.0252	mg/L		0.0003	E200.8	05/05/06 05:47 / bws
042	Vanadium	0.012	mg/L		0.001	E200.8	05/05/06 05:47 / bws
043	Zinc	0.006	mg/L		0.001	E200.8	05/05/06 05:47 / bws

ReportRL - Analyte reporting limit.Definitions:QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-012

Client Sample ID: RW-49

Report Date: 06/06/06 **Collection Date:** 05/02/06 16:40 **Date Received:** 05/03/06 **Matrix:** Aqueous

				MCL	1	·····
Anal	yses	Result	Units	Qual RL QCL	Method	Analysis Date / By
MET	ALS - TOTAL					,
122	Aluminum	0.028	mg/L	0.001	E200.8	05/09/06 03:43 / bws
119	Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 21:25 / sml
124	Barium	0.012	mg/L	0.001	E200.8	05/04/06 21:25 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 21:25 / sml
101	Calcium	19.3	mg/L	0.5	E200.7	05/12/06 16:31 / ts
120	Chromium	0.002	mg/L	0.001	E200.8	05/04/06 21:25 / sml
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 21:25 / sml
129	Copper	0.010	mg/L	0.001	E200.8	05/04/06 21:25 / sml
121	Iron	0.19	mg/L	0.01	E200.7	05/12/06 16:31 / ts
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 21:25 / sml
102	Magnesium	5.1	mg/L	0.5	E200.7	05/12/06 16:31 / ts
134	Manganese	0.004	mg/L	0.001	E200.8	05/04/06 21:25 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 21:25 / sml
136	Molybdenum	0.004	mg/L	0.001	E200.8	05/04/06 21:25 / sml
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 21:25 / sml
103	Potassium	2.3	mg/L	0.5	E200.7	05/12/06 16:31 / ts
140	Selenium	0.105	mg/L	0.001	E200.8	05/04/06 21:25 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 21:25 / sml
104	Sodium	356	mg/L	0.5	E200.7	05/12/06 16:31 / ts
115	Uranium	0.0267	mg/L	0.0003	E200.8	05/04/06 21:25 / sml
142	Vanadium	0.013	mg/L	0.001	E200.8	05/04/06 21:25 / sml
143	Zinc	0.012	mg/L	0.001	E200.8	05/04/06 21:25 / sml
RADI	ONUCLIDES - DISSOLVED					
045	Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 21:56 / trs
057	Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 13:44 / pj
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
363 .	Thorium 230 precision (±)	0.3	pCi/L		E907.0	05/18/06 10:00 / df
	QUALITY					
	A/C Balance (± 5)	-1.86	%		Calculation	05/15/06 11:46 / cp
	Anions	17.6	meg/L		Calculation	05/15/06 11:46 / cp
	Cations	16.9	meq/L		Calculation	05/15/06 11:46 / cp
	Solids, Total Dissolved Calculated	1120	mg/L		Calculation	05/15/06 11:46 / cp
	TDS Balance (0.80 - 1.20)	1.00	dec. %		Calculation	05/15/06 11:46 / cp



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Mr. Wesley Marquez P. O. Box 2417 Milan, NM 87021

Subject: Analytical reports for water samples RW-42 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Marquez:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-42". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the secondary Federal drinking water standards for sulfate and total dissolved solids (TDS).

Mr. W. Marquez

RE: Analytical reports for water samples RW-42 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)
Sample RW-42	439	934
EPA MCL	250 (a)	500 (a)
NMWQCC (b)	600	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. David L. Maverson

Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages)

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA) Sulfate in Drinking Water (EPA)

Sunale III Dhinking Waler (Er

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Mr. W. Marquez

-.

RE: Analytical reports for water samples RW-42 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

e., ,

November 2, 2006

Copies without enclosures: Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co

Project: Grants NM

Lab ID: C06050089-006

Client Sample ID: RW-42

Report Date: 06/06/06 **Collection Date:** 05/01/06 13:52 **Date Received:** 05/02/06 **Matrix:** Aqueous

				MCI	L/	
Analy	/ses	Result	Units	Qual RL QC	L Method	Analysis Date / By
МЕТА	LS - TOTAL					
122 A	Aluminum	0.001	mg/L	0.001	E200.8	05/08/06 15:30 / bws
119 A	Arsenic	0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
124 E	Barium	0.015	mg/L	0.001	E200.8	05/04/06 14:59 / sml
126 C	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
101 C	Calcium	146	mg/L	0.5	E200.7	05/16/06 15:24 / cp
120 C	Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
128 C	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
129 C	Copper	0.004	mg/L	0.001	E200.8	05/04/06 14:59 / sml
121 li	ron	<0.01	mg/L	0.01	E200.7	05/16/06 15:24 / cp
133 L	ead	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
102 N	Magnesium	42.8	mg/L	0.5	E200.7	05/16/06 15:24 / cp
134 N	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
135 N	Aercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 14:59 / sml
136 N	Aolybdenum	0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
137 N	lickel	0.002	mg/L	0.001	E200.8	05/04/06 14:59 / sml
103 P	Potassium	5.1	mg/L	0.5	E200.7	05/16/06 15:24 / cp
140 S	Selenium	0.020	mg/L	0.001	E200.8	05/04/06 14:59 / sml
141 S	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 14:59 / sml
104 S	Sodium	97.5	mg/L	0.5	E200.7	05/16/06 15:24 / cp
115 U	Jranium	0.0066	mg/L	0.0003	E200.8	05/04/06 14:59 / sml
142 V	/anadium	0.003	mg/L	0.001	E200.8	05/04/06 14:59 / sml
143 Z	linc	0.013	mg/L	0.001	E200.8	05/04/06 14:59 / sml
RADIC	ONUCLIDES - DISSOLVED					
045 R	Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 15:09 / trs
057 R	Radium 228	1.6	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257 R	Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
048 T	horium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DATA	QUALITY					
	VC Balance (± 5)	-1.90	%		Calculation	05/17/06 12:55 / cp
	nions	16.2	meq/L		Calculation	05/17/06 12:55 / cp
	Cations	15.6	meq/L		Calculation	05/17/06 12:55 / cp
	olids, Total Dissolved Calculated	967	mg/L		Calculation	05/17/06 12:55 / cp
	DS Balance (0.80 - 1.20)	0.970	dec. %		Calculation	05/17/06 12:55 / cp

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-006 Client Sample ID: RW-42 **Report Date:** 06/06/06 **Collection Date:** 05/01/06 13:52 **Date Received:** 05/02/06 **Matrix:** Aqueous

						MCL/		
Ana	lyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	265	mg/L		1		A2320 B	05/08/06 10:20 / th
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/08/06 10:20 / th
005	Bicarbonate as HCO3	323	mg/L		1		A2320 B	05/08/06 10:20 / th
007	Chloride	48	mg/L		1		A4500-CI B	05/02/06 13:35 / jl
139	Nitrogen, Nitrate as N	3.8	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	3.8	mg/L		0.1		E353.2	05/02/06 15:07 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:17 / jal
008	Sulfate	439	mg/L	D	10		A4500-SO4 E	05/08/06 15:47 / th
РНҮ	SICAL PROPERTIES							
009	рН	7.83	s.u.		0.01		A4500-H B	05/03/06 12:18 / jdh
010	Solids, Total Dissolved TDS @ 180 C	934	mg/L		10		A2540 C	05/03/06 16:52 / jdh
мет	ALS - DISSOLVED							
022	Aluminum	0.004	mg/L		0.001		E200.8	05/03/06 16:26 / sml
023	Arsenic	0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
024	Barium	0.015	mg/L		0.001		E200.8	05/03/06 16:26 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
001	Calcium	152	mg/L		0.5		E200.7	05/16/06 13:33 / cp
027	Chromium	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
029	Copper	0.003	mg/L		0.001		E200.8	05/03/06 16:26 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:33 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
002	Magnesium	44.4	mg/L		0.5		E200.7	05/16/06 13:33 / cp
034	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:26 / sml
036	Molybdenum	0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
037	Nickel	0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
003	Potassium	5.1	mg/L		0.5		E200.7	05/16/06 13:33 / cp
040	Selenium	0.018	mg/L		0.001		E200.8	05/03/06 16:26 / sml
041	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:26 / sml
004	Sodium	97.3	mg/L		0.5		E200.7	05/16/06 13:33 / cp
015	Uranium	0.0059	mg/L		0.0003	•	E200.8	05/03/06 16:26 / sml
)42	Vanadium	0.003	mg/L		0.001		E200.8	05/03/06 16:26 / sml
)43	Zinc	0.012	mg/L		0.001		E200.8	05/03/06 16:26 / sml

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Ruby Marquez P. O. Box 2392 Milan, NM 87021

Subject: Analytical reports for water samples RW-44 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

: ...

Dear Ms. Marquez:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-44". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample.

The sample taken from your well was split into two parts (called "RW-44A" and "RW-44B"), and both parts were sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event. This was done to compare the results between the two analyses, and is a common procedure for quality assurance in sampling.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

Ms. R. Marquez

RE: Analytical reports for water samples RW-44 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

The results for this sample show that water from your well exceeds the secondary Federal drinking water standards for total dissolved solids (TDS).

SAMPLE	TDS (mg/L)
Sample RW-44A	606
Sample RW-44B	608
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not a health-based standard, and therefore the presence of this analyte only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely

David L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (4 pages) Fact Sheets: Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission

Dago 2 of 2

Ms. R. Marquez

RE: Analytical reports for water samples RW-44 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

· • •

1997 P 74 1

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-001

Client Sample ID: RW-44B

Report Date: 06/06/06 Collection Date: 05/01/06 14:42 Date Received: 05/02/06 Matrix: Aqueous

					MCI		
Ana	lyses	Result	Units	Qual	RL QCI	Method	Analysis Date / By
MA.	IOR IONS						
075	Alkalinity, Total as CaCO3	275	mg/L		1 '	A2320 B	05/08/06 10:04 / th
006	Carbonate as CO3	5	mg/L		1	A2320 B	05/08/06 10:04 / th
005	Bicarbonate as HCO3	327	mg/L		1	A2320 B	05/08/06 10:04 / th
007	Chloride	45	mg/L		1	A4500-CI B	05/02/06 13:26 / jl
139	Nitrogen, Nitrate as N	1.4	mg/L		0.1	E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.4	mg/L		0.1	E353.2	05/02/06 14:49 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/02/06 13:16 / jal
008	Sulfate	179	mg/L	D	6	A4500-SO4 E	05/08/06 14:21 / th
РНҮ	SICAL PROPERTIES						
009	рH	8.42	s.u.		0.01	A4500-H B	05/03/06 12:07 / jdh
010	Solids, Total Dissolved TDS @ 180 C	608	mg/L		10	A2540 C	05/03/06 16:51 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.014	mg/L		0.001	E200.8	05/03/06 15:26 / sml
023	Arsenic	0.002	mg/L		0.001	E200.8	05/03/06 15:26 / sml
024	Barium	0.022	mg/L		0.001	E200.8	05/03/06 15:26 / sml
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
001	Calcium	7.0	mg/L		0.5	E200.7	05/16/06 18:13 / cp
027	Chromium	0.004	mg/L		0.001	E200.8	05/03/06 15:26 / sml
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
029	Copper	0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
032	Iron	<0.01	mg/L		0.01	E200.7	05/16/06 18:13 / cp
033	Lead	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
002	Magnesium	1.8	mg/L		0.5	E200.7	05/16/06 18:13 / cp
034	Manganese	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 15:26 / sml
036	Molybdenum	0.002	mg/L		0.001	E200.8	05/03/06 15:26 / sml
037	Nickel	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
003	Potassium	2.4	mg/L		0.5	E200.7	05/16/06 18:13 / cp
040	Selenium	0.009	mg/L		0.001	E200.8	05/03/06 15:26 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 15:26 / sml
004	Sodium	221	mg/L		0.5	E200.7	05/16/06 18:13 / cp
015	Uranium	0.0170	mg/L		0.0003	E200.8	05/03/06 15:26 / sml
)42	Vanadium	0.013	mg/L		0.001	E200.8	05/03/06 15:26 / sml
043	Zinc	0.016	mg/L		0.001	E200.8	05/03/06 15:26 / sml

Report RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co

 Project:
 Grants NM

 Lab ID:
 C06050089-001

ABORATORIES

Client Sample ID: RW-44B

Report Date: 06/06/06 **Collection Date:** 05/01/06 14:42 **Date Received:** 05/02/06 **Matrix:** Aqueous

			M	CL/	
Analyses	Result	Units	Qual RL Q	CL Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.005	mg/L	0.001	E200.8	05/08/06 13:38 / bws
119 Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 13:26 / sml
124 Barium	0.023	mg/L	0.001	E200.8	05/04/06 13:26 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
101 Calcium	6.8	mg/L	0.5	E200.7	05/16/06 14:55 / cp
120 Chromium	0.003	mg/L	0.001	E200.8	05/04/06 13:26 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
129 Copper	0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
121 Iron	0.01	mg/L	0.01	E200.7	05/16/06 14:55 / cp
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
102 Magnesium	1.8	mg/L	0.5	E200.7	05/16/06 14:55 / cp
134 Manganese	0.002	mg/L	0.001	E200.8	05/04/06 13:26 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 13:26 / sml
136 Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 13:26 / sml
137 Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
103 Potassium	2.5	mg/L	0.5	E200.7	05/16/06 14:55 / cp
140 Selenium	0.009	mg/L	0.001	E200.8	05/04/06 13:26 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 13:26 / sml
104 Sodium	223	mg/L	0.5	E200.7	05/16/06 14:55 / cp
115 Uranium	0.0181	mg/L	0.0003	E200.8	05/04/06 13:26 / sml
142 Vanadium	0.014	mg/L	0.001	E200.8	05/04/06 13:26 / sml
143 Zinc	0.020	mg/L	0.001	E200.8	05/04/06 13:26 / sml
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 15:09 / trs
057 Radium 228	1.9	pCi/L	1.0	RA-05	05/17/06 10:30 / pj
257 Radium 228 precision (±)	0.8	pCi/L		RA-05	05/17/06 10:30 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DATA QUALITY					
192 A/C Balance (± 5)	0.472	%		Calculation	05/17/06 12:53 / cp
194 Anions	10.1	meq/L		Calculation	05/17/06 12:53 / cp
195 Cations	10.2	meq/L		Calculation	05/17/06 12:53 / cp
079 Solids, Total Dissolved Calculated	606	mg/L		Calculation	05/17/06 12:53 / cp
200 TDS Balance (0.80 - 1.20)	1.00	dec. %		Calculation	05/17/06 12:53 / cp



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-008

Client Sample ID: RW-44A

Report Date: 06/06/06 **Collection Date:** 05/01/06 14:40 **Date Received:** 05/02/06 **Matrix:** Aqueous

					M	(CL/		
Ana	llyses	Result	Units	Qual	RL Q	<u>P</u>CL	Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	275	mg/L		1		A2320 B	05/08/06 10:24 / th
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/08/06 10:24 / th
005	Bicarbonate as HCO3	336	mg/L		1		A2320 B	05/08/06 10:24 / th
007	Chloride	45	mg/L		1		A4500-CI B	05/02/06 13:50 / jl
139	Nitrogen, Nitrate as N	1.5	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	1.5	mg/L		0.1		E353.2	05/02/06 15:12 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:17 / jal
800	Sulfate	179	mg/L	D	6		A4500-SO4 E	05/08/06 15:50 / th
РΗΥ	SICAL PROPERTIES							
009	pН	7.88	s.u.		0.01		A4500-H B	05/03/06 12:21 / jdh
010	Solids, Total Dissolved TDS @ 180 C	606	mg/L		10		A2540 C	05/03/06 16:53 / jdh
MEI	ALS - DISSOLVED							
022	Aluminum	0.003	mg/L		0.001		E200.8	05/03/06 16:46 / sml
023	Arsenic	0.002	mg/L		0.001		E200.8	05/03/06 16:46 / sml
024	Barium	0.022	mg/L		0.001		E200.8	05/03/06 16:46 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
001	Calcium	6.6	mg/L		0.5		E200.7	05/16/06 13:39 / cp
027	Chromium	0.004	mg/L		0.001		E200.8	05/03/06 16:46 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
029	Copper	0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:39 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
002	Magnesium	1.8	mg/L		0.5		E200.7	05/16/06 13:39 / cp
034	Manganese	0.002	mg/L		0.001		E200.8	05/03/06 16:46 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:46 / sml
036	Molybdenum	0.002	mg/L		0.001		E200.8	05/03/06 16:46 / sml
037	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
003	Potassium	2.5	mg/L	,	0.5		E200.7	05/16/06 13:39 / cp
040	Selenium	0.009	mg/L		0.001		E200.8	05/03/06 16:46 / sml
041	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:46 / sml
004	Sodium	220	mg/L		0.5		E200.7	05/16/06 13:39 / cp
015	Uranium	0.0166	mg/L		0.0003		E200.8	05/03/06 16:46 / sml
042	Vanadium	0.013	mg/L		0.001		E200.8	05/03/06 16:46 / sml
043	Zinc	0.013	mg/L		0.001		E200.8	05/03/06 16:46 / sml

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050089-008

Client Sample ID: RW-44A

 Report Date:
 06/06/06

 Collection Date:
 05/01/06
 14:40

 Date Received:
 05/02/06

 Matrix:
 Aqueous

				MC	 L/	
Ana	alyses	Result	Units	Qual RL QC	L Method	Analysis Date / By
ME.	TALS - TOTAL					
122		0.009	mg/L	0.001	E200.8	05/08/06 15:45 / bws
119	Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 22:25 / sml
124	Barium	0.022	mg/L	0.001	E200.8	05/04/06 22:25 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
101	Calcium	6.6	mg/L	0.5	E200.7	05/16/06 15:31 / cp
120	Chromium	0.003	mg/L	0.001	E200.8	05/04/06 22:25 / sml
128	Cobalt	0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
129	Copper	0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
121	Iron	0.06	mg/L	0.01	E200.7	05/16/06 15:31 / cp
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
102	Magnesium	1.7	mg/L	0.5	E200.7	05/16/06 15:31 / cp
134	Manganese	0.002	mg/L	0.001	E200.8	05/04/06 22:25 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 22:25 / sml
136	Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 22:25 / sml
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
103	Potassium	2.5	mg/L	0.5	E200.7	05/16/06 15:31 / cp
140	Selenium	0.009	mg/L	0.001	E200.8	05/04/06 22:25 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 22:25 / sml
104	Sodium	224	mg/L	0.5	E200.7	05/16/06 15:31 / cp
115	Uranium	0.0176	mg/L	0.0003	E200.8	05/04/06 22:25 / sml
142	Vanadium	0.012	mg/L	0.001	E200.8	05/04/06 22:25 / sml
143	Zinc	0.013	mg/L	0.001	E200.8	05/04/06 22:25 / sml
RAD	DIONUCLIDES - DISSOLVED				ι	
045	Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs
057	Radium 228	3.2	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257	Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
דעם						
192	A/C Balance (± 5)	-1.65	%		Calculation	05/17/06 12:56 / cp
194	Anions	10.5	meq/L		Calculation	05/17/06 12:56 / cp
195	Cations	10.0	meq/L		Calculation	05/17/06 12:56 / cp
079	Solids, Total Dissolved Calculated	619	mg/L		Calculation	05/17/06 12:56 / cp
200	TDS Balance (0.80 - 1.20)	0.980	dec. %		Calculation	05/17/06 12:56 / cp
200	100 Dalahoo (0.00 - 1.20)	0.300	uco, 70		Calculation	03/17/06 12.507 CP



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Dick and Rhonda Elkins P. O. Box 1203 Grants, NM 87020

RE: Analytical reports for water sample RW-17 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. and Ms. Elkins:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 2, 2006. For tracking purposes, the samples from your well were designated as "RW-17". The sample taken from your well was split into two parts, with one sample sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event, and the second sample sent to Pinnacle Laboratory (listed as General Engineering on the laboratory report; note that Pinnacle Laboratory's reporting units are $\mu g/L$, whereas we report in units of mg/L below). This was done to compare the results between the two laboratories, and is a common procedure for quality assurance in sampling. The latter sample is designated "RW-17 duplicate" in the table following. The samples were analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte Mr. and Ms. Elkins

RE: Analytical reports for water samples RW-17 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

. . 1.1.

November 1, 2006

concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for these samples show that your well exceeds the Federal primary drinking water standard for total uranium (EPA MCL), the State standards (NMWQCC) for dissolved uranium and dissolved iron, the secondary Federal drinking water standards for total iron and manganese, and both. State and secondary Federal drinking water standards for sulfate and total dissolved solids (TDS).

SAMPLE	Urani	um (mg/L)	Sulfate	TDS	Iron (mg/L)		Total
	Total	Dissolved	(mg/L)	(mg/L)	Total	Dissolved	manganese (mg/L)
Sample RW- 17	0.0818	0.0706	1300	2520	6.33	0.92 (no exceedance)	0.061
Sample RW-	0.0669	0.062254	1190	2550	11.4	1.58	0.1
17 duplicate	(c)	(d)	4 ⁷				
EPA MCL	0.03	None	250 (a)	500 (a)	0.3 (a)	None	0.05 (a)
NMWQCC	None	0.03	600	1000	None	1.0	None
(b) MCI – Maximum Cont		(

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

c. Includes $U_{234},$ which comprises only 0.0058% of total uranium

d. Reported concentration excludes U₂₃₄

According to the Agency for Toxic Substances and Disease Registry (ATSDR), consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate, TDS, iron, and manganese are not health-based standards, and therefore the presence of these analytes affects only the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as orange staining. According to ATSDR, consumption of manganese usually has no harmful effects, except in very high quantities over a long period of time. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate, TDS, iron, and manganese.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of

Page 2 of 3

Mr. and Ms. Elkins

RE: Analytical reports for water samples RW-17 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

Pavid L. Mayerson Superfund Oversight Section

Encl.: Laboratory analytical report from Energy Laboratories (2 pages) Laboratory analytical report from Pinnacle Labs (7 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQs[™] for uranium (ATSDR) ToxFAQs[™] for manganese (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-007 Client Sample ID: RW-17 **Report Date:** 06/06/06 **Collection Date:** 05/02/06 08:50 **Date Received:** 05/03/06 **Matrix:** Aqueous

					MCL	/	
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	311	mg/L		1	A2320 B	05/11/06 12:37 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 12:37 / th
005	Bicarbonate as HCO3	380	mg/L		1	A2320 B	05/11/06 12:37 / th
007	Chloride	215	mg/L		1	A4500-CI B	05/04/06 15:28 / jl
139	Nitrogen, Nitrate as N	4.3	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	4.3	mg/L		0.1	E353.2	05/04/06 10:33 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:23 / jal
800	Sulfate	1300	mg/L	D	60	A4500-SO4 E	05/09/06 16:39 / th
РНҮ	SICAL PROPERTIES						
009	pН	7.63	s.u.		0.01	A4500-H B	05/04/06 14:08 / jdh
010	Solids, Total Dissolved TDS @ 180 C	2520	mg/L		10	A2540 C	05/05/06 14:56 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
024	Barium	0.010	mg/L		0.001	E200.8	05/05/06 04:19 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
001	Calcium	229	mg/L		0.5	E200.7	05/12/06 14:59 / ts
027	Chromium	0.002	mg/L		0.001	E200.8	05/05/06 04:19 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
029	Copper	0.007	mg/L		0.001	E200.8	05/05/06 04:19 / bws
032	Iron	0.92	mg/L		0.01	E200.7	05/12/06 14:59 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
002	Magnesium	63.0	mg/L		0.5	E200.7	05/12/06 14:59 / ts
034	Manganese	0.099	mg/L		0.001	E200.8	05/05/06 04:19 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 04:19 / bws
036	Molybdenum	0.004	mg/L		0.001	E200.8	05/05/06 04:19 / bws
037	Nickel	0.003	mg/L		0.001	E200.8	05/05/06 04:19 / bws
003	Potassium	4.7	mg/L		0.5	E200.7	05/12/06 14:59 / ts
040	Selenium	0.033	mg/L		0.001	E200.8	05/05/06 04:19 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
004	Sodium	470	mg/L		0.5	E200.7	05/12/06 14:59 / ts
D15	Uranium	0.0706	mg/L		0.0003	E200.8	05/05/06 04:19 / bws
042	Vanadium	<0.001	mg/L		0.001	E200.8	05/05/06 04:19 / bws
043	Zinc	0.384	mg/L		0.001	E200.8	05/05/06 04:19 / bws

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



ABORATORIE



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050172-007

Client Sample ID: RW-17

 Report Date:
 06/06/06

 Collection Date:
 05/02/06 08:50

 Date Received:
 05/03/06

 Matrix:
 Aqueous

			M	CL/	
Analyses	Result	Units	Qual RL Q	CL Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.076	mg/L	0.001	E200.8	05/04/06 17:32 / sml
119 Arsenic	0.002	mg/L	0.001	E200.8	05/04/06 17:32 / sml
124 Barium	0.011	mg/L	0.001	E200.8	05/04/06 17:32 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 17:32 / sml
101 Calcium	263	mg/L	0.5	E200.7	05/12/06 16:05 / ts
120 Chromium	0.002	mg/L	0.001	E200.8	05/04/06 17:32 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 17:32 / sml
129 Copper	0.048	mg/L	0.001	E200.8	05/04/06 17:32 / sml
121 Iron	6.33	mg/L	0.01	E200.7	05/12/06 16:05 / ts
133 Lead	0.003	mg/L	0.001	E200.8	05/04/06 17:32 / sml
102 Magnesium	66.7	mg/L	0.5	E200.7	05/12/06 16:05 / ts
134 Manganese	0.061	mg/L	0.001	E200.8	05/04/06 17:32 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 17:32 / sml
136 Molybdenum	0.004	mg/L	0.001	E200.8	05/04/06 17:32 / sml
137 Nickel	0.004	mg/L	0.001	E200.8	05/04/06 17:32 / sml
103 Potassium	4.3	mg/L	0.5	E200.7	05/12/06 16:05 / ts
140 Selenium	0.040	mg/L	0.001	E200.8	05/04/06 17:32 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 17:32 / sml
104 Sodium	453	mg/L	0.5	E200.7	05/12/06 16:05 / ts
115 Uranium	0.0818	mg/L	0.0003	E200.8	05/04/06 17:32 / sml
142 Vanadium	0.003	mg/L	0.001	E200.8	05/04/06 17:32 / sml
143 Zinc	0.483	mg/L	0.001	E200.8	05/04/06 17:32 / sml
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 16:54 / trs
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA QUALITY					
192 A/C Balance (± 5)	-0.063	%		Calculation	05/15/06 11:45 / cp
194 Anions	38.7	meq/L		Calculation	05/15/06 11:45 / cp
195 Cations	38.7	meq/L		Calculation	05/15/06 11:45 / cp
079 Solids, Total Dissolved Calculated	2480	mg/L		Calculation	05/15/06 11:45 / cp
200 TDS Balance (0.80 - 1.20)	1.02	dec. %		Calculation	05/15/06 11:45 / cp

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc 2709D Pan American Freeway NE Address : Albuquerque, New Mexico 87107

	Albuquerque, Ne	ew Mexico	8/10/			R	eport l	Date: May	y 17, 200	6	
Contact: Project:	Mr. Mitch Ruber	nstein						Pag	<u>ze 1</u>	of	2
SSOLU ED	Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID:	RW-17 162062006 Water 02-MAY-06 08:50 03-MAY-06 Client			Proiect: Client ID:	PIN PIN	L00405 L001			
Parameter	Qualifier	Result	DI DI	, R	L Uni	its DF	Ana	lystDate	Time]	Batch	Metho
Metals Analysis-ICP-I	MS										
200.2/200.8 Selenium	ı Federal							•			
Arsenic	U	1.41	1.50	5.00) ug	/L I	PRB	05/16/06	1732 5	27176	1
Iron		1580	10.0	25.0) սց	/L. 1					
Manganese		128	1.00			/L 1					
Molybdenum		5.55	0.100	0.500							
Selenium		24.1	2.50	5.00) ug	/L 1					
Vanadium	J	2.15	2.00	10.0) ug	/L 1					
SW846_6020 Isotopic	c Uranium										
Uranium-235		0.454	0.010	0.070	ug/	/L 1	PRB	05/12/06	1839 52	27178	2
Uranium-238		61.8	0.050	0.200	ug/	/L 1					
The following Prep N	fethods were perfor	med									
Method	Description			Analyst	Date	Time	P	rep Batch			
EPA 200.2	ICP-MS 200.2	PREP		CQHI	05/11/	06 1924	5:	27175	·····		
SW846 3005A	ICP-MS 3005 F	REP		CQH1	05/11/	06 1927	53	271 77			
The following Analyt	ical Methods were i	erformed									
Method	Description				Analyst C	omments			× ·		*****
1	EPA 200.8									······	
2	SW846 3005/60										

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

Concentration of the target analyte exceeds the instrument calibration range.

E Concentration of the target and, H Analytical holding time exceeded.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

х Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

đ The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

dissolved

Page 29 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address :	Pinnacle Labs, Inc 2709D Pan American Albuquerque, New Mo	-									
Contract	Mr. Mitch Rubenstein					Report Date:	May 17	7,200	6		
Contact:	Mr. Milen Rubenstein										
Project:	NMED						Page	2	of	2	
	Client Sample ID: Sample ID:	RW-17 162062006			Project: Client ID:	PINL0040 PINL001)5				
Parameter	Qualifier Ro	esult	DL	RL	Units D	F AnalystD	ate Ti	ime	Batch	Method	

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Marstan 7	11. M	usan	
Reviewed by		0	

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Pinnacle Labs, Inc Address: 2709D Pan American Freeway NE Albuquerque, New Mexico 87107

Report Date: May 17, 2006 Mr. Mitch Rubenstein Contact: Page 1 of 2 Project: NMED Project: PINL00405 **Client Sample ID:** 605009 RW-17 Client ID: PINL001 OTAL Sample ID: 162062001 Matrix: Water 02-MAY-06 08:50 Collect Date: **Receive Date:** 03-MAY-06 Collector: Client RL Units Qualifier Result AnalystDate Time Batch Method Parameter DL DF Metals Analysis-ICP-MS 200.2/200.8 Selenium Federal 5.00 1 PRB 05/16/06 1705 527176 1 ug/Ĺ J 1.50 Arsenic 3.45 10.0 25.0 ug/L 11400 lron ug/L Manganese 100 1.00 5.00 Molybdenum 0.100 0.500 ug/L 3.18 300 80.0 ug/L Potassium 4440 1 Selenium 2.50 5.00 ug/L 34.7 1 Vanadium 2.00 10.0 ug/L 3 6.34 2000 10000 100 PRB 05/16/06 1622 527176 2 ug/L Calcium 260000 500 **Í**500 Magnesium ug/L 100 60900 100 PRB 05/17/06 1033 527176 25000 Sodium 506000 8000 ug/L 3 SW846_6020 Isotopic Uranium 5 PRB 05/15/06 1051 527178 4 1.00 0.250 Uranium 66.9 ug/L ug/L Uranium-235 0.050 0.350 5 0.480 Uranium-238 66.5 0.250 1.00 ug/L 5 The following Prep Methods were performed Method Description Analyst Date Time **Prep Batch** EPA 200.2 CQH1 05/11/06 **ICP-MS 200.2 PREP** 1924 527175 SW846 3005A **ICP-MS 3005 PREP** COHI 05/11/06 527177 1927 The following Analytical Methods were performed **Analyst Comments** Method Description 1 **EPA 200.8** 2 EPA 200.8 3 **EPA 200.8** 4 SW846 3005/6020 Notes: The Qualifiers in this report are defined as follows : < Result is less than amount reported.

> Result is greater than amount reported.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

ì

+0+0

Page 19 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan American Freeway NE Albuquerque, New Mexico 87107								
	Contact: Project:	Mr. Mitch Rubenstein NMED]	Report Date:	May 17 Page	, 200 _2)6 of	2
		Client Sample ID: 605009 RW-17 Sample ID; 162062001			Project: Client ID:	PINL0040 PINL001	15			
Parameter	• •	Qualifier Result	DL	RL	Units DF	AnalystDa	ite TE	me	Batch	Method

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Address : 2 A Contact: M Project: N	709D Pan Ameri Ibuquerque, Nev fr. Mitch Rubens	can Free v Mexico lein	•		Pro		eport Date: May	17, 20	06	
S M C F	Client Sample II Sample ID: Aatrix: Collect Date: Receive Date: Collector:	U.	02-MAY-06 03-MAY-06 Client			nt ID:	PINL001			
Parameter	Qualifier	Result		RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Federal							· /			
EPA 150.1 pH Federal	·									
pH at Temp 12.5C	н	7.47	0.010	0.100	SU	I	SXS2 05/10/06	2224	526994	1
Ion Chromatography Feder	ral									
EPA 300.0 Anions-NO2,SC	04,Cl		١.							
Nitrate-N		4.01	0.033	0.100	mg/L	1	RXM105/04/06	0423	526700	2
Nitrite-N	U	0.00	0.033	0.100	mg/L	1				_
Chloride		184	3.30	10.0	mg/L	50	MAR105/04/06	1826	526700	3
Sulfate		1190	5.00	20.0	mg/L	50				
Nutrient Analysis Federal										
Nitrogen, (NO3/NO2)			0.145	0.600	-	10	1/1 D1 05/00/04			
Nitrogen, Nitrate/Nitrite		3.84	0.140	0.500	mg/L	10	KLP1 05/08/06	1314 :	52/551	4
Solids Analysis Federal										
EPA 160.1 Solids, Dissolve	d-F		A A A	10.0			ON LO ARIORIOZ	00.04		~
Total Dissolved Solids		2550	2.38	10.0	mg/L		GXA2 05/05/06	0854 :	526858	5
Titration Analysis Federal										
SM 2320B Total Alkalinity										
Alkalinity, Total as CaCO3		296	0.725	1.00	mg/L		RG2 05/15/06	1549 3	528783	6
Bicarbonate alkalinity (Cal	,	295	0.725	1.00	mg/L					
Carbonate alkalinity (CaCO)3) J	0.983	0.725	1.00	mg/L.					

The following Analytical Methods were performed

Company : Pinnacle Labs, Inc

Method	Description	Analyst Comments
1	EPA 150.1	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 353.1	
5	EPA 160.1	
6	SM 2320B	

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company :	Pinnacle Labs, Inc
Address :	2709D Pan American Freeway NE

Albuquerque, New Mexico 87107 Contact: Mr. Mitch Rubenstein Project: NMED Report Date: May 17, 2006

	Si M C R	lient Sam ampie ID fatrix: ollect Da eccive Da ollector:	te:		RW-17 1620620 Water 02MA 03MA Client	006 Y-06	ĉ	oiect; lient ID:	PINL00405 PINL001			
Parameter	. 0	Jualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analy	st Date	Time Bate	h Mto
Rad Alpha Spec	Analysis					···						
Alphaspec Th, I	Liguid											
Thorium-228	-	.U	0,0796	+/0.143	0.671	+/~0.143	1.00	pCi/L	DDRI	05/12/06	0810 5282	80 1
Thorium-230		U	0.0122	+/-0.0365	0.247	+/0.0365	1.00	pCi/L				
Thorium-232		U	-0.0356	+/-0.0206	0.330	+/-0.021	1.00	pCi/L				
Rad Gas Flow P	roportional	Counting	•									
GFPC, Ra228,	Liauid											
Radium-228		U	1.52	+/-0.555	2.14	+/0.556	3.00	pCi/L	KSDI	05/16/06	1257 5291	01 2
Rad Radium-22	26	-						1				
Lucas Cell, Raz	226 limid											
CHURD CON, MUZ												
Radium-226	•		0.525	+/-0.139	0.315	+/0.139	1.00	pCi/L	SG	05/15/06	1015 5272	46 3
The following P				+/-0.139	0.315						1015 5272	46 3
The following P Method	Descripti	on	rformed	+/-0.139	0.315	Analyst	Date	Time	Prep Bato		1015 5272	46 3 -
The following P		on	rformed	+/-0.139	0.315				Prep Bato		1015 5272	46 3 -
The following P Method EPA 200.2	Descripti	on 200.2 PRE	rformed	+/-0.139	0.315	Analyst	Date	Time	Prep Bato 527175		1015 5272	46 3 -
The following P Method EPA 200.2	Descripti ICP-MS 2 ICP-MS 3	on 200.2 PRE 3005 PRE	p P		0.315	Analyst CQH1	Date 05/11/06	- Time 1924	Prep Bato 527175		1015 5272	46 3
The following P Method EPA 200.2 SW846 3005A	Descripti ICP-MS 2 ICP-MS 3	on 200.2 PRE 3005 PRE ethods we	p P		0.315	Analyst CQH1	Date 05/11/06	- Time 1924	Prep Bato 527175		1015 5272	46 3 -
The following P Method EPA 200.2 SW846 3005A The following A	Descripti iCP-MS : iCP-MS : malytical M Descriptio	on 200.2 PRE 3005 PRE cthods we on	rformed P P		0.315	Analyst CQH1	Date 05/11/06	- Time 1924	Prep Bato 527175		1015 5272	46 3 - - -
The following P Method EPA 200.2 SW846 3005A The following A	Descripti iCP-MS : iCP-MS : malytical M Descriptio	on 200.2 PRE 3005 PRE ethods we on L HASL-3	rformed P re performation 100, Th-01	med	0.315	Analyst CQH1	Date 05/11/06	- Time 1924	Prep Bato 527175		1015 5272	46 3
The following P Method EPA 200.2 SW846 3005A The following A Method 1 2	Description ICP-MS 2 ICP-MS 3 ICP-MS 3 ICP-MS 3 Description DOB EMI	on 200.2 PRE 3005 PRE ethods we on L HASL-3 0 Modified	rformed P P Re perform 1000, Th-01	med	0.315	Analyst CQH1	Date 05/11/06	- Time 1924	Prep Bato 527175		1015 5272	46 3 - - -
The following P Method EPA 200.2 SW846 3005A The following A Method 1 2	Descripti ICP-MS 2 ICP-MS 3 ICP-MS 3 Description DOE EMI EPA 904.0 EPA 903.1	on 200.2 PRE 3005 PRE ethods we on L HASL-3 0 Modified	rformed P P Re perform 1000, Th-01	med	0.315	Analyst CQH1	Date 05/11/06 05/11/06	- Time 1924	Prep Bate 527175 527177		1015 5272	46 3 - -
The following P Method EPA 200.2 SW846 3005A The following A Method 1 2 3	Descripti ICP-MS 2 ICP-MS 3 ICP-MS 3 Description DOE EMI EPA 904.0 EPA 903.1	on 200.2 PRE 3005 PRE ethods we on L HASL-3 0 Modified 1 Modified Test	rformed P P Re perform 1000, Th-01	med I-RC Modified	0.315	Analyst CQH1 CQH1	Date 05/11/06 05/11/06 Accepts	Time 1924 1927	Prep Bate 527175 527177		1015 5272	46 3

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Parameter		Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analyst Date	Time Batch Mtd
		Client Samp Sample ID:	ple ID:		RW-17 162062006	6		Project: Client ID:	PINL00405 PINL001	
	Contact: Project:	Mr. Mitch Ru NMED								
	Address :	2709D Pan A Albuquerque,]	Report Date: May 17, 2	006
	Company :									

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Page 149 of 161



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Ms. Virginia Chaffin P. O. Box 2420 Milan, NM 87021

Subject: Analytical report for water sample RW-51 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Chaffin:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 3, 2006. For tracking purposes, the sample from your well was designated as "RW-51". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal and State drinking water standards for chloride, sulfate and total dissolved solids (TDS).

Ms. V. Chaffin

RE: Analytical report for water sample RW-51 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
Sample RW-51	625	660	2250
EPA MCL	250 (a)	250 (a)	500 (a)
NMWQCC (b)	250	600	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for chloride, sulfate and TDS are not healthbased standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness, of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

「「「「大人」」であった。

Sincerely.

David L. Mayerson Superfund Oversight Section

Enclosures:

S: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

-act Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA)

1.00

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau



Ms. V. Chaffin

RE: Analytical report for water sample RW-51 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

Copies without enclosures: Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050216-006

Client Sample ID: RW-51

 Report Date:
 06/06/06

 Collection Date:
 05/03/06 09:30

 Date Received:
 05/04/06

 Matrix:
 Aqueous

	······································	···.			MCL/		
Analyses	Result	Units	Qual		QCL	Method	Analysis Date / By
METALS - TOTAL							
122 Aluminum	0.006	mg/L		0.001		E200.8	05/08/06 19:39 / sml
119 Arsenic	0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
124 Barium	0.011	mg/L		0.001		E200.8	05/08/06 19:39 / sml
126 Cadmium	<0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
101 Calcium	14.7	mg/L		0.5		E200.7	05/17/06 16:34 / cp
120 Chromium	0.002	mg/L		0.001		E200.8	05/08/06 19:39 / sml
128 Cobalt	<0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
129 Copper	0.003	mg/L		0.001		E200.8	05/08/06 19:39 / sml
121 Iron	0.06	mg/L		0.01		E200.7	05/17/06 16:34 / cp
133 Lead	0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
102 Magnesium	1.6	mg/L		0.5		E200.7	05/17/06 16:34 / cp
134 Manganese	0.020	mg/L		0.001		E200.8	05/08/06 19:39 / sml
135 Mercury	<0.0002	mg/L		0.0002		E200.8	05/08/06 19:39 / sml
136 Molybdenum	0.037	mg/L		0.001		E200.8	05/08/06 19:39 / sml
137 Nickel	<0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
103 Potassium	1.9	mg/L		0.5		E200.7	05/17/06 16:34 / cp
140 Selenium	0.002	mg/L		0.001		E200.8	05/08/06 19:39 / sml
141 Silver	<0.001	mg/L		0.001		E200.8	05/08/06 19:39 / sml
104 Sodium	818	mg/L	D	0.8		E200.7	05/22/06 13:41 / cp
115 Uranium	0.0245	mg/L		0.0003		E200.8	05/08/06 19:39 / sml
142 Vanadium	0.007	mg/L		0.001		E200.8	05/08/06 19:39 / sml
143 Zinc	0.107	mg/L		0.001		E200.8	05/08/06 19:39 / sml
RADIONUCLIDES - DISSOLVED							
045 Radium 226	<1.0	pCi/L		1.0		E903.0	05/24/06 12:11 / trs
057 Radium 228	<1.0	pCi/L		1.0		RA-05	05/19/06 13:09 / pj
048 Thorium 230	<1.0	pCi/L		1.0		E907.0	05/22/06 11:00 / df
DATA QUALITY							
192 A/C Balance (± 5)	-4.61	%				Calculation	05/19/06 14:11 / cp
194 Anions	37.5	meq/L				Calculation	05/19/06 14:11 / cp
195 Cations	34.2	meq/L				Calculation	05/19/06 14:11 / cp
079 Solids, Total Dissolved Calculated	2240	mg/L				Calculation	05/19/06 14:11 / cp
200 TDS Balance (0.80 - 1.20)	1.00	dec. %				Calculation	05/19/06 14:11 / cp

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-006

Client Sample ID: RW-51

Report Date: 06/06/06 **Collection Date:** 05/03/06 09:30 **Date Received:** 05/04/06 **Matrix:** Aqueous

					MCL		
Ana	lyses	Result	Units	Qual	RL QCI	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	305	mg/L		1	A2320 B	05/11/06 13:34 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 13:34 / th
005	Bicarbonate as HCO3	372	mg/L		1	A2320 B	05/11/06 13:34 / th
007	Chloride	625	mg/L		1	A4500-CI B	05/08/06 13:11 / jl
139	Nitrogen, Nitrate as N	0.4	mg/L		0.1	E353.2	05/08/06 10:42 / sec
039	Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1	E353.2	05/05/06 10:27 / ja)
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:58 / jal
800	Sulfate	660	mg/L	D	30	A4500-SO4 E	05/10/06 10:33 / th
PHY	SICAL PROPERTIES						
009	pН	7.98	s.u.		0.01	A4500-H B	05/05/06 12:16 / jdh
010	Solids, Total Dissolved TDS @ 180 C	2250	mg/L		10	A2540 C	05/05/06 15:10 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.003	mg/L		0.001	E200.8	05/08/06 19:32 / sml
023	Arsenic	0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
024	Barium	0.011	mg/L		0.001	E200.8	05/08/06 19:32 / sml
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
001	Calcium	15.5	mg/L		0.5	E200.7	05/17/06 15:27 / cp
027	Chromium	0.002	mg/L		0.001	E200.8	05/08/06 19:32 / sml
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
029	Copper	0.003	mg/L		0.001	E200.8	05/08/06 19:32 / sml
032	Iron	0.02	mg/L		0.01	E200.7	05/17/06 15:27 / cp
033	Lead	0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
002	Magnesium	1.7	mg/L		0.5	E200.7	05/17/06 15:27 / cp
034	Manganese	0.021	mg/L		0.001	E200.8	05/08/06 19:32 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 19:32 / sml
036	Molybdenum	0.036	mg/L		0.001	E200.8	05/08/06 19:32 / sml
037	Nickel	<0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
003	Potassium	1.9	mg/L	;	0.5	E200.7	05/17/06 15:27 / cp
040	Selenium	0.002	mg/L		0.001	E200.8	05/08/06 19:32 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 19:32 / sml
004	Sodium	764	mg/L	D	3	E200.7	05/18/06 14:47 / cp
015	Uranium	0.0247	mg/L		0.0003	E200.8	05/08/06 19:32 / sml
)42	Vanadium	0.007	mg/L		0.001	E200.8	05/08/06 19:32 / sml
043	Zinc	0.098	mg/L		0.001	E200.8	05/08/06 19:32 / sml

ReportRL - Analyte reporting limit.Definitions:QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Virginia Chaffin P. O. Box 2420 Milan, NM 87021

Subject: Analytical report for water sample RW-53 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

1 N 11 12

Dear Ms. Chaffin:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 3, 2006. For tracking purposes, the sample from your well was designated as "RW-53". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standards for sulfate, total dissolved solids (TDS), and total iron.

Ms. V. Chaffin

RE: Analytical report for water sample RW-53 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)	Total iron (mg/L	
Sample RW-53	304	966	0.47	
EPA MCL	250 (a)	500 (a)	0.3 (a)	
NMWQCC (b)	600	1000	none	

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate, TDS, and iron are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as Please review the enclosed fact sheet for additional information orange staining. pertaining to the effects of sulfate, TDS, and iron.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information. . . .

Sincerely.

David L. Maverson Superfund Oversight Section

Laboratory Analytical Report from Energy Labs (4 pages) Enclosures: Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA) Sulfate in Drinking Water (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau Ms. V. Chaffin

ę

RE: Analytical report for water sample RW-53 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Copies without enclosures: Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-007

Client Sample ID: RW-53

Report Date: 06/06/06 **Collection Date:** 05/03/06 09:55 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/						
Ana	llyses	Result	Units	Qual	RL		Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	300	mg/L		1		A2320 B	05/11/06 13:36 / th
006	Carbonate as CO3	18	mg/L		1		A2320 B	05/11/06 13:36 / th
005	Bicarbonate as HCO3	335	mg/L		1		A2320 B	05/11/06 13:36 / th
007	Chloride	139	mg/L		1		A4500-CI B	05/08/06 13:12 / jl
139	Nitrogen, Nitrate as N	<0.1	mg/L		0.1		E353.2	05/08/06 10:42 / sec
039	Nitrogen, Nitrate+Nitrite as N	<0.1	mg/L		0.1		E353.2	05/05/06 10:29 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/04/06 11:58 / jai
800	Sulfate	304	_mg/L	D	10		A4500-SO4 E	05/10/06 10:34 / th
РНҮ	SICAL PROPERTIES							
009	pH ,	8.99	s.u.		0.01		A4500-H B	05/05/06 12:17 / jdh
010	Solids, Total Dissolved TDS @ 180 C	966	mg/L		10		A2540 C	05/05/06 15:10 / jdh
MET	ALS - DISSOLVED							
022	Aluminum	0.003	mg/L		0.001		E200.8	05/08/06 19:45 / sml
023	Arsenic	0.005	mg/L		0.001		E200.8	05/08/06 19:45 / sml
024	Barium	0.015	mg/L		0.001		E200.8	05/08/06 19:45 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
001	Calcium	3.2	mg/L		0.5		E200.7	05/17/06 15:30 / cp
027	Chromium	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
029	Copper	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
032	Iron	0.11	mg/L		0.01		E200.7	05/17/06 15:30 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
002	Magnesium	<0.5	mg/L		0.5		E200.7	05/17/06 15:30 / cp
034	Manganese	0.011	mg/L		0.001		E200.8	05/08/06 19:45 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/08/06 19:45 / sml
036	Molybdenum	0.013	mg/L		0.001		E200.8	05/08/06 19:45 / sml
037	Nickel	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
003	Potassium	1.0	mg/L		0.5		E200.7	05/17/06 15:30 / cp
040	Selenium	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
D41	Silver	<0.001	mg/L		0.001		E200.8	05/08/06 19:45 / sml
004	Sodium	358	mg/L		0.5		E200.7	05/17/06 15:30 / cp
015	Uranium	0.0114	mg/L		0.0003		E200.8	05/08/06 19:45 / sml
)42	Vanadium	0.010	mg/L		0.001		E200.8	05/08/06 19:45 / sml
)43	Zinc	0.036	mg/L		0.001		E200.8	05/08/06 19:45 / sml

 Report
 RL - Analyte reporting limit.

 Definitions:
 QCL - Quality control limit.

 D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-007 Client Sample ID: RW-53 **Report Date:** 06/06/06 **Collection Date:** 05/03/06 09:55 **Date Received:** 05/04/06 **Matrix:** Aqueous

	MCL/						
Analyses	Result	Units	Qual RL QC	Method	Analysis Date / By		
METALS - TOTAL							
122 Aluminum	0.004	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
119 Arsenic	0.005	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
124 Barium	0.015	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
101 Calcium	3.3	mg/L	0.5	E200.7	05/17/06 16:50 / cp		
120 Chromium	0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
129 Copper	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
121 Iron	0.47	mg/L	0.01	E200.7	05/17/06 16:50 / cp		
133 Lead	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
102 Magnesium	<0.5	mg/L	0.5	E200.7	05/17/06 16:50 / cp		
134 Manganese	0.013	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/08/06 19:52 / sml		
136 Molybdenum	0.013	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
137 Nickel	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / smł		
103 Potassium	1.0	mg/L	0.5	E200.7	05/17/06 16:50 / cp		
140 Selenium	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
141 Silver	<0.001	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
104 Sodium	384	mg/L	0.5	E200.7	05/17/06 16:50 / cp		
115 Uranium	0.0117	mg/L	0.0003	E200.8	05/08/06 19:52 / sml		
142 Vanadium	0.011	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
143 Zinc	0.024	mg/L	0.001	E200.8	05/08/06 19:52 / sml		
RADIONUCLIDES - DISSOLVED							
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/24/06 13:26 / trs		
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/19/06 13:09 / pj		
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/22/06 11:00 / df		
DATA QUALITY							
192 A/C Balance (± 5)	-0.853	%		Calculation	05/18/06 15:50 / cp		
194 Anions	16.1	meq/L		Calculation	05/18/06 15:50 / cp		
195 Cations	15.8	meq/L		Calculation	05/18/06 15:50 / cp		
79 Solids, Total Dissolved Calculated	977	mg/L	,	Calculation	05/18/06 15:50 / cp		
200 TDS Balance (0.80 - 1.20)	0.990	dec. %		Calculation	05/18/06 15:50 / cp		



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Dwayne Wilson P. O. Box 2613 Milan, NM 87021

Subject: Analytical report for water sample RW-37 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Wilson:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-37". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample taken from your well was split into two parts (called "RW-37A" and "RW-37B"), and both parts were sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event. This was done to compare the results between the two analyses, and is a common procedure for quality assurance in sampling.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary

Mr. D. Wilson

RE: Analytical reports for water sample RW-37 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Federal drinking water standard for total dissolved solids (TDS).

SAMPLE	TDS (mg/L)
Sample RW-37A	698
Sample RW-37B	700
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not a health-based standard, and therefore the presence of this analyte only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely.

Bavid L. Mayerson Superfund Oversight Section

Laboratory Analytical Report from Energy Labs (4 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau Mr. D. Wilson

RE: Analytical reports for water sample RW-37 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-010 Client Sample ID: RW-37B
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 10:40

 Date Received:
 05/02/06

 Matrix:
 Aqueous

An	alyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / By
МА	JOR IONS							
075	Alkalinity, Total as CaCO3	264	mg/L		1		A2320 B	05/08/06 10:39 / th
006	Carbonate as CO3	8	mg/L		1		A2320 B	05/08/06 10:39 / th
005	Bicarbonate as HCO3	308	mg/L		1		A2320 B	05/08/06 10:39 / th
007	Chloride	50	mg/L		1		A4500-CI B	05/02/06 13:52 / ji
139	Nitrogen, Nitrate as N	2.0	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.0	mg/L		0.1		E353.2	05/02/06 15:25 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:19 / jal
800	Sulfate	245	mg/L	D	6		A4500-SO4 E	05/08/06 15:52 / th
РΗ	SICAL PROPERTIES							
600	pН	8.68	s.u.		0.01		A4500-H B	05/03/06 12:24 / jdh
010	Solids, Total Dissolved TDS @ 180 C	700	mg/L		10		A2540 C	05/03/06 16:55 / jdh
ME	TALS - DISSOLVED							
022	Aluminum	0.002	mg/L		0.001		E200.8	05/03/06 16:59 / sml
023	Arsenic	0.003	 mg/∟		0.001		E200.8	05/03/06 16:59 / sml
024	Barium	0.020	mg/L		0.001		E200.8	05/03/06 16:59 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
001	Calcium	7.5	m g /L		0.5		E200.7	05/16/06 13:59 / cp
027	Chromium	0.002	mg/L		0.001		E200.8	05/03/06 16:59 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
029	Copper	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:59 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
002	Magnesium	1.4	mg/L		0.5		E200.7	05/16/06 13:59 / cp
034	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:59 / sml
036	Molybdenum	0.003	mg/L		0.001		E200.8	05/03/06 16:59 / smł
037	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
203	Potassium	2.3	mg/L		0.5		E200.7	05/16/06 13:59 / cp
040	Selenium	0.013	mg/L		0.001		E200.8	05/03/06 16:59 / sml
041	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
004	Sodium	257	mg/L		0.5		E200.7	05/16/06 13:59 / cp
015	Uranium	0.0158	mg/L		0.0003		E200.8	05/03/06 16:59 / sml
)42	Vanadium	0.017	mg/L		0.001		E200.8	05/03/06 16:59 / sml
)43	Zinc	0.023	mg/L		0.001		E200.8	05/03/06 16:59 / sml

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

Track# 006050089 Page 2



Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-010Client Sample ID:RW-37B

Report Date: 06/06/06 **Collection Date:** 05/01/06 10:40 **Date Received:** 05/02/06 **Matrix:** Aqueous

		MCL/								
Analy	yses	Result	Units	Qual RL QCL	Method	Analysis Date / By				
META	ALS - TOTAL									
122	Aluminum	0.002	mg/L	0.001	E200.8	05/08/06 15:59 / bws				
119	Arsenic	0.003	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
.124	Barium	0.020	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
126	Cadmium	<0,001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
101	Calcium	6.9	mg/L	0.5	E200.7	05/16/06 15:37 / cp				
120	Chromium	0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
128 (Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
129 (Copper	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
121	Iron	<0.01	mg/L	0.01	E200.7	05/16/06 15:37 / cp				
133 1	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
102	Magnesium	1.3	mg/L	0.5	E200.7	05/16/06 15:37 / cp				
134 M	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
135 N	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 22:39 / sml				
136 1	Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
137 N	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
103 F	Potassium	2.3	mg/L	0.5	E200.7	05/16/06 15:37 / cp				
140 S	Selenium	0.012	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
141 5	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
104 5	Sodium	261	mg/L	0.5	E200.7	05/16/06 15:37 / cp				
115 L	Jranium	0.0169	mg/L	0.0003	E200.8	05/04/06 22:39 / sml				
142 \	/anadium	0.016	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
143 Z	Zinc	0.024	mg/L	0.001	E200.8	05/04/06 22:39 / sml				
RADIC	ONUCLIDES - DISSOLVED									
045 F	Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs				
057 R	Radium 228	6.4	pCi/L	1.0	RA-05	05/17/06 12:05 / pj				
257 R	Radium 228 precision (±)	1.0	pCi/L		RA-05	05/17/06 12:05 / pj				
048 T	horium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df				
DATA	QUALITY									
192 A	/C Balance (± 5)	-1.39	%		Calculation	05/17/06 12:57 / cp				
	nions	12.1	meq/L		Calculation	05/17/06 12:57 / cp				
195 C	ations	11.7	meq/L		Calculation	05/17/06 12:57 / cp				
	olids, Total Dissolved Calculated	734	mg/L		Calculation	05/17/06 12:57 / cp				
	DS Balance (0.80 - 1.20)	0.950	dec. %		Calculation	05/17/06 12:57 / cp				

Report RL - Analyte re

Definitions:

RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-011 Client Sample ID: RW-37A

Report Date: 06/06/06 Collection Date: 05/01/06 10:35 Date Received: 05/02/06 Matrix: Aqueous

Ana	lyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / B
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	271	mg/L		1		A2320 B	05/08/06 10:46 / th
006	Carbonate as CO3	6	mg/L		1	ς	A2320 B	05/08/06 10:46 / th
005	Bicarbonate as HCO3	321	mg/L		1	1	A2320 B	05/08/06 10:46 / th
007	Chloride	50	mg/L		1		A4500-CI B	05/02/06 13:54 / jl
139	Nitrogen, Nitrate as N	2.0	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.0	mg/L		0.1		E353.2	05/02/06 15:27 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:20 / jal
008	Sulfate	245	mg/L	D	6		A4500-SO4 E	05/08/06 15:53 / th
рну	SICAL PROPERTIES							
009	рН	8.50	s.u.		0.01		A4500-H B	05/03/06 14:47 / jdh
010	Solids, Total Dissolved TDS @ 180 C	698	mg/L		10		A2540 C	05/03/06 16:55 / jdh
VET	ALS - DISSOLVED							
)22	Aluminum	0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
)23	Arsenic	0.003	mg/L		0.001		E200.8	05/03/06 17:52 / sml
)24	Barium	0.019	mg/L		0.001		E200.8	05/03/06 17:52 / smi
26	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
01	Calcium	5.9	mg/L		0.5		E200.7	05/16/06 14:02 / cp
27	Chromium	0.002	mg/L		0.001		E200.8	05/03/06 17:52 / smi
28	Cobalt 1	< 0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
29	Copper	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
32	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 14:02 / cp
33	Lead	<0.001	mg/L		0.001		E200,8	05/03/06 17:52 / sml
02	Magnesium	1.1	mg/L		0.5		E200.7	05/16/06 14:02 / cp
34	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
35	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 17:52 / sml
36	Molybdenum	0.003	mg/L		0.001		E200.8	05/03/06 17:52 / sml
37	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
03	Potassium	2.3	mg/L		0.5		E200.7	05/16/06 14:02 / cp
40	Selenium	0.012	mg/L		0.001		E200.8	05/03/06 17:52 / sml
41	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
)4	Sodium	250	mg/L		0.5		E200.7	05/16/06 14:02 / cp
15	Uranium	0.0161	mg/L		0.0003		E200.8	05/03/06 17:52 / sml
12	Vanadlum	0.017	mg/L		0.001		E200.8	05/03/06 17:52 / sml
3	Zinc	0.017	mg/L		0.001		E200.8	05/03/06 17:52 / sml

Report

RL - Analyte reporting limit. **Definitions:**

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-011 Client Sample ID: RW-37A
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 10:35

 Date Received:
 05/02/06

 Matrix:
 Aqueous

					MCL/	• · · ·
Anal	yses	Result	Units	Qual RL	QCL Method	Analysis Date / B
MET	ALS - TOTAL					
122	Aluminum	0.003	mg/L	0.001	E200.8	05/08/06 16:07 / bw
119	Arsenic	0.003	mg/L	0.001	E200.8	05/04/06 22:45 / sm
124	Barium	0.019	mg/L	0.001	E200.8	05/04/06 22:45 / sm
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sm
101	Calcium	6.9	mg/L	0.5	E200.7	05/16/06 15:41 / cp
120	Chromium	0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sm
128 (Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sm
129	Copper	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sm
121	Iron	<0.01	mg/L	0.01	E200.7	05/16/06 15:41 / cp
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
102 1	Magnesium	1.4	mg/L	0.5	E200.7	05/16/06 15:41 / cp
34 1	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
35	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 22:45 / sml
36 I	Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 22:45 / sml
37 1	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
03 Ę	Potassium	2.3	mg/L	0.5	E200.7	05/16/06 15:41 / cp
40 5	Selenium	0.011	mg/L	0.001	E200.8	05/04/06 22:45 / sml
41 8	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
04 5	Sodium	249	mg/L	0.5	E200.7	05/16/06 15:41 / cp
15 L	Jranium	0.0170	mg/L	0.0003	E200.8	05/04/06 22:45 / sml
42 V	/anadium	0.016	mg/L	0.001	E200.8	05/04/06 22:45 / sml
43 Z	linc	0.017	mg/L	0.001	E200.8	05/04/06 22:45 / sml
	NUCLIDES - DISSOLVED					
45 R	ladium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs
45 R	adium 226 precision (±)	0.6	pCi/L		E903.0	05/22/06 16:16 / trs
	adium 228	3.4	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
57 R	adium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
48 TI	horium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
ATA	QUALITY					
92 A/	/C Balance (± 5)	-2.59	%		Calculation	05/17/06 12:57 / cp
	nions	11.9	meg/L		Calculation	05/17/06 12:57 / cp
95 Ca	ations	11.3	meq/L		Calculation	05/17/06 12:57 / cp
'9 Sc	plids, Total Dissolved Calculated		mg/L		Calculation	05/17/06 12:57 / cp
	OS Balance (0.80 - 1.20)		dec. %		Calculation	05/17/06 12:57 / cp

Report R Definitions: O

RL - Analyte reporting limit. QCL - Quality control limit.

MCL - Maximum contaminant level.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Pat Pladgett P. O. Box 1744 Grants, NM 87020

Subject: Analytical report for water sample RW-38 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Wilson:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-38". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standard for total dissolved solids (TDS).

Mr. P. Pladgett

RE: Analytical reports for water sample RW-38 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

SAMPLE	TDS (mg/L)
Sample RW-38	598
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not a health-based standard, and therefore the presence of this analyte only affects the aesthetic qualities of the water such as taste, color and odor. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely David L. Maverson

Superfund Oversight Section

Enclosures: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets: Secondary Drinking Water Regulations: Guidance for Nuisance

Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-004 Client Sample ID: RW-38
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 11:50

 Date Received:
 05/02/06

 Matrix:
 Aqueous

		MCL/							
Ana	llyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / By	
MA.	JOR IONS								
075	Alkallnity, Total as CaCO3	290	mg/L		1		A2320 B	05/08/06 10:11 / th	
006	Carbonate as CO3	10	mg/L		1		A2320 B	05/08/06 10:11 / th	
005	Bicarbonate as HCO3	337	mg/L		1		A2320 B	05/08/06 10:11 / th	
007	Chloride	41	mg/L		1		A4500-C1 B	05/02/06 13:31 /	
139	Nitrogen, Nitrate as N	1.0	mg/L		0.1		E353.2	05/04/06 10:03 / sec	
039	Nitrogen, Nitrate+Nitrite as N	1.0	mg/L		0.1		E353.2	05/02/06 15:02 / jal	
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:17 / jal	
800	Sulfate	167	mg/L	D	6		A4500-SO4 E	05/08/06 15:45 / th	
РНҮ	SICAL PROPERTIES								
009	pН	8.73	s.u.		0.01		A4500-H B	05/03/06 12:13 / jdh	
010	Solids, Total Dissolved TDS @ 180 C	598	mg/L		10		A2540 C	05/03/06 16:52 / jdh	
MET	ALS - DISSOLVED								
022	Aluminum	0.003	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
023	Arsenic	0.004	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
D 2 4	Barlum	0.026	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
001	Catcium	3.3	mg/L		0.5		E200.7	05/16/06 13:26 / cp	
)27	Chromium	0.003	mg/L		0.001		E200.8	05/03/06 16:12 / smł	
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
)29	Copper	0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
)32	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:26 / cp	
)33	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
02	Magnesium	0.6	mg/L		0.5		E200.7	05/16/06 13:26 / cp	
34	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
35	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:12 / sml	
36	Molybdenum	0.003	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
37	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
03	Potassium	1.9	mg/L		0.5		E200.7	05/16/06 13:26 / cp	
40	Selenium	0.008	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
41	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:12 / smł	
04	Sodium	221	mg/L		0.5		E200.7	05/16/06 13:26 / cp	
15	Uranium	0.0178	mg/L		0.0003		E200.8	05/03/06 16:12 / sml	
42	Vanadium	0.026	mg/L		0.001		E200.8	05/03/06 16:12 / sml	
43	Zinc	0.003	mg/L		0.001		E200.8	05/03/06 16:12 / sml	

Report

Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

Track# C06050089 Page



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-004 Client Sample ID: RW-38
 Report Date:
 06/06/06

 Collection Date:
 05/01/06 11:50

 Date Received:
 05/02/06

 Matrix:
 Aqueous

		MCL/							
Ana	lyses	Result	Units	Qual RL QC	. Method	Analysis Date / By			
мет	ALS - TOTAL								
122	Aluminum	0.003	mg/L	0.001	E200.8	05/08/06 14:46 / bws			
119	Arsenic	0.004	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
124	Barium	0.026	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
101	Calcium	3.2	mg/L	0.5	E200.7	05/16/06 15:04 / cp			
120	Chromium	0.002	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / smł			
129	Copper	0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
121	Iron	<0.01	mg/L	0.01	E200.7	05/16/06 15:04 / cp			
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
102	Magneslum	0.6	mg/L	0.5	E200.7	05/16/06 15:04 / cp			
134	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 14:45 / sml			
136	Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
103	Potassium	1. 9	mg/L	0.5	E200.7	05/16/06 15:04 / cp			
140	Selenium	0.009	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
04	Sodium	228	mg/L	0.5	E200.7	05/16/06 15:04 / cp			
15	Uranium	0.0195	mg/L	0.0003	E200.8	05/04/06 14:45 / sml			
42	Vanadium	0.026	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
43	Zinc	0.003	mg/L	0.001	E200.8	05/04/06 14:45 / sml			
			-						
RADI	ONUCLIDES - DISSOLVED								
45	Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 15:09 / trs			
57	Radium 228	1.3	pCi/L	1.0	RA-05	05/17/06 12:05 / pj			
57	Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj			
	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df			
ΑΤΑ	QUALITY								
	A/C Balance (± 5)	-2.68	%		Calculation	05/17/06 12:55 / cp			
	Anions	10.4	meq/L		Calculation	05/17/06 12:55 / cp			
95 (Cations		meq/L		Calculation	05/17/06 12:55 / cp			
	Solids, Total Dissolved Calculated	606	mg/L		Calculation	05/17/06 12:55 / cp			
	DS Balance (0.80 - 1.20)	0.990	dec. %		Calculation	05/17/06 12:55 / cp			

ReportRL - Analyte reporting limit.Definitions:QCL - Quality control limit.

MCL - Maximum contaminant level.



k

BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Robert and Ms. Marti Smith P. O. Box 2393 Milan, NM 87021

Subject: Analytical report for water sample RW-39 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. and Ms. Smith:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-39". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standard for sulfate, and the State and secondary Federal drinking water standards for total dissolved solids (TDS).

Mr. and Ms. Smith

RE: Analytical reports for water sample RW-39 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)
Sample RW-39	390	1010
EPA MCL	250 (a)	500 (a)
NMWQCC (b)	600	1000

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheetS for additional information pertaining to the effects of sulfate and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

David L. Mayerson/ Superfund Oversight Section

Enclosures: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

- 新世

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA) Sulfate in Drinking Water (EPA) 3

Mr. and Ms. Smith

RE: Analytical reports for water sample RW-39 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

18.1

ηĽ.

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence

D----



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-007 Client Sample ID: RW-39 **Report Date:** 06/06/06 **Collection Date:** 05/01/06 10:33 **Date Received:** 05/02/06 **Matrix:** Aqueous

MCL/								
Analy	/ses	Result	Units	Qual RI	QCL	Method	Analysis Date / By	
META	NLS - TOTAL							
122	Aluminum	<0.001	mg/L	0.00	1	E200.8	05/08/06 15:37 / bws	
119	Arsenic	0.001	mg/L	0.00	I	E200.8	05/04/06 15:05 / sml	
124 E	Barium	0.033	mg/L	0.00	I	E200.8	05/04/06 15:05 / sml	
126 (Cadmium	<0.001	mg/L	0.00]	E200.8	05/04/06 15:05 / sml	
101 (Calcium	227	mg/L	0.5		E200.7	05/16/06 15:27 / cp	
120 0	Chromium	0.002	mg/L	0.00	i	E200.8	05/04/06 15:05 / sml	
128 0	Cobalt	<0.001	mg/L	0.00	l	E200.8	05/04/06 15:05 / sml	
129 (Copper	0.001	mg/L	0.00	l	E200.8	05/04/06 15:05 / sml	
121 I	ron	0.03	mg/L	0.01		E200.7	05/16/06 15:27 / cp	
133 L	.ead	<0.001	mg/L	0.00	1	E200.8	05/04/06 15:05 / sml	
102 N	Magnesium	46.7	mg/L	0.5		E200.7	05/16/06 15:27 / cp	
134 N	Manganese	0.001	mg/L	0.00		E200.8	05/04/06 15:05 / sml	
135 N	Mercury	<0.0002	mg/L	0.000	2	E200.8	05/04/06 15:05 / sml	
136 N	Aolybdenum	<0.001	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
137 N	lickel	0.006	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
103 P	Potassium	2.2	mg/L	0.5		E200.7	05/16/06 15:27 / cp	
140 S	Selenium	0.006	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
141 S	Silver	<0.001	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
104 S	Godium	40.3	mg/L	0.5		E200.7	05/16/06 15:27 / cp	
115 U	Jranium	0.0080	mg/L	0.000	3	E200.8	05/04/06 15:05 / sml	
142 V	/anadium	0.007	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
143 Z	(inc	0.030	mg/L	0.001		E200.8	05/04/06 15:05 / sml	
RADIC	NUCLIDES - DISSOLVED							
045 R	Radium 226	1.1	pCi/L	1.0		E903.0	05/22/06 16:16 / trs	
245 R	adium 226 precision (±)	0.6	pCi/L			E903.0	05/22/06 16:16 / trs	
057 R	tadium 228	2.2	pCi/L	1.0		RA-05	05/17/06 12:05 / pj	
257 R	ladium 228 precision (±)	0.9	∽pCi/L			RA-05	05/17/06 12:05 / pj	
	horium 230	<1.0	pCi/L	1.0		E907.0	05/16/06 09:30 / df	
DATA	QUALITY							
192 A	/C Balance (± 5)	0.800	%			Calculation	05/17/06 12:56 / cp	
194 A	nions	18.2	meq/L			Calculation	05/17/06 12:56 / cp	
195 C	ations	18.5	meq/L		·	Calculation	05/17/06 12:56 / cp	
	olids, Total Dissolved Calculated	1050	mg/L			Calculation	05/17/06 12:56 / cp	
200 T	DS Balance (0.80 - 1.20)	0.960	dec. %			Calculation	05/17/06 12:56 / cp	

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

1



Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-007

Client Sample ID: RW-39

Report Date: 06/06/06 **Collection Date:** 05/01/06 10:33 **Date Received:** 05/02/06 **Matrix:** Aqueous

	<u></u>				·			
Ana	lyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
MAJ	IOR IONS							
075	Alkalinity, Total as CaCO3	435	mg/L		1		A2320 B	05/08/06 10:22 / th
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/08/06 10:22 / th
005	Bicarbonate as HCO3	531	mg/L		1		A2320 B	05/08/06 10:22 / th
007	Chloride	35	mg/L		1		A4500-CI B	05/02/06 13:36 / jl
139	Nitrogen, Nitrate as N	2.8	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.8	mg/L		0.1		E353.2	05/02/06 15:10 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:17 / jal
800	Sulfate	390	mg/L	D	6		A4500-SO4 E	05/08/06 15:48 / th
рнү	SICAL PROPERTIES							
009	рН	7.79	s.u.		0.01		A4500-H B	05/03/06 12:20 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1010	mg/L		10		A2540 C	05/03/06 16:53 / jdh
мет	ALS - DISSOLVED							
022	Aluminum	0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
023	Arsenic	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
024	Barium	0.033	mg/L		0.001		E200.8	05/03/06 16:39 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
001	Calcium	248	mg/L		0.5		E200.7	05/16/06 13:36 / cp
027	Chromium	0.003	mg/L		0.001		E200.8	05/03/06 16:39 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
029	Copper	0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:36 / cp
033	Lead	<0.001	mg/L	•	0.001		E200.8	05/03/06 16:39 / sml
002	Magnesium	52.1	mg/L		0.5		E200.7	05/16/06 13:36 / cp
034	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:39 / sml
036	Molybdenum	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
037	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
003	Potassium	2.2	mg/L		0.5		E200.7	05/16/06 13:36 / cp
040	Selenium	0.006	mg/L		0.001		E200.8	05/03/06 16:39 / sml
041	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:39 / sml
004	Sodium	40.6	mg/L		0.5		E200.7	05/16/06 13:36 / cp
015	Uranium	0.0073	mg/L		0.0003		E200.8	05/03/06 16:39 / sml
042	Vanadium	0.008	mg/L		0.001		E200.8	05/03/06 16:39 / sml
043	Zinc	0.029	mg/L		0.001		E200.8	05/03/06 16:39 / sml

Report Definitions: MCL - Maximum contaminant level.

QCL - Quality control limit.

D - RL increased due to sample matrix interference.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. James Driscoll P. O. Box 3205 Milan, NM 87021

Subject: Analytical reports for water samples RW-40 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Driscoll:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-40". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the Federal primary drinking water standard for total uranium (EPA MCL), the State standard for dissolved uranium (NMWQCC), and secondary Federal drinking water and State standards for sulfate and total dissolved solids (TDS).

Mr. J. Driscoll

RE: Analytical reports for water samples RW-40 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Uranium	ו (mg/L)	Sulfate	TDS (mg/L)	
	Total	Dissolved	(mg/L)		
Sample RW-40	0.0390	0.0366	753	1500	
EPA MCL	0.03	None	250 (a)	500 (a)	
NMWQCC (b)	None	None 0.03		1000	

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

Consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely David L. Máverson

Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets: Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA) Mr. J. Driscoll

RE: Analytical reports for water samples RW-40 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Sulfate in Drinking Water (EPA) ToxFAQsTM for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

teres en la compañía de la compañía

:,

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NM

Lab ID: C06050089-009 Client Sample ID: RW-40 Report Date: 06/06/06 Collection Date: 05/01/06 11:27 Date Received: 05/02/06 Matrix: Aqueous

						MCL/		
An	alyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / By
MA	JOR IONS							
075	Alkalinity, Total as CaCO3	316	mg/L		1		A2320 B	05/08/06 10:26 / th
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/08/06 10:26 / th
005	Bicarbonate as HCO3	386	mg/L		1		A2320 B	05/08/06 10:26 / th
007	Chloride	77	mg/L		1		A4500-CI B	05/02/06 13:51 / jl
139	Nitrogen, Nitrate as N	3.7	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	3.7	mg/L		0.1		E353.2	05/02/06 15:22 / jai
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	, 05/02/06 13:19 / jal
800	Sulfate	753	mg/L	D	30		A4500-SO4 E	05/08/06 15:51 / th
РΗ	SICAL PROPERTIES							
009	рН	8.02	s.u.		0.01		A4500-H B	05/03/06 12:23 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1500	mg/L		10		A2540 C	05/03/06 16:53 / jdh
MET	ALS - DISSOLVED							
022	Aluminum	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
023	Arsenic	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
024	Barium	0.016	mg/L		0.001		E200.8	05/03/06 16:52 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
001	Calcium	163	mg/L		0.5		E200.7	05/16/06 17:53 / cp
027	Chromium	0.002	mg/L		0.001		E200.8	05/03/06 16:52 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
)29	Copper	0.005	mg/L		0.001		E200.8	05/03/06 16:52 / smł
)32	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 17:53 / cp
)33	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
02	Magnesium	43.8	mg/L		0.5		E200.7	05/16/06 17:53 / cp
)34	Manganese	0.002	mg/L		0.001		E200.8	05/03/06 16:52 / sml
35	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:52 / sml
36	Molybdenum	0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
37	Nickel	0.002	mg/L		0.001		E200.8	05/03/06 16:52 / sml
03	Potassium	4.1	mg/L		0.5		E200.7	05/16/06 17:53 / cp
40	Selenium	0.024	mg/L		0.001		E200.8	05/03/06 16:52 / sml
41	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:52 / sml
04	Sodium	266	mg/L		0.5		E200.7	05/16/06 17:53 / cp
15	Uranium	0.0366	mg/L		0.0003		E200.8	05/03/06 16:52 / sml
42	Vanadium	0.003	mg/L		0.001		E200.8	05/03/06 16:52 / sml
43	Zinc	0.012	mg/L		0.001		E200.8	05/03/06 16:52 / sml

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.



ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050089-009

Client Sample ID: RW-40

Report Date: 06/06/06 **Collection Date:** 05/01/06 11:27 **Date Received:** 05/02/06 **Matrix:** Aqueous

			MCL	d	
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.002	mg/L	0.001	E200.8	05/08/06 15:52 / bws
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 22:32 / smi
124 Barium	0.017	mg/L	0.001	E200.8	05/04/06 22:32 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 22:32 / sml
101 Calcium	155	mg/L	0.5	E200.7	05/16/06 17:56 / cp
120 Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 22:32 / sml
128 Cobalt	0.001	mg/L	0.001	E200.8	05/04/06 22:32 / sml
129 Copper	0.005	mg/L	0.001	E200.8	05/04/06 22:32 / sml
121 Iron	<0.01	mg/L	0.01	E200.7	05/16/06 17:56 / cp
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 22:32 / sml
102 Magnesium	41.4	mg/L	0.5	E200.7	05/16/06 17:56 / cp
134 Manganese	0.002	mg/L	0.001	E200.8	05/04/06 22:32 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 22:32 / sml
136 Molybdenum	0.002	mg/L	0.001	E200.8	05/04/06 22:32 / sml
137 Nickel	0.002	mg/L	0.001	E200.8	05/04/06 22:32 / sml
103 Potassium	4.2	mg/L	0.5	E200.7	05/16/06 17:56 / cp
140 Selenium	0.022	mg/L	0.001	E200.8	05/04/06 22:32 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 22:32 / sml
104 Sodium	272	mg/L	0.5	E200.7	05/16/06 17:56 / cp
115 Uranium	0.0390	mg/L	0.0003	E200.8	05/04/06 22:32 / sml
142 Vanadium	0.002	mg/L	0.001	E200.8	05/04/06 22:32 / sml
143 Zinc	0.012	mg/L	0.001	E200.8	05/04/06 22:32 / sml
RADIONUCLIDES - DISSO	LVED				
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs
057 Radium 228	2.2	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257 Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DATA QUALITY					
92 A/C Balance (± 5)	-1.62	%		Calculation	05/17/06 12:57 / cp
94 Anions	24.2	meg/L		Calculation	05/17/06 12:57 / cp
95 Cations	23.4	meq/L		Calculation	05/17/06 12:57 / cp
79 Solids, Total Dissolved Ca		mg/L		Calculation	05/17/06 12:57 / cp
00 TDS Balance (0.80 - 1.20)		dec. %		Calculation	05/17/06 12:57 / cp

MCL - Maximum contaminant level.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Kathy Leclair P. O. Box 3851 Milan, NM 87021

Subject: Analytical reports for water samples RW-41 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

 $\sim 10^{-1}$

Dear Ms. Leclair:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-41". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the Federal primary drinking water standard for total selenium (EPA), the State standard for dissolved selenium, and secondary Federal drinking water and State standards for sulfate and total dissolved solids (TDS).

Ms. K. Leclair

RE: Analytical reports for water samples RW-41 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Se	Selenium		TDS (mg/L)	
	Total	Dissolved	(mg/L)		
Sample RW-41	0.079	0.076	1210	2370	
EPA MCL	0.05	None	250 (a)	500 (a)	
NMWQCC (b)	None	0.05	600	1000	

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

According to the Agency for Toxic Substances and Disease Registry (ATSDR), selenium in trace amounts is necessary for good health, but can be harmful in high concentrations. Based on the exceedance of the primary drinking water standard for selenium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes selenium, such as reverse osmosis. Please review the enclosed fact sheets for additional information pertaining to the health effects of selenium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

z Dê

Sincerely, David L. Maverson

Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages)

Ms. K. Leclair

RE: Analytical reports for water samples RW-41 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQsTM for selenium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050089-003

Client Sample ID: RW-41

Report Date: 06/06/06 **Collection Date:** 05/01/06 13:55 **Date Received:** 05/02/06 **Matrix:** Aqueous

122 Alum 119 Arse 124 Barii 126 Cad 101 Calc 120 Chro 128 Cobi 129 Copi 121 Iron 133 Leac 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	S	Result	T		MCL/							
122 Alum 119 Arse 124 Barii 126 Cad 101 Calc 120 Chro 128 Cobi 129 Copi 121 Iron 133 Leac 102 Mag 134 Man 135 Merc 136 Moly 137 Nick			Units	Qual	RL	QCL	Method	Analysis Date / By				
119 Arse 124 Barii 126 Cad 101 Calc 120 Chro 128 Cobi 129 Copi 121 Iron 133 Leac 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	- TOTAL											
124 Barin 126 Cadi 101 Calc 120 Chro 128 Cobi 129 Copi 121 Iron 133 Leac 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	minum	0.008	mg/L		0.001		E200.8	05/08/06 14:39 / bws				
126 Cad 101 Calc 120 Chro 128 Cobi 129 Copi 121 Iron 133 Leac 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	enic	0.002	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
101Calc120Chro128Cobi129Copi121Iron133Lead102Mag134Man135Merc136Moly137Nick	ium	0.012	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
120 Chrc 128 Cobi 129 Copi 121 Iron 133 Lead 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	łmium	<0.001	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
128 Cobin 129 Copin 121 Iron 133 Lead 102 Mag 134 Man 135 Merci 136 Moly 137 Nick	cium	213	mg/L		0.5		E200.7	05/16/06 17:43 / cp				
129 Copp 121 Iron 133 Lead 102 Mag 134 Man 135 Merd 136 Moly 137 Nick	omium	0.003	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
121 Iron 133 Lead 102 Mag 134 Man 135 Merc 136 Moly 137 Nick	palt	<0.001	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
133 Lead 102 Mag 134 Man 135 Merci 136 Moly 137 Nick	per	0.002	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
102 Mag 134 Man 135 Merc 136 Moly 137 Nick		0.01	mg/L		0.01		E200.7	05/16/06 17:43 / cp				
134 Man 135 Merc 136 Moly 137 Nick	d	<0.001	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
135 Merc 136 Moly 137 Nick	nesium	56.9	mg/L		0.5		E200.7	05/16/06 17:43 / cp				
136 Moly 137 Nick	iganese	<0.001	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
137 Nick	cury	<0.0002	mg/L		0.0002		E200.8	05/04/06 13:39 / sml				
	ybdenum	0.002	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
	el	0.002	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
103 Pota	assium	7.2	mg/L		0.5		E200.7	05/16/06 17:43 / cp				
140 Sele	enium	0.079	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
141 Silve	er	<0.001	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
104 Sodi	ium	432	mg/L	D	3		E200.7	05/16/06 15:01 / cp				
115 Uran	nium	0.287	mg/L		0.0003		E200.8	05/04/06 13:39 / sml				
142 Vana	adium	0.007	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
143 Zinc	· ·	0.009	mg/L		0.001		E200.8	05/04/06 13:39 / sml				
RADION	UCLIDES - DISSOLVED											
	ium 226	<1.0	p Ci/ L		1.0		E903.0	05/22/06 15:09 / trs				
	ium 228	2.1	pCi/L		1.0		RA-05	05/17/06 12:05 / pj				
257 Radi	ium 228 precision (±)	0.9	, pCi/L				RA-05	05/17/06 12:05 / pj				
	rium 230	<1.0	pCi/L		1.0		E907.0	05/16/06 09:30 / df				
DATA QU	JALITY											
	Balance (± 5)	-2.78	%				Calculation	05/17/06 12:54 / cp				
194 Anior		37.2	meg/L				Calculation	05/17/06 12:54 / cp				
195 Catic		35.2	meq/L				Calculation	05/17/06 12:54 / cp				
	ts, Total Dissolved Calculated	2290	mg/L				Calculation	05/17/06 12:54 / cp				
200 TDS	•	1.03	dec. %				Calculation	05/17/06 12:54 / cp				

MCL - Maximum contaminant level.

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-003

Client Sample ID: RW-41

ABORATORIES

Report Date: 06/06/06 **Collection Date:** 05/01/06 13:55 **Date Received:** 05/02/06 **Matrix:** Aqueous

		MCL/							
Ana	llyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By		
MA.	JOR IONS								
075	Alkalinity, Total as CaCO3	429	mg/L		1	A2320 B	05/08/06 10:09 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/08/06 10:09 / th		
005	Bicarbonate as HCO3	523	mg/L		1	A2320 B	05/08/06 10:09 / th		
007	Chloride	200	mg/L		1	A4500-CI B	05/02/06 13:29 / jl		
139	Nitrogen, Nitrate as N	6.2	mg/L		0.1	E353.2	05/04/06 10:03 / sec		
039	Nitrogen, Nitrate+Nitrite as N	6.2	mg/L	D	0.2	E353.2	05/02/06 14:55 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/02/06 13:16 / jal		
008	Sulfate	1210	mg/L	D	30	A4500-SO4 E	05/08/06 15:44 / th		
рну	SICAL PROPERTIES								
009	рH	7.60	s.u.		0.01	A4500-H B	05/03/06 12:11 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	2370	mg/L		10	A2540 C	05/03/06 16:51 / jdh		
MET	ALS - DISSOLVED		,						
022	Aluminum	0.002	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
023	Arsenic	0.002	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
024	Barium	0.012	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
001	Calcium	224	mg/L		0.5	E200.7	05/16/06 17:40 / cp		
027	Chromium	0.004	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
029	Copper	0.002	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
032	Iron	<0.01	mg/L		0.01	E200.7	05/16/06 17:40 / cp		
033	Lead	<0.001	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
002	Magnesium	59.1	mg/L		0.5	E200.7	05/16/06 17:40 / cp		
034	Manganese	<0.001	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 15:39 / sml		
036	Molybdenum	0.002	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
037	Nickel	0.002	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
003	Potassium	7.2	mg/L		0.5	E200.7	05/16/06 17:40 / cp		
040	Selenium	0.076	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
004	Sodium	436	mg/L	ם ו	3	E200.7	05/16/06 13:23 / cp		
015	Uranium	0.265	mg/L		0.0003	E200.8	05/03/06 15:39 / sml		
042	Vanadium	0.006	mg/L		0.001	E200.8	05/03/06 15:39 / sml		
043	Zinc	0.009	mg/L		0.001	E200.8	05/03/06 15:39 / sml		

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Adolpho Blea P. O. Box 3750 Milan, NM 87021

Subject: Analytical reports for water samples RW-45 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Blea:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-45". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from your well exceeds the Federal primary drinking water standards (EPA MCL) for total uranium and selenium, the State standards (NMWQCC) for dissolved uranium and selenium, and secondary Federal drinking water and State standards for sulfate and total dissolved solids (TDS).

Mr. A. Blea

RE: Analytical reports for water samples RW-45 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Uraniu	ım (mg/L)	Sulfate	TDS	Selenium (mg/L)		
	Total	Dissolved	(mg/L)	(mg/L)	Total	Dissolved	
Sample RW-45	0.0497	0.0462	1210	2290	.0.56	0.054	
EPA MCL	0.03	None	250 (a)	500 (a)	0.05	None	
NMWQCC (b)	None	0.03	600	1000	None	0.05	

MCL≈Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

According to the Agency for Toxic Substances and Disease Registry (ATSDR), consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity; selenium in trace amounts is necessary for good health, but can be harmful in high concentrations. Based on the exceedance of the primary drinking water standards for uranium and selenium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium and selenium, such as reverse osmosis. Please review the enclosed fact sheets for additional information pertaining to the health effects of uranium and selenium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely

David L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages)

Mr. A. Blea

RE: Analytical reports for water samples RW-45 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQs[™] for selenium (ATSDR) ToxFAQs[™] for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-005

Client Sample ID: RW-45

 Report Date:
 06/06/06

 Collection Date:
 05/01/06 11:59

 Date Received:
 05/02/06

 Matrix:
 Aqueous

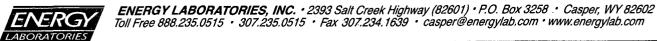
		MCL/							
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By		
MA.	JOR IONS								
075	Alkalinity, Total as CaCO3	345	mg/L		1	A2320 B	05/08/06 10:18 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/08/06 10:18 / th		
005	Bicarbonate as HCO3	421	mg/L		1	A2320 B	05/08/06 10:18 / th		
007	Chloride	205	mg/L		1	A4500-CI B	05/02/06 13:33 / jl		
139	Nitrogen, Nitrate as N	4.2	mg/L		0.1	E353.2	05/04/06 10:03 / sec		
039	Nitrogen, Nitrate+Nitrite as N	4.2	mg/L		0.1	E353.2	05/02/06 15:05 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/02/06 13:17 / jal		
800	Sulfate	1210	mg/L	D	30	A4500-SO4 E	05/08/06 15:47 / th		
РΗ	SICAL PROPERTIES								
009	На	7.78	s.u.		0.01	A4500-H B	05/03/06 12:15 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	2290	mg/L		10	A2540 C	05/03/06 16:52 / jdh		
MET	ALS - DISSOLVED								
022	Aluminum	0.002	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
024	Barium	0.016	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
001	Calcium	285	mg/L		0.5	E200.7	05/16/06 17:46 / cp		
027	Chromium	0.003	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
029	Copper	0.002	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
032	Iron	<0.01	mg/L		0.01	E200.7	05/16/06 17:46 / cp		
033	Lead	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
002	Magnesium	62.1	mg/L		0.5	E200.7	05/16/06 17:46 / cp		
034	Manganese	0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 16:19 / sml		
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
037	Nickel	0.002	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
003	Potassium	6.1	mg/L		0.5	E200.7	05/16/06 17:46 / cp		
040	Selenium	0.054	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
004	Sodium	349	mg/L	D	3	E200.7	05/16/06 13:29 / cp		
015	Uranium	0.0462	mg/L		0.0003	E200.8	05/03/06 16:19 / sml		
042	Vanadium	0.002	mg/L		0.001	E200.8	05/03/06 16:19 / sml		
043	Zinc	0.016	mg/L		0.001	E200.8	05/03/06 16:19 / sml		

 Report
 RL - Analyte reporting limit.

 Definitions:
 QCL - Quality control limit.

 D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



Homestake Mining Co **Client:** Project: Grants NM Lab ID: C06050089-005

Client Sample ID: RW-45

Report Date: 06/06/06 Collection Date: 05/01/06 11:59 Date Received: 05/02/06 Matrix: Aqueous

					MCL/		
Anal	yses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MET	ALS - TOTAL						
122	Aluminum	0.001	mg/L		0.001	E200.8	05/08/06 15:23 / bws
119	Arsenic	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
124	Barium	0.016	mg/L		0.001	E200.8	05/04/06 14:52 / sml
126	Cadmium	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
101	Calcium	270	mg/L		0.5	E200.7	05/16/06 17:50 / cp
120	Chromium	0.002	mg/L		0.001	E200.8	05/04/06 14:52 / sml
128	Cobalt	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
129	Copper	0.003	mg/L		0.001	E200.8	05/04/06 14:52 / sml
121	Iron	<0.01	mg/L		0.01	E200.7	05/16/06 17:50 / cp
133	Lead	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
102	Magnesium	59.2	mg/L		0.5	E200.7	05/16/06 17:50 / cp
134	Manganese	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
135	Mercury	<0.0002	mg/L		0.0002	E200.8	05/04/06 14:52 / sml
136	Molybdenum	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
137	Nickel	0.003	mg/L		0.001	E200.8	05/04/06 14:52 / sml
103	Potassium	6.0	mg/L		0.5	E200.7	05/16/06 17:50 / cp
140	Selenium	0.056	mg/L		0.001	E200.8	05/04/06 14:52 / sml
141	Silver	<0.001	mg/L		0.001	E200.8	05/04/06 14:52 / sml
104	Sodium	346	mg/L	D	3	E200.7	05/16/06 15:21 / cp
115	Uranium	0.0497	mg/L		0.0003	E200.8	05/04/06 14:52 / sml
142	Vanadium	0.002	mg/L		0.001	E200.8	05/04/06 14:52 / sml
143	Zinc	0.017	mg/L		0.001	E200.8	05/04/06 14:52 / sml
RADI	ONUCLIDES - DISSOLVED						
045	Radium 226	<1.0	pCi/L		1.0	E903.0	05/22/06 15:09 / trs
057	Radium 228	2.4	pCi/L		1.0	RA-05	05/17/06 12:05 / pj
257	Radium 228 precision (±)	0.9	pCi/L			RA-05	05/17/06 12:05 / pj
048	Thorìum 230	<1.0	pCi/L		1.0	E907.0	05/16/06 09:30 / df
DATA	QUALITY						
192	A/C Balance (± 5)	-0.995	%			Calculation	05/17/06 12:55 / cp
194	Anions	35.3	meq/L			Calculation	05/17/06 12:55 / cp
195	Cations	34.7	meq/L			Calculation	05/17/06 12:55 / cp
079	Solids, Total Dissolved Calculated	2200	mg/L			Calculation	05/17/06 12:55 / cp
	TDS Balance (0.80 - 1.20)	1.04	dec. %			Calculation	05/17/06 12:55 / cp

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Mr. Leon Bachman P. O. Box3343 Milan, NM 87021

Subject: Analytical reports for water samples RW-46 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Bachman:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 2, 2006. For tracking purposes, the samples from your well were designated as "RW-46". The samples were analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. Both samples were sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for these samples show that water from your well exceeds the Federal primary drinking water standard for total uranium (EPA MCL), the State standard for dissolved uranium (NMWQCC), and secondary Federal drinking water and State standards for sulfate and total dissolved solids (TDS).

Mr. L. Bachman

RE: Analytical reports for water samples RW-46 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

SAMPLE	Uranium	n (mg/L)	Sulfate	TDS (mg/L)
	Total	Dissolved	(mg/L)	
Sample RW-46	0.0487	0.0458	606	1330
EPA MCL	0.03	None	250 (a)	500 (a)
NMWQCC (b)	None	None 0.03		1000

MCL≈Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

Consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. David L.'Maverson

Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (2 pages)

Mr. L. Bachman

RE: Analytical reports for water samples RW-46 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQsTM for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-010 Client Sample ID: RW-46

Report Date: 06/06/06 **Collection Date:** 05/02/06 06:46 **Date Received:** 05/03/06 **Matrix:** Aqueous

		,						
Ana	lyses	Result	Units	Qual		QCL	Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Totał as CaCO3	336	mg/L		1		A2320 B	05/11/06 12:42 / th
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/11/06 12:42 / th
005	Bicarbonate as HCO3	410	mg/L		1		A2320 B	05/11/06 12:42 / th
007	Chloride	48	mg/L		1		A4500-CI B	05/04/06 15:38 / jl
139	Nitrogen, Nitrate as N	2.9	mg/L		0.1		E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.9	mg/L		0.1		E353.2	05/04/06 10:40 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/03/06 14:23 / jal
800	Sulfate	606	mg/L	D	30		A4500-SO4 E	05/09/06 16:58 / th
РНҮ	SICAL PROPERTIES							
009	pН	7.92	s.u.		0.01		A4500-H B	05/04/06 14:13 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1330	mg/L		10		A2540 C	05/05/06 14:57 / jdh
мет	ALS - DISSOLVED							
022	Aluminum	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
023	Arsenic	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
024	Barium	0.017	mg/L		0.001		E200.8	05/05/06 05:25 / bws
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
001	Calcium	139	mg/L		0.5		E200.7	05/12/06 15:09 / ts
027	Chromium	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
029	Copper	0.007	mg/L		0.001		E200.8	05/05/06 05:25 / bws
032	Iron	<0.01	mg/L		0.01		E200.7	05/12/06 15:09 / ts
033	Lead	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
002	Magnesium	39.5	mg/L		0.5		E200.7	05/12/06 15:09 / ts
034	Manganese	0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/05/06 05:25 / bws
036	Molybdenum	0.002	mg/L		0.001		E200.8	05/05/06 05:25 / bws
037	Nickel	0.002	mg/L		0.001		E200.8	05/05/06 05:25 / bws
003	Potassium	3.1	mg/L		0.5		E200.7	05/12/06 15:09 / ts
040	Selenium	0.018	mg/L		0.001		E200.8	05/05/06 05:25 / bws
041	Silver	<0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
004	Sodium	268	mg/L		0.5		E200.7	05/12/06 15:09 / ts
)15	Uranium	0.0458	mg/L		0.0003		E200.8	05/05/06 05:25 / bws
)42	Vanadium	0.001	mg/L		0.001		E200.8	05/05/06 05:25 / bws
043	Zinc	0.019	mg/L		0.001		E200.8	05/05/06 05:25 / bws

MCL - Maximum contaminant level.



ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602 Toll Free 888.235.0515 • 307.235.0515 • Fax 307.234.1639 • casper@energylab.com • www.energylab.com

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co

Project: Grants NM Lab ID: C06050172-010

Client Sample ID: RW-46

Report Date: 06/06/06 **Collection Date:** 05/02/06 06:46 **Date Received:** 05/03/06 **Matrix:** Aqueous

			MCL	1	
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.001	mg/L	0.001	E200.8	05/09/06 03:29 / bws
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
124 Barium	0.017	mg/L	0.001	E200.8	05/04/06 21:05 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
101 Calcium	133	mg/L	0.5	E200.7	05/12/06 16:15 / ts
120 Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
129 Copper	0.012	mg/L	0.001	E200.8	05/04/06 21:05 / sml
121 Iron	0.12	mg/L	0.01	E200.7	05/12/06 16:15 / ts
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
102 Magnesium	37.6	mg/L	0.5	E200.7	05/12/06 16:15 / ts
134 Manganese	0.003	mg/L	0.001	E200.8	05/04/06 21:05 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 21:05 / sml
136 Molybdenum	0.002	mg/L	0.001	E200.8	, 05/04/06 21:05 / sml
137 Nickel	0.002	mg/L	0.001	E200.8	05/04/06 21:05 / sml
103 Potassium	2.8	mg/L	0.5	E200.7	05/12/06 16:15 / ts
140 Selenium	0.018	mg/L	0.001	E200.8	05/04/06 21:05 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
104 Sodium	255	mg/L	0.5	E200.7	05/12/06 16:15 / ts
115 Uranium	0.0487	mg/L	0.0003	E200.8	05/04/06 21:05 / sml
142 Vanadium	0.001	mg/L	0.001	E200.8	05/04/06 21:05 / sml
143 Zinc	0.014	mg/L	0.001	E200.8	05/04/06 21:05 / sml
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 19:55 / trs
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 13:44 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA QUALITY					
192 A/C Balance (± 5)	-0.029	%		Calculation	05/15/06 11:46 / cp
194 Anions	20.9	meq/L		Calculation	05/15/06 11:46 / cp
195 Cations	20.9	meq/L		Calculation	05/15/06 11:46 / cp
079 Solids, Total Dissolved Calculated	1320	mg/L		Calculation	05/15/06 11:46 / cp
200 TDS Balance (0.80 - 1.20)	1.01	dec. %		Calculation	05/15/06 11:46 / cp



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Mr. Rudy and Ms. Rhilla Vasquez P. O. Box 2324 Milan, NM 87021

Subject: Analytical reports for water samples RW-37 and RW-43 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. and Ms. Vasquez:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 1, 2006. For tracking purposes, the sample from your well was designated as "RW-43". During our conversation on 11/01/2006, you expressed your belief that your sample number was RW-37. However, since our conversation I have checked several sources of field documentation made at the time that the sampling was conducted, and the sample number designation of RW-43 for your well does appear to be correct. Nevertheless, I am including the results from well RW-37 for your information. Sample RW-37 was split into two parts (called "RW-37A" and "RW-37B"); all samples were sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event. This was done to compare the results between the two analyses, and is a common procedure for quality assurance in sampling.

I would like to clarify a statement that I made during our conversation: Energy Laboratories is an independent laboratory that has been approved by both the EPA and NMED to perform these sample analyses; by prior arrangement, the cost for these analyses is being paid by Homestake.

The samples were analyzed for metals (dissolved and total), major ions, radionuclides

Mr. and Ms. Vasquez

RE: Analytical reports for water samples RW-37 and RW-43 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that water from RW-37 exceeds the secondary Federal drinking water standards for sulfate; water from RW-43 exceeds both State and secondary Federal drinking water standards for sulfate. Additionally, water from both wells exceed the secondary Federal and State drinking water standards for total dissolved solids (TDS).

SAMPLE	Sulfate (mg/L)	TDS (mg/L)
Sample RW-43	461	1030
Sample RW-37A	245	698
Sample RW-37B	245	700
EPA MCL	250 (a)	500 (a)
NMWQCC (b)	600	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional

¥ ...

Mr. and Ms. Vasquez

RE: Analytical reports for water samples RW-37 and RW-43 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico November 2, 2006

information.

Sincerely,

Bavid L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (6 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

and the second

Sulfate in Drinking Water (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence

LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-002 Client Sample ID: RW-43

Report Date: 06/06/06 Collection Date: 05/01/06 14:55 Date Received: 05/02/06 Matrix: Aqueous

					MCL	1	
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MAJ	IOR IONS						
075	Alkalinity, Total as CaCO3	275	mg/L		1	A2320 B	05/08/06 10:06 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/08/06 10:06 / th
005	Bicarbonate as HCO3	336	mg/L		1	A2320 B	05/08/06 10:06 / th
007	Chloride	68	mg/L		1	A4500-CI B	05/02/06 13:27 / jì
139	Nitrogen, Nitrate as N	3.6	mg/L		0.1	E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	3.6	mg/L		0.1	E353.2	05/02/06 14:52 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/02/06 13:16 / jal
800	Sulfate	461	mg/L	D	10	A4500-SO4 E	05/08/06 14:26 / th
РНҮ	SICAL PROPERTIES						
009	pН	7.84	s.u.		0.01	A4500-H B	05/03/06 12:10 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1030	mg/L		10	A2540 C	05/03/06 16:51 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / smł
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
024	Barium	0.012	mg/L		0.001	E200.8	05/03/06 15:32 / sml
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
001	Calcium	164	mg/L		0.5	E200.7	05/16/06 13:19 / cp
027	Chromium	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
029	Copper	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
032	Iron	0.03	mg/L		0.01	E200.7	05/16/06 13:19 / cp
033	Lead	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / smi
002	Magnesium	51.8	mg/L		0.5	E200.7	05/16/06 13:19 / cp
034	Manganese	0.002	mg/L		0.001	E200.8	05/03/06 15:32 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/03/06 15:32 / sml
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
037	Nickel	0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
003	Potassium	6.6	mg/L		0.5	E200.7	05/16/06 13:19 / cp
040	Selenium	0.011	mg/L	4	0.001	E200.8	05/03/06 15:32 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/03/06 15:32 / sml
004	Sodium	107	mg/L		0.5	E200.7	05/16/06 13:19 / cp
015	Uranium	0.0054	mg/L		0.0003	E200.8	05/03/06 15:32 / sml
042	Vanadium	0.002	mg/L		0.001	E200.8	05/03/06 15:32 / sml
043	Zinc	0.012	mg/L		0.001	E200.8	05/03/06 15:32 / sml

RL - Analyte reporting limit. Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



Report

LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-002

Client Sample ID: RW-43

RATORIES

Report Date: 06/06/06 **Collection Date:** 05/01/06 14:55 **Date Received:** 05/02/06 **Matrix:** Aqueous

				MCL	/	
Ana	lyses	Result	Units	Qual RL QCL	Method	Analysis Date / By
MEI	TALS - TOTAL					
122	Aluminum	0.001	mg/L	0.001	E200.8	05/08/06 14:31 / bws
119	Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
124	Barium	0.012	mg/L	0.001	E200.8	05/04/06 13:32 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
101	Calcium	155	mg/L	0.5	E200.7	05/16/06 14:58 / cp
120	Chromium	<0.001	′ mg/L	0.001	E200.8	05/04/06 13:32 / sml
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
129	Copper	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
121	Iron	0.04	mg/L	0.01	E200.7	05/16/06 14:58 / ср
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
102	Magnesium	48.1	mg/L	0.5	E200.7	05/16/06 14:58 / cp
134	Manganese	0.002	mg/L	0.001	E200.8	05/04/06 13:32 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 13:32 / sml
136	Molybdenum	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
103	Potassium	6.6	mg/L	0.5	E200.7	05/16/06 14:58 / cp
140	Selenium	0.012	mg/L	0.001	E200.8	05/04/06 13:32 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 13:32 / sml
104	Sodium	110	mg/L	0.5	E200.7	05/16/06 14:58 / cp
115	Uranium	0.0058	mg/L	0.0003	E200.8	05/04/06 13:32 / sml
142	Vanadium	0.002	mg/L	0.001	E200.8	05/04/06 13:32 / sml
143	Zinc	0.013	mg/L	0.001	E200.8	05/04/06 13:32 / sml
RAD	IONUCLIDES - DISSOLVED					
045	Radium 226	1.0	pCi/L	1.0	E903.0	05/22/06 15:09 / trs
245	Radium 226 precision (±)	0.6	pCi/L		E903.0	05/22/06 15:09 / trs
057	Radium 228	1.3	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257	Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DAT	A QUALITY					
192	A/C Balance (± 5)	-1.79	%		Calculation	05/17/06 12:54 / cp
194	Anions	17.9	meq/L		Calculation	05/17/06 12:54 / cp
195	Cations	17.3	meq/L		Calculation	05/17/06 12:54 / cp
079	Solids, Total Dissolved Calculated	1070	mg/L		Calculation	05/17/06 12:54 / cp
200	TDS Balance (0.80 - 1.20)	0.960	dec. %		Calculation	05/17/06 12:54 / cp

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-010 Client Sample ID: RW-37B **Report Date:** 06/06/06 **Collection Date:** 05/01/06 10:40 **Date Received:** 05/02/06 **Matrix:** Aqueous

		· ·			M	ICL/		
Analyses		Result	Units	Qual	RL Q)CL	Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	264	mg/L		1		A2320 B	05/08/06 10:39 / th
006	Carbonate as CO3	.8	mg/L		1		A2320 B	05/08/06 10:39 / th
005	Bicarbonate as HCO3	308	mg/L		1		A2320 B	05/08/06 10:39 / th
007	Chloride	50	mg/L		1		A4500-CI B	05/02/06 13:52 / ji
139	Nitrogen, Nitrate as N	2.0	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.0	mg/L		0.1		E353.2	05/02/06 15:25 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:19 / jal
008	Sulfate	245	mg/L	D	6		A4500-SO4 E	05/08/06 15:52 / th
РНҮ	SICAL PROPERTIES							
009	pH	8.68	s.u.		0.01		A4500-H B	05/03/06 12:24 / jdh
010	Solids, Total Dissolved TDS @ 180 C	700	mg/L		10		A2540 C	05/03/06 16:55 / jdh
мет	ALS - DISSOLVED							
022	Aluminum	0.002	mg/L		0.001		E200.8	05/03/06 16:59 / sml
023	Arsenic	0.003	mg/L		0.001		E200.8	05/03/06 16:59 / sml
024	Barium	0.020	mg/L		0.001		E200.8	05/03/06 16:59 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
001	Calcium	7.5	mg/L		0.5		E200.7	05/16/06 13:59 / cp
027	Chromium	0.002	mg/L		0.001		E200.8	05/03/06 16:59 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
029	Copper	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 13:59 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
002	Magnesium	1.4	mg/L		0.5		E200.7	05/16/06 13:59 / cp
034	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
035	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 16:59 / sml
036	Molybdenum	0.003	mg/L		0.001		E200.8	05/03/06 16:59 / sml
037	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
003	Potassium	2.3	mg/L		0.5		E200.7	05/16/06 13:59 / cp
040	Selenium	0.013	mg/L		0.001		E200.8	05/03/06 16:59 / sml
041	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 16:59 / sml
004	Sodium	257	mg/L		0.5		E200.7	05/16/06 13:59 / cp
015	Uranium	0.0158	mg/L		0.0003		E200.8	05/03/06 16:59 / sml
)42	Vanadium	0.017	mg/L		0.001		E200.8	05/03/06 16:59 / sml
)43	Zinc	0.023	mg/L		0.001		E200.8	05/03/06 16:59 / sml

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050089-010 Client Sample ID: RW-37B **Report Date:** 06/06/06 **Collection Date:** 05/01/06 10:40 **Date Received:** 05/02/06 **Matrix:** Aqueous

						MCL/		
An	alyses	Result	Units	Qual	RL	QCL	Method	Analysis Date / By
ME	TALS - TOTAL							
122	Aluminum	0.002	mg/L		0.001		E200.8	05/08/06 15:59 / bws
119	Arsenic	0.003	mg/L		0.001		E200.8	05/04/06 22:39 / sml
124	Barium	0.020	mg/L		0.001		E200.8	05/04/06 22:39 / sml
126	Cadmium	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
101	Calcium	6.9	mg/L		0.5		E200.7	05/16/06 15:37 / cp
120	Chromium	0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
128	Cobalt	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sm)
129	Copper	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
121	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 15:37 / cp
133	Lead	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
102	Magnesium	1.3	mg/L		0.5		E200.7	05/16/06 15:37 / cp
134	Manganese	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
135	Mercury	<0.0002	mg/L		0.0002		E200.8	05/04/06 22:39 / sml
136	Molybdenum	0.003	mg/L		0.001		E200.8	05/04/06 22:39 / sml
137	Nickel	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
103	Potassium	2.3	mg/L		0.5		E200.7	05/16/06 15:37 / cp
140	Selenium	0.012	mg/L		0.001		E200.8	05/04/06 22:39 / sml
141	Silver	<0.001	mg/L		0.001		E200.8	05/04/06 22:39 / sml
104	Sodium	261	mg/L		0.5		E200.7	05/16/06 15:37 / cp
115	Uranium	0.0169	mg/L		0.0003		E200.8	05/04/06 22:39 / sml
142	Vanadium	0.016	mg/L		0.001		E200.8	05/04/06 22:39 / sml
143	Zinc	0.024	mg/L		0.001		E200.8	05/04/06 22:39 / sml
RAD	IONUCLIDES - DISSOLVED							
045	Radium 226	<1.0	pCi/L		1.0		E903.0	05/22/06 16:16 / trs
057	Radium 228	6.4	pCi/L		1.0		RA-05	05/17/06 12:05 / pj
257	Radium 228 precision (±)	1.0	pCi/L				RA-05	05/17/06 12:05 / pj
048	Thorium 230	<1.0	pCi/L		1.0		E907.0	05/16/06 09:30 / df
DAT	A QUALITY							
192	A/C Balance (± 5)	-1.39	%				Calculation	05/17/06 12:57 / cp
194	Anions	12.1	meg/L				Calculation	05/17/06 12:57 / cp
95	Cations	11,7	meq/L				Calculation	05/17/06 12:57 / cp
)79	Solids, Total Dissolved Calculated	734	mg/L				Calculation	05/17/06 12:57 / cp
200	TDS Balance (0.80 - 1.20)	0.950	dec. %				Calculation	05/17/06 12:57 / cp
	· · · · · · · · · · · · · · · · · · ·							00, 1100 12,01 / Op

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-011Client Sample ID:RW-37A

Report Date: 06/06/06 **Collection Date:** 05/01/06 10:35 **Date Received:** 05/02/06 **Matrix:** Aqueous

						MCL/		
Ana	alyses	Result	Units	Qual		QCL	Method	Analysis Date / By
MA.	JOR IONS							
075	Alkalinity, Total as CaCO3	271	mg/L		1		A2320 B	05/08/06 10:46 / th
006	Carbonate as CO3	6	mg/L		1		A2320 B	05/08/06 10:46 / th
005	Bicarbonate as HCO3	321	mg/L		1		A2320 B	05/08/06 10:46 / th
007	Chloride	50	mg/L		1		A4500-CI B	05/02/06 13:54 / jl
139	Nitrogen, Nitrate as N	2.0	mg/L		0.1		E353.2	05/04/06 10:03 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.0	mg/L		0.1		E353.2	05/02/06 15:27 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/02/06 13:20 / jal
8 0 0	Sulfate	245	mg/L	D	6		A4500-SO4 E	05/08/06 15:53 / th
РНҮ	SICAL PROPERTIES							
009	рН	8.50	s.u.		0.01		A4500-H B	05/03/06 14:47 / jdh
010	Solids, Total Dissolved TDS @ 180 C	698	mg/L		10		A2540 C	05/03/06 16:55 / jdh
MET	ALS - DISSOLVED							
022	Aluminum	0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
023	Arsenic	0.003	mg/L		0.001		E200.8	05/03/06 17:52 / sml
024	Barium	0.019	mg/L		0.001		E200.8	05/03/06 17:52 / sml
026	Cadmium	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
001	Calcium	5.9	mg/L		0.5		E200.7	05/16/06 14:02 / cp
027	Chromium	0.002	mg/L		0.001		E200.8	05/03/06 17:52 / sml
028	Cobalt	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
029	Copper	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
032	Iron	<0.01	mg/L		0.01		E200.7	05/16/06 14:02 / cp
033	Lead	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
002	Magnesium	1.1	mg/L		0.5		E200.7	05/16/06 14:02 / cp
)34	Manganese	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
)35	Mercury	<0.0002	mg/L		0.0002		E200.8	05/03/06 17:52 / sml
)36	Molybdenum	0.003	mg/L		0.001		E200.8	05/03/06 17:52 / sml
)37	Nickel	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
003	Potassium	2.3	mg/L		0.5		E200.7	05/16/06 14:02 / cp
940	Selenium	0.012	mg/L		0.001		E200.8	05/03/06 17:52 / smł
)41	Silver	<0.001	mg/L		0.001		E200.8	05/03/06 17:52 / sml
04	Sodium ,	250	mg/L		0.5		E200.7	05/16/06 14:02 / cp
15	Uranium	0.0161	mg/L		0.0003		E200.8	05/03/06 17:52 / sml
42	Vanadium	0.017	mg/L		0.001		E200.8	05/03/06 17:52 / sml
43	Zinc	0.017	mg/L		0.001		E200.8	05/03/06 17:52 / sml

Report R

RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050089-011Client Sample ID:RW-37A

· · .

ABORATORIES

67

Report Date: 06/06/06 **Collection Date:** 05/01/06 10:35 **Date Received:** 05/02/06 **Matrix:** Aqueous

				I	MCL/	
An	alyses	Result	Units	Qual RL	QCL Method	Analysis Date / By
ME	TALS - TOTAL					
122	Aluminum	0.003	mg/L	0.001	E200.8	05/08/06 16:07 / bws
119	Arsenic	0.003	mg/L	0.001	E200.8	05/04/06 22:45 / smi
124	Barium	0.019	mg/L	0.001	E200.8	05/04/06 22:45 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / smł
101	Calcium	6.9	mg/L	0.5	E200.7	05/16/06 15:41 / cp
120	Chromium	0.001	mg/L	0.001	E200.8	05/04/06 22:45 / smt
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
129	Copper	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
121	Iron	<0.01	mg/L	0.01	E200.7	05/16/06 15:41 / cp
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
102	Magnesium	1.4	mg/L	0.5	E200.7	05/16/06 15:41 / cp
134	Manganese	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sm
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 22:45 / sml
136	Molybdenum	0.003	mg/L	0.001	E200.8	05/04/06 22:45 / sml
137	Nickel	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
103	Potassium	2.3	mg/L	0.5	E200.7	05/16/06 15:41 / cp
140	Selenium	0.011	mg/L	0.001	E200.8	05/04/06 22:45 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 22:45 / sml
104	Sodium	249	mg/L	0,5	E200.7	05/16/06 15:41 / cp
115	Uranium	0.0170	mg/L	0.0003	E200.8	05/04/06 22:45 / sm)
142	Vanadium	0.016	mg/L	0.001	E200.8	05/04/06 22:45 / sml
143	Zinc	0.017	mg/L	0.001	E200.8	05/04/06 22:45 / sml
RAD	ONUCLIDES - DISSOLVED					
)45	Radium 226	<1.0	pCi/L	1.0	E903.0	05/22/06 16:16 / trs
245	Radium 226 precision (±)	0.6	pCi/L		E903.0	05/22/06 16:16 / trs
)57	Radium 228	3.4	pCi/L	1.0	RA-05	05/17/06 12:05 / pj
257	Radium 228 precision (±)	0.9	pCi/L		RA-05	05/17/06 12:05 / pj
48	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/16/06 09:30 / df
DAT	A QUALITY					
92	A/C Balance (± 5)	-2.59	%		Calculation	05/17/06 12:57 / cp
94	Anions	11.9	meq/L		Calculation	
95	Cations	11.3	meg/L		Calculation	
79	Solids, Total Dissolved Calculated	716	mg/L		Calculation	
00	TDS Balance (0.80 - 1.20)	0.970	dec. %		Calculation	ee the find top
	,,		/0		Calculation	05/17/06 12:57 / cp



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 1, 2006

Ms. Winnie Mae Wilcox P. O. Box 2711 Milan, NM 87021

Subject: Analytical report for water sample RW-48 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Wilcox:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-48". The sample taken from your well was split into two parts, with one sample sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event, and the second sample sent to Pinnacle Laboratory (listed as General Engineering on the laboratory report; note that Pinnacle Laboratory's reporting units are μ g/L, whereas we report in units of mg/L below). This was done to compare the results between the two laboratories, and is a common procedure for quality assurance in sampling. The latter sample is designated "RW-48 duplicate" in the table following.

The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte

Ms. W. Wilcox

RE: Analytical reports for water sample RW-48 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the Federal primary drinking water standard for total uranium (EPA MCL), the State standard (NMWQCC) for dissolved uranium, the secondary Federal drinking water standard for iron, and both the State and secondary Federal drinking water standards for total iron, sulfate, and total dissolved solids (TDS).

SAMPLE	Sulfate (mg/L)	TDS (mg/L)	Total iron	Uraniu	m (mg/L)
			(mg/L)	Total	Dissolved
Sample RW-48	1660	3030	3.01	0.0857	0.0811
Sample RW-48 duplicate	1450	3060	1.510	0.0736 (c)	0.072933 (d)
EPA MCL	250 (a)	500 (a)	0.3 (a)	0.03	None
NMWQCC (b)	600	1000	None	None	0.03

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

c. Includes U_{234} , which comprises only 0.0058% of total uranium

d. Reported concentration excludes U234

According the Agency for Toxic Substances and Disease Registry (ASTDR), consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate, TDS, and iron are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as orange staining. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate, TDS, and iron.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide

Ms. W, Wilcox

RE: Analytical reports for water sample RW-48 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

19 F F

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely, David L. Maverson

Superfund Oversight Section

Enclosures: Laboratory Analytical Report from Energy Labs (2 pages) Laboratory analytical report from Pinnacle Labs (6 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA) Sulfate in Drinking Water (EPA) ToxFAQsTM for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

> . તમાર, ંગે કર્યત્ર કે

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-005

٠

Client Sample ID: RW-48

Report Date: 06/06/06 Collection Date: 05/02/06 14:40 Date Received: 05/03/06 Matrix: Aqueous

					MCL	/	
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	311	mg/L		1	A2320 B	05/11/06 11:36 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:36 / th
005	Bicarbonate as HCO3	380	mg/L		1	A2320 B	05/11/06 11:36 / th
007	Chloride	264	mg/L		1	A4500-CI B	05/04/06 15:24 / jl
139	Nitrogen, Nitrate as N	5.2	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	5.2	mg/L	D	0.2	E353.2	05/04/06 10:20 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:22 / jal
008	Sulfate	1660	mg/L	D	60	A4500-SO4 E	05/09/06 16:37 / th
РНҮ	SICAL PROPERTIES						
009	pH .	7.65	s.u.		0.01	A4500-H B	05/04/06 13:58 / jdh
010	Solids, Total Dissolved TDS @ 180 C	3030	mg/L		10	A2540 C	05/05/06 14:56 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
024	Barium	0.006	mg/L		0.001	E200.8	05/05/06 03:42 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
001	Calcium	308	mg/L	D	0.6	E200.7	05/10/06 17:23 / ts
027	Chromium	0.002	mg/L		0.001	E200.8	05/05/06 03:42 / bws
028	Cobalt	0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
029	Copper	0.003	mg/L		0.001	E200.8	05/05/06 03:42 / bws
032	Iron	0.03	mg/L		0.01	E200.7	05/10/06 17:19 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
002	Magnesium	77.7	mg/L		0.5	E200.7	05/10/06 17:19 / ts
D34	Manganese	0.009	mg/L		0.001	E200.8	05/05/06 03:42 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 03:42 / bws
036	Molybdenum	0.003	mg/L		0.001	E200.8	05/05/06 03:42 / bws
037	Nickel	0.003	mg/L		0.001	E200.8	05/05/06 03:42 / bws
003	Potassium	5.6	mg/L		0.5	E200.7	05/10/06 17:19 / ts
040	Selenium	0.046	mg/L		0.001	E200.8	05/05/06 03:42 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
004	Sodium	548	mg/L	D	0.6	E200.7	05/10/06 17:23 / ts
015	Uranium	0.0811	mg/L		0.0003	E200.8	05/05/06 03:42 / bws
042	Vanadium	0.001	mg/L		0.001	E200.8	05/05/06 03:42 / bws
043	Zinc	0.349	mg/L		0.001	E200.8	05/05/06 03:42 / bws

RL - Analyte reporting limit. Report

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-005

Client Sample ID: RW-48

 Report Date:
 06/06/06

 Collection Date:
 05/02/06 14:40

 Date Received:
 05/03/06

 Matrix:
 Aqueous

				MC		
Analyses		Result	Units	Qual RL QC	L Method	Analysis Date / By
ΜΕΤΑ	LS - TOTAL					
122 A	Numinum	0.107	mg/L	0.001	E200.8	05/04/06 17:18 / sml
119 A	Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 17:18 / sml
124 B	Barium	0.008	mg/L	0.001	E200.8	05/04/06 17:18 / smi
126 C	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 17:18 / sml
101 C	Calcium	286	mg/L	0.5	E200.7	05/12/06 15:52 / ts
120 C	Chromium	0.002	mg/L	0.001	E200.8	05/04/06 17:18 / smł
128 C	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 17:18 / sml
129 C	Copper	0.005	mg/L	0.001	E200.8	05/04/06 17:18 / sml
121 lr	on	3.01	mg/L	0.01	E200.7	05/12/06 15:52 / ts
133 L	ead	0.002	mg/L	0.001	E200.8	05/04/06 17:18 / sml
102 N	1agnesium	74.0	mg/L	0.5	E200.7	05/12/06 15:52 / ts
134 N	langanese	0.042	mg/L	0.001	E200.8	05/04/06 17:18 / sml
135 M	1ercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 17:18 / sml
136 M	loiybdenum	0.003	mg/L	0.001	E200.8	05/04/06 17:18 / sml
137 N	lickel	0.004	mg/L	0.001	E200.8	05/04/06 17:18 / sml
103 P	otassium	4.6	mg/L	0.5	E200.7	05/12/06 15:52 / ts
140 S	elenium	0.045	mg/L	0.001	E200.8	05/04/06 17:18 / sml
141 S	ilver	<0.001	mg/L	0.001	E200.8	05/04/06 17:18 / sml
104 S	odium	569	mg/L	0.5	E200.7	05/12/06 15:52 / ts
115 U	ranium	0.0857	mg/L	0.0003	E200.8	05/04/06 17:18 / sml
142 Va	anadium	0.002	mg/L	0.001	E200.8	05/04/06 17:18 / sml
143 Zi	inc	0.369	mg/L	0.001	E200.8	05/04/06 17:18 / sml
RADIO	NUCLIDES - DISSOLVED					
045 Ra	adium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 14:53 / trs
057 Ra	adium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj
048 TH	horium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA	QUALITY					
192 A/	/C Balance (± 5)	-0.132	%		Calculation	05/15/06 11:44 / cp
194 Ar	nions	45.5	meq/L		Calculation	05/15/06 11:44 / cp
195 Ca	ations	45.3	meq/L		Calculation	05/15/06 11:44 / cp
079 So	olids, Total Dissolved Calculated	2940	mg/L		Calculation	05/15/06 11:44 / cp
200 TC	DS Balance (0.80 - 1.20)	1.03	dec. %		Calculation	05/15/06 11:44 / cp

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis



Company: Pinnacle Labs, Inc Address: 2709D Pan American Freeway NE Albuquerque, New Mexico 87107

Report Date: May 17, 2006

Contact:	Mr. Mitch Rubenst	ein					cport Dai		17,200		
Project:	NMED							Pag	e 1	of	2
	Client Sample II Sample ID: Matrix: Collect Date: Receive Date: Collector:):	RW-48 162062005 Water 02-MAY-06 14:40 03-MAY-06 Client			iect: ent ID:	PINLO PINLO				
Parameter	Qualifier	Result	DL	RL	Units	DF	Analys	tDate	Time	Batch	Metho
Analysis-ICP-M	ſS										
200.2/200.8 Selenium	Federal										
Arsenic	J	2.32	1.50		ug/L	1	PRB ()5/16/06	1729 5	527176	1
Iron		1510	10.0	25.0	ug/L	1					
Manganese		19.0	1.00		ug/L	1					
Molybdenum		2.85	0.100	0.500	ug/L	1					
Potassium		4670	80.0	300	ug/L	, I					
Selenium		45.4	2.50	5.00	ug/L	1					
Sodium		6550	80.0	250	ug/L	1					
Vanadium	J	3.25	2.00	10.0	ug/L	1					
Calcium		315000	2000	10000	ug/L	100	PRB ()5/16/06	1645 5	27176	2
Magnesium		72800	500	1500	ug/L	100					
SW846_6020 Isotopic	Uranium										
Uranium		73.6	0.050	0.200	ug/L	1	PRB 0	5/12/06	1836 5	27178	3
Uranium-235		0.534	0.010	0.070	ug/L	1					
Uranium-238		73.1	0.050	0.200	ug/L	1					•
The following Prep M	ethods were perform	ed									
Method	Description	_		Analyst	Date	Time	Prep	Batch			
EPA 200.2	ICP-MS 200.2 PF	EP	· · ·	CQH1	05/11/06	1924	5271	75			
SW846 3005A	ICP-MS 3005 PR	EP		CQH1	05/11/06	1927	5271	77			

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 200.8	· · · · · · · · · · · · · · · · · · ·
2	EPA 200.8	
3	SW846 3005/6020	

Notes:

The Qualifiers in this report are defined as follows :

< Result is less than amount reported.

> Result is greater than amount reported.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

DISSOLUED

Company : Pinnacle Labs, Inc Address : 2709D Pan American Freeway NE Albuquerque, New Mexico 87107

Report Date: May 17, 2006

Contact:	Mr. Mitch Rubenst	cin							,00			
Project:	NMED				· · · · · · · · · · · · · · · · · · ·				Pag	<u>ge 1</u>	of	2
	Client Sample II Sample ID: Matrix: Collect Date: Receive Date: Collector:) ;	RW-48 162062010 Water 02-MAY-06 14:4 03-MAY-06 Client	10			iect: ent ID:	PINI PINI	.00405 .001			
Parameter	Qualifier	Result	:	DL	RL	Units	DF	Ana	ystDate	Time	Batch	Metho
Metals Analysis-ICP-N	IS											
200.2/200.8 Selenium	Federal											
Arsenic	J	2.35		1.50	5.00	ug/L	1	PRB	05/16/06	1742	527176	1
Iron		1000		10.0	25.0	ug/L	1					
Manganese		9.45		1.00	5.00	ug/L	1					
Molybdeaum		2.98		.100	0.500	ug/L	1					
Selenium		47.0	:	2.50	5.00	ug/L	1					
Vanadium	J	2.81	:	2.00	10.0	ug/L	1					
SW846_6020 Isotopic	Uranium						•					
Uranium-235		0.533	0	.010	0.070	ug/L	1	PRB	05/12/06	1849	527178	2
Uranium-238		72.4	0	.050	0.200	ug/L	1					
The following Prep M	ethods were perform	ed										
Method	Description				Analyst	Date	Time	P	rep Batch			
EPA 200.2	ICP-MS 200.2 PF	REP			CQHI	05/11/06	1924	52	27175			<u> </u>
SW846 3005A	ICP-MS 3005 PR	EP			CQHI	05/11/06	1927	52	27177			
The following Analyti	cal Methods were ner	formed										
Method	Description				A	nalyst Comm	ents					
1	EPA 200.8				····	·						<u> </u>
2	SW846 3005/6020	0	1. 1. A.									
		-										
Notes:												

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Page 37 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company Address :	Pinnacle Labs, Inc 2709D Pan American Freeway NE Albuquerque, New Mexico 87107									
Contact:	Mr. Mitch Rubenstein							May 17, 2006		
Project:	NMED						Page	2	oſ	2
	Client Sample ID: RW-48 Sample ID: 162062010			Project Client I		PINL0040 PINL001	5		_	
Parameter	Qualifier Result	DL	RL	Units	DF	AnalystDa	te T	ime	Batch	1 Method

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard, operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

A nuria Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address :	Pinnacle Labs, In 2709D Pan Amer Albuquerque, Nev	ican Free w Mexico	•			·	Report Date: May 17, 2006			
Contact:	Mr. Mitch Rubens	stein								
Project:	<u>NMED</u>			······						
	Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	D:	RW-48 162062005 Water 02-MAY-06 14:40 03-MAY-06 Client			roiect: lient ID:	PINL00405 PINL001			
Parameter	Qualifier	Result	DI	. RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Feder	ral									
EPA 150.1 pH Federal										
pH at Temp 14.1C	Н	7.50	0.010	0.100	SU	1	SXS2 05/10/06	2236	526994	1
Ion Chromatography Fe	deral									
EPA 300.0 Anions-NO2	,SO4,Cl									
Nitrate-N		5.51	0.033		mg/L	1	RXM105/04/06	0626 :	526700	2
Nitrite-N	U	0.00	0.033		mg/L	1				
Chloride		234	6.60		mg/L	100	MAR105/04/06	2029 :	526700	3
Sulfate		1450	10.0	40.0	mg/L	100				
Nutrient Analysis Federa	al									
Nitrogen, (NO3/NO2)										
Nitrogen, Nitrate/Nitrite	;	4.91	0.140	0.500	mg/L	10	KLP1 05/08/06	1324 :	527551	4
Solids Analysis Federal				•						
EPA 160.1 Solids, Disso	olved-F									
Total Dissolved Solids		3060	2.38	10.0	mg/L		GXA2 05/05/06	0854 5	526858	5
Titration Analysis Feder	al									
SM 2320B Total Alkalin	ity Federal									•
Alkalinity, Total as CaC	203	295	0.725	1.00	mg/L		RG2 05/15/06	1641 5	528783	6
Bicarbonate alkalinity (294	0.725	1.00	mg/L					
Carbonate alkalinity (Ca	CO3)	1.15	0.725	1.00	mg/L					

The following Analytical Methods were performed

Method	Description	Analyst Comments						
1	EPA 150.1	······						
2	EPA 300.0							
3	EPA 300.0	· · · · · · · · · · · · · · · · · · ·						
4	EPA 353.1							
5	EPA 160.1							
6	SM 2320B							

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc Address : 2709D Pan American Freeway NE

Albuquerque, New Mexico 87107 Report Date: May 17, 2006 Contact: Mr. Mitch Rubenstein NMED Project: Client Sample ID: **RW-48** Project: Client ID: **PINL00405** 162062010 Sample ID: PINL001 Water Matrix: 02-MAY-06 Collect Date: 03-MAY-06 Receive Date: Collector: Client Qualifier Parameter Result Uncertainty DL TPU RL Units Time Batch Mtd **DF** Analyst Date **Rad Alpha Spec Analysis** Alphaspec Th, Liquid pCi/L Thorium-228 U -0.167 +/-0.119 0.857 +/-0.121 1.00 DDR1 05/12/06 0810 528280 1 Thorium-230 -0.0912 +/--0.076 +/-0.076 U 0.498 1.00 pCi/L --0.0164 pCi/L Thorium-232 U +/--0.0164 0.342 +/-0.0166 1.00 **Rad Gas Flow Proportional Counting** GFPC, Ra228, Liquid 0.920 +/-0.421 Radium-228 U 1.68 +/--0.421 3.00 pCi/L KSD1 05/16/06 1258 529101 2 Rad Radium-226 Lucas Cell, Ra226, liquid Radium-226 U 0.247 +/-0.0987 0.266 +/-0.0987 1.00 pCi/L SG 05/15/06 1045 527246 3

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	СQНІ	05/11/06	1924	527175
SW846 3005A	ICP-MS 3005 PREP	CQH1	05/11/06	1927	527177

Method Description 1 DOE EML HASL-300, Th-01-RC Modified 2 EPA 904.0 Modified 3 EPA 903.1 Modified Surrogate/Tracer recovery Test Recovery%

Surrogate/Tracer recovery	1650	Recovery %	Acceptable Limits	
Thorium-229	Alphaspec Th, Liquid	52	(15%-125%)	· · · · · · · · · · · · · · · · · · ·
Carrier/Tracer Recovery	GFPC, Ra228, Liquid	- 74	(15%–125%)	

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Parameter		Qualifier Result Uncertainty	DL TP	rU RL	Units DF An	alyst Date Time Batch Mtd
		Client Sample ID: Sample ID:	RW-48 162062010	Proi Clie	ect: PINL004 ent ID: PINL001	05
-	Contact: Project:	Albuquerque, New Mexico 87107 Mr. Mitch Rubenstein NMED			Report Date:	May 17, 2006
	Company : Address :	Pinnacle Labs, Inc 2709D Pan American Freeway NE				

APARTER ...

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Mr. Charles Harding P. O. Box 204 Grants, NM 87020

Subject: Analytical report for water sample RW-50 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Harding:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-50". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal and State drinking water standards for sulfate and total dissolved solids (TDS).

Mr. C. Harding

Analytical report for water sample RW-50 collected by New Mexico Environment RE: Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	Sulfate (mg/L)	TDS (mg/L)
Sample RW-50	1010	1950
EPA MCL	250 (a)	500 (a)
NMWQCC (b)	600	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. 1.1.1.1

David L. Mayerson Superfund Oversight Section

Enclosures:

Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA)

Mr. C. Harding

RE: Analytical report for water sample RW-50 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence

da s conce



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-004

Client Sample ID: RW-50

 Report Date:
 06/06/06

 Collection Date:
 05/02/06 15:20

 Date Received:
 05/03/06

 Matrix:
 Aqueous

			MCL	1	
Analyses	Result	Units	Qual RL QCL		Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.002	mg/L	0.001	E200.8	05/09/06 02:59 / bws
119 Arsenic	0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
124 Barium	0.007	mg/L	0.001	E200.8	05/04/06 20:45 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
101 Calcium	15.7	mg/L	0.5	E200.7	05/12/06 15:48 / ts
120 Chromium	0.006	mg/L	0.001	E200.8	05/04/06 20:45 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
129 Copper	0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
121 Iron	0.13	mg/L	0.01	E200.7	05/12/06 15:48 / ts
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
102 Magnesium	4.8	mg/L	0.5	E200.7	05/12/06 15:48 / ts
134 Manganese	0.027	mg/L	0.001	E200.8	05/04/06 20:45 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 20:45 / sml
136 Molybdenum	0.027	mg/L	0.001	E200.8	05/04/06 20:45 / sml
137 Nickel	0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
103 Potassium	2.4	mg/L	0.5	E200.7	05/12/06 15:48 / ts
140 Selenium	0.005	mg/L	0.001	E200.8	05/04/06 20:45 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 20:45 / sml
104 Sodium	645	mg/L	0.5	E200.7	05/12/06 15:48 / ts
115 Uranium	0.0103	mg/L	0.0003	E200.8	05/04/06 20:45 / sml
142 Vanadium	<0.001	mg/L	0.001	E200.8	05/04/06 20:45 / smi
143 Zinc	0.003	mg/L	0.001	E200.8	05/04/06 20:45 / smł
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 13:53 / trs
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA QUALITY					
192 A/C Balance (± 5)	-1.76	%		Calculation	05/15/06 11:44 / cp
194 Anions	30.4	meq/L		Calculation	05/15/06 11:44 / cp
195 Cations	29.3	meq/L		Calculation	05/15/06 11:44 / cp
079 Solids, Total Dissolved Calculated	1940	mg/L		Calculation	05/15/06 11:44 / cp
200 TDS Balance (0.80 - 1.20)	1.01	dec. %		Calculation	05/15/06 11:44 / cp

Report Definitions:

RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-004

Client Sample ID: RW-50

Report Date: 06/06/06 **Collection Date:** 05/02/06 15:20 **Date Received:** 05/03/06 **Matrix:** Aqueous

					MC		
Ana	lyses	Result	Units	Qual	RL QC	L Method	Analysis Date / By
MA.	JORIONS						
075	Alkalinity, Total as CaCO3	360	mg/L		1	A2320 B	05/11/06 11:34 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:34 / th
005	Bicarbonate as HCO3	439	mg/L		1	A2320 B	05/11/06 11:34 / th
007	Chloride	174	mg/L		1	A4500-CI B	05/04/06 15:22 / il
139	Nitrogen, Nitrate as N	<0.1	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	<0.1	mg/L		0.1	E353.2	05/04/06 10:17 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:22 / jal
008	Sulfate	1010	mg/L	D	30	A4500-SO4 E	05/09/06 16:36 / th
РНҮ	SICAL PROPERTIES						
009	рН	7.86	s.u.		0.01	A4500-H B	05/04/06 13:56 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1950	mg/L		10	A2540 C	05/05/06 14:55 / jdh
MET	ALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
023	Arsenic	0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
024	Barium	0.006	mg/L		0.001	E200.8	05/05/06 03:35 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
001	Calcium	16.3	mg/L		0.5	E200.7	05/10/06 16:50 / ts
027	Chromium	0.002	mg/L		0.001	E200.8	05/05/06 03:35 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
029	Copper	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
032	Iron	0.02	mg/L		0.01	E200.7	05/10/06 16:50 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
002	Magnesium	5.0	mg/L		0.5	E200.7	05/10/06 16:50 / ts
034	Manganese	0.025	mg/L		0.001	E200.8	05/05/06 03:35 / bws
D35	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 03:35 / bws
036	Molybdenum	0.027	mg/L		0.001	E200.8	05/05/06 03:35 / bws
037	Nickel	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
003	Potassium	3.4	mg/L		0.5	E200.7	05/10/06 16:50 / ts
040	Selenium	0.003	mg/L		0.001	E200.8	05/05/06 03:35 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
004	Sodium	635	mg/L		0.5	E200.7	05/10/06 16:50 / ts
015	Uranium	0.0094	mg/L		0.0003	E200.8	05/05/06 03:35 / bws
042	Vanadium	<0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws
043	Zinc	0.001	mg/L		0.001	E200.8	05/05/06 03:35 / bws

 Report
 RL - Analyte reporting limit.

 Definitions:
 QCL - Quality control limit.

 D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



State of New Mexico ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

BILL RICHARDSON GOVERNOR

November 1, 2006

Ms. Candace Williams 2042 Zuni Canyon Road Grants, NM 87020

Subject: Analytical reports for water sample RW-20 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935), Milan, New Mexico.

Dear Ms. Williams:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical reports for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-20". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. Additionally the samples designated as RW-20A and RW-20B (see below for further explanation) were analyzed for the presence of volatile organic compounds (VOCs).

The sample taken from your well was split into two parts. One sample (designated RW-20 in the table below) was sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event. The second sample was sent to Pinnacle Laboratory (listed as General Engineering on the laboratory report; note that Pinnacle Laboratory's reporting units are μ g/L, whereas we report in units of mg/L below). Additionally, the sample that was sent to Pinnacle Laboratory was again split into two parts, designated RW-20A and RW-20B, with the same analytical procedures performed on both of these samples. This was done to compare the results between the two

Ms. C. Williams

RE: Analytical reports for water sample RW-20 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico November 1, 2006

laboratories, as well as within Pinnacle Laboratory itself, and is a common procedure for quality assurance in sampling.

There were no detections of VOCs that were reported from sample RW-20 (i.e., RW-20A and RW-20B analyses from Pinnacle Laboratory). Analytical results that do exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the Federal drinking water (MCL) and State standards for nitrate as nitrogen, and State and secondary Federal drinking water standards for sulfate, total dissolved solids (TDS), and total iron.

SAMPLE	Nitrate as nitrogen (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Total iron (mg/L)
Sample RW-20	24.6	842	1740	0.04 (no exceedance)
Sample RW-20A (split)	25.3	766	1740	0.755
Sample RW-20B (split/duplicate)	24.7	754	1750	0.709
EPA MCL	10.0	250 (a)	500 (a)	0.3 (a)
NMWQCC (b)	10.0	600	1000	None

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

According to the Environmental Protection Agency (EPA), excessive levels of nitrate in drinking water have caused serious illness and sometimes death, and can be especially harmful to infants. Based on the exceedance of the primary drinking water standard for nitrates, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes nitrates, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of nitrates.

The secondary drinking water standards for sulfate, TDS, and iron are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as

Ms. C. Williams

RE: Analytical reports for water sample RW-20 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

orange staining. Please review the enclosed fact sheets for additional information pertaining to the effects of iron, sulfate, and TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and Agency for Toxic Substances and Disease Registry (ATSDR) to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely,

David L. Mayerson Superfund Oversight Section

Enclosures: Laboratory analytical report from Energy Laboratories (2 pages) Laboratory analytical report from Pinnacle Laboratory (18 pages) Fact Sheets:

> Consumer Factsheet on nitrates/nitrites (EPA) Sulfate in Drinking Water (EPA) Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-011 Client Sample ID: RW-20
 Report Date:
 06/06/06

 Collection Date:
 05/02/06 11:42

 Date Received:
 05/03/06

 Matrix:
 Aqueous

					MCL/						
An	alyses	Result	Units	Qual	RL O	QCL	Method	Analysis Date / By			
MA.	JORIONS		-					·			
075	Alkalinity, Total as CaCO3	252	mg/L		1		A2320 B	05/11/06 12:44 / th			
006	Carbonate as CO3	<1	mg/L		1		A2320 B	05/11/06 12:44 / th			
005	Bicarbonate as HCO3	308	mg/L		1		A2320 B	05/11/06 12:44 / th			
007	Chloride	111	mg/L		1		A4500-CI B	05/04/06 15:40 / il			
139	Nitrogen, Nitrate as N	24.6	mg/L		0.1		E353.2	05/05/06 08:47 / sec			
039	Nitrogen, Nitrate+Nitrite as N	24.6	mg/L	D	0.3	-	E353.2	05/04/06 10:48 / jal			
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1		A4500-NO2 B	05/03/06 14:24 / jal			
800	Sulfate	842	mg/L	D	30		A4500-SO4 E	05/09/06 16:59 / th			
РНҮ	SICAL PROPERTIES										
009	pН	7.90	s.u.		0.01		A4500-H B	05/04/06 14:17 / jdh			
010	Solids, Total Dissolved TDS @ 180 C	1740	mg/L		10		A2540 C	05/05/06 15:00 / jdh			
MET	ALS - DISSOLVED										
022	Aluminum	0.006	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
023	Arsenic	<0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
024	Barium	0.026	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
)26	Cadmium	<0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
)01	Calcium	201	mg/L		0.5		E200.7	05/12/06 15:13 / ts			
)27	Chromium	0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
)28	Cobalt	0.002	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
)29	Copper	0.002	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
32	Iron	<0.01	mg/L		0.01		E200.7	05/12/06 15:13 / ts			
33	Lead	<0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
02	Magnesium	73.9	mg/L		0.5		E200.7	05/12/06 15:13 / ts			
34	Manganese	<0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
35	Mercury	<0.0002	mg/L		0.0002		E200.8	05/05/06 05:32 / bws			
36	Molybdenum	0.002	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
37	Nickel	0.003	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
03	Potassium	7.6	mg/L		0.5		E200.7	05/12/06 15:13 / ts			
40	Selenium	0.026	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
41	Silver	< 0.001	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
04	Sodium	248	mg/L		0.5		E200.0	05/12/06 15:13 / ts			
15	Uranium	0.0230	mg/L		0.0003		E200.8	05/05/06 05:32 / bws			
42	Vanadium	0.004	mg/L		0.001		E200.8	05/05/06 05:32 / bws			
43	Zinc	0.003	mg/L		0.001		E200.8	05/05/06 05:32 / bws			

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-011 Client Sample ID: RW-20
 Report Date:
 06/06/06

 Collection Date:
 05/02/06 11:42

 Date Received:
 05/03/06

 Matrix:
 Aqueous

				I	MCL/	
Ans	alyses	Result	Units	Qual RL	QCL Method	Analysis Date / By
ME	TALS - TOTAL					
122	Aluminum	0.008	mg/L.	0.001	E200.8	05/09/06 03:36 / bws
119	Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 21:19 / sml
124	Barium	0.037	mg/L	0.001	E200.8	05/04/06 21:19 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 21:19 / sml
101	Calcium	197	mg/L	0.5	E200.7	05/12/06 16:18 / ts
120	Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 21:19 / sml
128	Cobalt	0.002	mg/L	0.001	E200.8	05/04/06 21:19 / sml
129	Copper	0.002	mg/L	0.001	E200.8	05/04/06 21:19 / sml
121	Iron	0.04	mg/L	0.01	E200.7	05/12/06 16:18 / ts
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 21:19 / sml
102	Magnesium	71.8	mg/L	0.5	E200.7	05/12/06 16:18 / ts
134	Manganese	0.004	mg/L	0.001	E200.8	05/04/06 21:19 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 21:19 / sml
136	Molybdenum	0.002	mg/L	0.001	E200.8	05/04/06 21:19 / smi
137	Nickel	0.004	mg/L	0.001	E200.8	05/04/06 21:19 / sml
103	Potassium	7.4	mg/L	0.5	E200.7	05/12/06 16:18 / ts
140	Selenium	0.023	mg/L	0.001	E200.8	05/04/06 21:19 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 21:19 / smł
104	Sodium	243	mg/L	0.5	E200.7	05/12/06 16:18 / ts
115	Uranium	0.0240	mg/L	0.0003	E200.8	05/04/06 21:19 / smi
142	Vanadium	0.001	mg/L	0.001	E200.8	05/04/06 21:19 / sml
143	Zinc	0.003	mg/L	0.001	E200.8	05/04/06 21:19 / sml
RAD	IONUCLIDES - DISSOLVED					
045	Radium 226	<1.0	pCi/L	1,0	E903.0	05/27/06 20:55 / trs
057	Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 13:44 / pj
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
σΑτι	A QUALITY					
192	A/C Balance (± 5)	0.549	%		Calculation	05/15/06 11:46 / cp
194	Anions	26.2	meq/L		Calculation	05/15/06 11:46 / cp
95	Cations	26.5	még/L		Calculation	05/15/06 11:46 / cp
079	Solids, Total Dissolved Calculated		mg/L		Calculation	05/15/06 11:46 / cp
	TDS Balance (0.80 - 1.20)	1.03	dec. %		Calculation	05/15/06 11:46 / cp

ND - Not detected at the reporting limit.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

OTAL **Certificate of Analysis** Company : Pinnacle Labs, Inc 2709D Pan American Preeway NB Address : Albuquerque, New Mexico 87107 Report Date: May 17, 2006 Contact: Mr. Mitch Rubenstein Project: Page 1 of 2 NMED **RW-20A** PINL00405 Client Sample ID: Project: Sample ID: 162062002 Client ID: PINL001 Matrix: Water Collect Date: 02-MAY-06 09:44 Receive Date: 03-MAY-06 Collector: Client Parameter Qualifier Result DL RL Units DF AnalystDate Time Batch Method Metals Analysis-ICP-MS 200.2/200.8 Selenium Federal U 1.50 5.00 Arsenic 0.698 ug/L 1 PRB 05/16/06 1717 527176 1 10.0 25.0 Iron ug/L. 755 1 Manganese 3 1.00 5.00 3.95 Ug/L 1 Molybdenum 0.100 0.500 ug/L 2.42 1 Potassium 7590 80.0 300 ug/L t Selenium 2.50 5.00 ug/L 21.2 1 Vanadium U 2.00 10.0 ug/L 1 1.41 Calcium 208000 2000 10000 ug/L 100 PRB 05/16/06 1637 527176 2 Magnesium 500 1500 76700 ng/L 100 Sodium 282000 8000 25000 ug/L 100 PRB 05/17/06 1041 527176 3 SW846_6020 Isotopic Uranium Uranium 0.050 0.200 21.9 ug/L ł PRB 05/12/06 1828 527178 4 Uranium-235 0.010 ug/L 0.070 0.156 1 0.050 Uranium-238 21.8 0.200 ug/L 1 The following Prep Methods were performed Method Description Analyst Date Time **Prep Batch** EPA 200.2 **ICP-MS 200.2 PREP** CQHI 05/11/06 1924 527175 SW846 3005A **ICP-MS 3005 PREP** COHI 05/11/06 1927 527177

The following Analytical Methods were performed

Method	Description	Analyst Comments
I	EPA 200.8	
2	EPA 200.8	
3	EPA 200:8	

5	AM 11 200.0
4	SW845 3005/6020

Notes:

The Qualifiers in this report are defined as follows :

< Result is less than amount reported.

> Result is greater than amount reported.

E Concentration of the target analyte exceeds the instrument calibration mage.

H Analytical holding time exceeded.

J Indicates an estimated value.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan Americ Albuquerque, New	can Freev										
	Contact: Project:	Mr. Mitch Rubens	tein					R	eport Date:	May 1 Page	7, 20 2	06 of	2
		Client Sample II Sample ID:	 D:	RW-20A 162062002			Projec Client		PINL0040 PINL001				
Parameter		Qualifier	Result		DL	RL	Units	DF	AnalystDa	ite I	Ime	Batch	Method

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

tan M. Murra Reviewed by

2040 Savege Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan American F Albuquerque, New Me											
							Re	port Date:	May 1	7, 20	06		
	Contact:	Mr. Mitch Rubenstein											
	Project:	NMED							Page	2	of	2	
		Client Sample ID: Sample ID:	RW-20A 162062007			Projec Client		PINL0040 PINL001	5				
Parameter		Qualifier Re	sult	DL	RL	Units	DF	AnalystDa	te T	ime	Batch	Method	

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless gualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

M. Mura 0 Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address : Contact: Project:	Pinnacle Labs, Inc 2709D Pan Ameri Albuguergue, New Mr. Mitch Rubens NMED	can Free v Mexico	•			R	eport Date: May	17, 20	006	
	Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	D:	RW-20A 162062002 Water 02-MAY-06 09:44 03-MAY-06 Client		Proi Clie	ect: nt ID:	PINL00405 PINL001			
Parameter	Qualifier	Result	DL	RL.	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Feder	ral .				· .					
EPA 150.1 pH Federal										
pH at Temp 12.6C	н	7.65	0.010	0.100	SU	1	SXS2 05/10/06	2228	526994	1
Ion Chromatography Fe	deral									
EPA 300.0 Anions-NO2										
Nitrite-N	U	0.00	0.033	0.100	mg/L	1	RXM105/04/06	0524	526700	2
Chloride		98.2	3.30	10.0	mg/L	50	MAR105/04/06	1927	526700	3
Nitrate-N	н	25.3	1.65	5.00	mg/L	50				
Sulfate		766	5.00	20.0	mg/L	50				
Nutrient Analysis Federa	1									
Nitrogen, (NO3/NO2)										
Nitrogen, Nitrate/Nitrite		24.3	1.40	5.00	mg/L	100	KLP1 05/08/06	1314	527551	4
Solids Analysis Federal										
EPA 160.1 Solids, Disso	lved-F									
Total Dissolved Solids		1740	2.38	10.0	mg/L		GXA2 05/05/06	0854	526858	5
Titration Analysis Feder	al									
SM 2320B Total Alkalin	ity Federal									
Alkalinity, Total as CaC	03	246	0.725	1.00	mg/L		RG2 05/15/06	1555 3	528783	6
Bicarbonate alkalinity (CaCO3)	245	0.725	1.00	mg/L					-
Carbonate alkalinity (Ca										

The following Analytical Methods were performed

Method	Description	Analyst Comments							
1	EPA 150.1								
2	EPA 300.0								
3	EPA 300.0								
4	EPA 353.1								
5	BPA 160.1		·						
6	SM 2320B	· ·							
	,								

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company :	Pinnacle Labs, Inc
Address :	2709D Pan American Freeway NE

Contact: Project:	Albuquerqu Mr. Mitch F NMED	•						Report Date: May 17,	2006
	Client San Sample ID Matrix: Collect Da Receive D Collector:): ute:		RW-20 1620620 Water 02-MA 03-MA Client	007 Y06		Project: Client ID:	PINL00405 PINL001	
Parameter	Qualifier	Result	Uncertainty	DL	TPU	RI,	Units	DF Analyst Date	Time Batch Mtd
Rad Alpha Spec Analys	sls								
Alphaspec Th, Liquid									
Thorium-228	ប	-0.0701	+/-0.040	0.303	+/0.0401	1.00	pCi/L	DDR1 05/12	/06 0810 528280 1
Thorium-230	U	-0.0242	+/0.022	0.238	+/-0.0222	1.00	pCi/L		

Thorium-228	ប	-0.0701	+/0.040	0.303	+/0.0401	1.00	pCi/L	DDRI	05/12/06 0810 528280	1
Thorium-230	U	-0.0242	+/0.022	0.238	+/-0.0222	1.00	pCi/L			
Thorium-232	U	-0.0236	+/0.0136	0,218	+/-0.0138	1.00	pCi/L			
Rad Gas Flow Proportional	Counting									
GFPC, Ra228, Liquid										
Radium-228	U	1.34	+/~0.468	1.74	+/0.469	3,00	pCi/L	KSD1	05/16/06 1257 529101	2
Rad Radium-226										
Lucas Cell, Ra226, liquid										
Radium~226		0.387	+/~0.123	0.317	+/-0.124	1.00	pCi/L	SG	05/15/06 1015 527246	3
Solid Preparation							-			
Filtration										

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	EPA 160 Laboratory Filtration (Metals Only)	LXEI	05/10/06	1130	527148
EPA 200.2	ICP-MS 200.2 PREP	CQHI	05/11/06	1924	527175
GL-RAD-A-026	Laboratory sample composite				527377
SW846 3005A	ICP-MS 3005 PREP	CQH1	05/11/06	1927	527177
The following An Method	alytical Méthods were performed Description				
1	DOE EML HASL-300, Th-01-RC Modified				
2	EPA 904.0 Modified				
3	EPA 903.1 Modified				
4	GL-RAD-A-026				
Surrogate/Trace	recovery Test	Recovery%	Acceptabl	e Limits	

67

(15%~125%)

ļ

and of an include the states of the second

Page 150 of 161

GFPC, Ra228, Liquid

Carrier/Tracer Recovery

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc 2709D Pan American Freeway NE Address : Report Date: May 17, 2006 Albuquerque, New Mexico 87107 Contact: Mr. Mitch Rubenstein Project: NMED **RW-20A** Project: Client ID: PINL00405 Client Sample ID: 162062007 PINL001 Sample ID:

Parameter	Qualifier	Result	Uncertainty		DL	TPU	RL	Units	DF Analyst Date	Time Batch Mtd		

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

OTAI

Report Date: May 17, 2006

Certificate of Analysis

Company : Pinnacle Labs, Inc 2709D Pan American Freeway NE Address : Albuquerque, New Mexico 87107

Contact: Mr. Mitch Rubenstein

Contact.	Mil. Millett itedeb										
Project:	NMED							Pag	<u>ge 1</u>	of	2
	Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID:	RW-20B 162062004 Water 02-MAY-06 09:46 03-MAY-06 Client			ect: mt ID:	PINI PINI	.00405 .001			
Parameter	Qualifier	Result	DL	RL.	Units	DF	Anal	ystDate	Time	Batch	Metho
Metals Analysis-ICP-M	IS										
200.2/200.8 Selenium	Federal										
Arsenic	U	0.976	1.50	5.00	ug/L	1	PRB	05/16/06	1727	527176	1
Iron		709	10.0	25.0	ug/L	1					
Manganese	J	1.48	1.00	5.00	ug/L.	i					
Molybdenum		2.48	0.100	0.500	ug/L	1					
Potassium		8030	80.0	300	ug/L	1					
Selcnium		23.1	2.50	5.00	ug/L	1					
Vanadium	U	0.590	2.00	10.0	ug/L.	1					
Calcium		209000	2000	10000	ug/L	100	PRB	05/16/06	1642	527176	2
Magnesium		72800	500	1500	ug/L	100					
Sodium		288000	8000	25000	ug/L	100	PRB	05/17/06	1044	527176	3
SW846_6020 Isotopic	Uranium										
Uranium		21.6	0.050	0.200	ug/L	1	PRB	05/12/06	1833	527178	4
Uranium-235		0.153	0.010	0.070	ug/L	1					
Uranium-238		21.5	0.050	0.200	ug/L	1					
The following Prep M	ethods were perfor	med									
Method	Description			Analyst	Date	Time	Pr	ep Batch			

	-	-			•
EPA 200.2	ICP-MS 200.2 PREP	CQH1	05/11/06	1924	527175
SW846 3005A	ICP-MS 3005 PREP	CQH1	05/11/06	1927	527177

The following Analytical Methods were performed				
Method	Description	Analyst Comments		
1	EPA 200.8			
2	EPA 200.8	· · ·		
3	EPA 200.8			
4	SW846 3005/6020			

Notes:

The Qualifiers in this report are defined as follows :

< Result is less than amount reported.

>

Result is greater than amount reported. Concentration of the target analyte exceeds the instrument calibration range. Analytical holding time exceeded. Ε

Η

J Indicates an estimated value.

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan American Freeway NE Albuquerque, New Mexico 87107					
	Contact: Project:	Mr. Mitch Rubenstein NMED			Repo	ort Date: May 1 Page	7,2006 <u>2 of 2</u>
		Client Sample ID: RW-20B Sample ID: 162062004				PINL00405 PINL001	
Parameter		Qualifier Result	DL	RL	Units DF A	AnalystDate T	ime Batch Method

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com DISSOLVED **Certificate of Analysis** Company : Pinnacle Labs, Inc Address : 2709D Pan American Freeway NE Albuquerque, New Mexico 87107 Report Date: May 17, 2006 Contact: Mr. Mitch Rubenstein Project: NMED Page l of 2 RW-20B Project: PINL00405 Client Sample ID: Client ID: Sample ID: 162062009 PINL001 Matrix: Water Collect Date: 02-MAY-06 09:46 **Receive Date:** 03-MAY-06 Collector: Client Qualifier RL Units Parameter Result DL ÐF AnalystDate Time Batch Method Metals Analysis-ICP-MS 200.2/200.8 Selenium Federal ug/L υ 1.50 5.00 1 PRB 05/16/06 1739 527176 1 Arsenic 1.17 10.0 25.0 ug/L Iron 649 1 1.00 ug/L Manganesc 11 0.581 5.00 1 Molybdenum 0.100 0.500 ug/L. 2.39 1 2.50 5.00 ug/L Selenium 22.3 1 2.00 10.0 Vanadium 3 ug/L 1 2.82 SW846_6020 Isotopic Uranium 0.010 0.070 PRB 05/12/06 1847 527178 2 Uranium-235 ug/L 1 0.150 Uranium-238 21.0 0.050 0.200 ug/L The following Prep Methods were performed Method Description Analyst Date Time **Prep Batch** CQH1 EPA 200.2 **ICP-MS 200.2 PREP** 05/11/06 1924 527175 **ICP-MS 3005 PREP** CQHI 05/11/06 SW846 3005A 1927 527177 The following Analytical Methods were performed **Analyst Comments** Method Description ł EPA 200.8 SW846 3005/6020 2 Notes: The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Page 35 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan Americau Freeway NE Albuquerque, New Mexico 87107			Report Date	: May 17, 2006
	Contact: Project:	Mr. Mitch Rubenstein NMED				Page 2 of 2
		Client Sample ID: RW-20B Sample ID: 162062009			Project: PINL00 Client ID: PINL00	
Parameter		Qualifier Result	DL	RL	Units DF Analyst	Date Time Batch Method

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Kurrai Reviewed by

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

2709D Pan American Freeway NE Address : Albuquerque, New Mexico 87107 Report Date: May 17, 2006 Mr. Mitch Rubenstein Contact: Project: NMED Client Sample ID: **RW-20B** Project: **PINL00405** Sample ID: Client ID: PINL001 162062004 Matrix: Water Collect Date: 02-MAY-06 09:46 Receive Date: 03-MAY-06 Collector: _Client__ Qualifier Parameter Result DL RL Units DF AnalystDate Time Batch Method **Electrode Analysis Federal** EPA 150.1 pH Federal pH at Temp 13.6C Н 0.010 0.100 SU 1 SXS2 05/10/06 2233 526994 7.70 ł Ion Chromatography Federal EPA 300.0 Anions-NO2,SO4,Cl mg/L U 0.033 0.100 Nitrite-N 0.00 1 RXM105/04/06 0605 526700 2 Chloride 98.8 3.30 10.0 mg/L 50 MAR105/04/06 2008 526700 3 н 5.00 Nitrate-N 24.7 1.65 mg/L 50 Sulfate 20.0 5.00 mg/L 50 754 **Nutrient Analysis Federal** Nitrogen, (NO3/NO2) Nitrogen, Nitrate/Nitrite 21.6 1.40 5.00 mg/L 100 KLP1 05/08/06 1314 527551 4 Solids Analysis Federal EPA 160.1 Solids, Dissolved-F Total Dissolved Solids 2.38 10.0 mg/L GXA2 05/05/06 0854 526858 1750 5 **Titration Analysis Federal** SM 2320B Total Alkalinity Federal Alkalinity, Total as CaCO3 0.725 1.00 mg/L RG2 05/15/06 1640 528783 6 253 1.00 Bicarbonate alkalinity (CaCO3) 0.725 251 mg/L Carbonate alkalinity (CaCO3) 0.725 1.00 1.53 mg/L

Method	Description EPA 150.1	Analyst Comments					
1							
2	EPA 300.0						
3	EPA 300.0						
4	EPA 353.1						
5	EPA 160.1	· · ·					
6	SM 2320B						

....

Company : Pinnacle Labs, Inc

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 ~ (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc 2709D Pan American Freeway NE Address :

Collector:

Contact: Project:	Albuquerque, New Mexico 87107 Mr. Mitch Rubenstein NMED			Report Date: May 17, 2006
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date:	RW-20B 162062009 Water 02-MAY-06 03-MAY-06	Proiect: Client ID:	PINL00405 PINL001

Client

Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analyst D	ate Time Batch Mtd
Rad Alpha Spec Analysis									
Alphaspec Th, Liquid									
Thorium-228	ប	-0.0299	+/0.0378	0.300	+/-0.0379	1.00	pCi/L	DDR1 05	/12/06 0810 528280 1
Thorium-230	ប	-0.0323	+/0.0249	0.265	+/-0.0251	1.00	pCi/L		
Thorium-232	U	0.0258	+/0.0349	0.169	+/-0.035	1.00	pCi/L		
Rad Gas Flow Proportion	al Counting	g							
GFPC, Ra228, Liquid									
Radium-228	U	-0.456	+/0.470	2.51	+/-0.470	3.00	pCi/L	KSD1 05	/16/06 1258 529101 2
Rad Radium-226									
Lucas Cell, Ra226, liquid	1								
Radium-226		0.833	+/-0.149	0.186	+/-0.151	1.00	pCi/L	SG 05	15/06 1045 527246 3
Solid Preparation							P		10/00/10/10/02/2/10/07
Filtration									

9

Method	Description	Analyst	Date	Time	Prep Batch
EPA 160	EPA 160 Laboratory Filtration (Metals Only)	LXEI	05/10/06	1130	527148
EPA 200.2	ICP-MS 200.2 PREP	CQH1	05/11/06	1924	527175
GL-RAD-A-02	6 Laboratory sample composite				527377
SW846 3005A	ICP-MS 3005 PREP	CQHI	05/11/06	1927	527177
Method	nalytical Methods were performed Description				
1	DOE EML HASL-300, Th-01-RC Modified				
2	EPA 904.0 Modified				
3	EPA 903.1 Modified				
4	GL-RAD-A-026				
Surrogate/Trac	er recovery Test	Recovery%	Acceptabl	e Limits	

53

(15%-125%)

Page 154 of 161

Carrier/Tracer Recovery

GFPC, Ra228, Liquid

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

<u>Certificate of Analysis</u>

Parameter		Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analyst Date	Time Batch Mtd
		Client Sam Sample ID			RW-20B 16206200	9		Proiect: Client ID:	PINL00405 PINL001	
	Contact: Project:	Albuquerque Mr. Mitch R NMED							Report Date: May 17, 2	006
	Company : Address :	Pinnacle Lal 2709D Pan A	•	Freeway NE						

Notes:

The Qualifiers in this report are defined as follows :

Target analyte was detected in the sample as well as the associated blank. В

BD Results below the MDC or low tracer recovery.

Concentration of the target analyte exceeds the instrument calibration range. Ε

Analytical holding time exceeded. Н

Indicates an estimated value. I

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details. Х

The 2:1 depletion requirement was not met for this sample d

Sample preparation or preservation holding time exceeded. h

The above sample is reported on an "as received" basis.

PINN **CLE Environmental Testing**

GC/MS RESULTS

TEST CLIENT PROJECT # PROJECT NAME	: Volatile orgai : NMED-SWQB : Well Sampling : Homesteak Res		8260B	PINNACLE I.D. DATE RECEIVED INSTRUMENT ID ANALYST		605009 05/03/06 GCMS2 DSR
SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
605009-02	RW-20B	AQUEOUS	05/02/06	N/A	05/04/06	1
PARAMETER (CAS#)	DET. LIMIT	RESULT	UNITS			
		· · · · · · · · · · · · · · · · · · ·				
Dichlorodifluoromethane (75-71-8)	5.0	< 5.0	ug/L			
Chloromethane (74-87-3)	5.0	< 5.0	ug/L			
Vinyl Chloride (75-01-4)	5.0	< 5.0	ug/L			
Bromomethane (74-83-9)	5.0	< 5.0	ug/L			
Chloroethane (75-00-3)	5.0	< 5.0	ug/L			
Trichlorofluoromethane (75-69-4)	5.0	< 5.0	ug/L			
Acetone (67-64-1)	10	< 10	ug/L			
Acrolein (107-02-8)	10	< 10	ug/L			
1,1-Dichloroethene (75-35-4)	1.0	< 1.0	ug/L			
lodomethane (74-88-4)	5.0	< 5.0	ug/L			
Methylene Chloride (75-09-2)	1.0	< 1.0	ug/L			
Acrylonitrile (107-13-1)	5.0	< 5.0	ug/L			
cis-1,2-Dichloroethene (156-59-2)	1.0	< 1.0	ug/L			
Methyl-t-butyl Ether (1634-04-4)	1.0	< 1.0	ug/L			
1,1,2-Trichlorotrifluoroethane (76-13-1)	5.0	< 5.0	ug/L			
1,1-Dichloroethane (75-34-3)	1.0	< 1.0	ug/L			
trans-1,2-Dichloroethene (156-60-5)	1.0	< 1.0	ug/L			
2-Butanone (78-93-3)	10	< 10	ug/L			
Carbon Disulfide (75-15-0)	1.0	< 1.0	ug/L			
Bromochloromethane (74-97-5)	1.0	< 1.0	ug/L			
Chloroform (67-66-3)	1.0	< 1.0	ug/L			
2,2-Dichloropropane (594-20-7)	1.0	< 1.0	ug/L			
1,2-Dichloroethane (107-06-2)	1.0	< 1.0	ug/L			
Vinyl Acetate (108-05-4)	5.0	< 5.0	ug/L			
1,1,1-Trichloroethane (71-55-6)	1.0	< 1.0	ug/L			
1,1-Dichloropropene (563-58-6)	1.0	< 1.0	ug/L			
Carbon Tetrachloride (56-23-5)	1.0	< 1.0	ug/L			
Benzene (71-43-2)	1.0	< 1.0	ug/L			
1,2-Dichloropropane (78-87-5)	1.0	< 1.0	ug/L			
Trichloroethene (79-01-6)	1.0	< 1.0	ug/L			
Bromodichloromethane (75-27-4)	1.0	< 1.0	ug/L			
2-Chloroethyl Vinyl Ether (110-75-8)	10	< 10	ug/L			
cls-1,3-Dichloropropene (10061-01-5)	1.0	< 1.0	ug/L			
trans-1,3-Dichloropropene (10061-02-6)	1.0	< 1.0	ug/L			
1,1,2-Trichloroethane (79-00-5)	1.0	< 1.0	ug/L			
1,3-Dichloropropane (142-28-9)	1.0	< 1.0	ug/L			
Dibromomethane (74-95-3)	1.0	< 1.0	ug/L			
Toluene (108-88-3)	1.0	< 1.0	ug/L			
1,2-Dibromoethane (106-93-4)	1.0	< 1.0	ug/L			
4-Methyl-2-Pentanone (108-10-1)	10	< 10	ug/L			
2-Hexanone (591-78-6)	10	< 10	ug/L			
Dibromochloromethane (124-48-1)	1.0	< 1.0	ug/L			
Tetrachloroethene (127-18-4)	1.0	< 1.0	ug/L			
Chlorobenzene (108-90-7)	1.0	< 1.0	ug/L			



GC/MS RESULTS

TEST CLIENT PROJECT # PROJECT NAME	: Volatile orga : Nmed-Swqb : Well Sampling : Homesteak Res		8260B	PINNACLE I.D. DATE RECEIVED INSTRUMENT ID ANALYST	605009 05/03/06 GCMS2 DSR	
SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
605009-02	RW-20B	AQUEOUS	05/02/06	N/A	05/04/06	1
PARAMETER (CAS#)	DET. LIMIT	RESULT	UNITS			
Ethylbenzene (100-41-4)	1.0	< 1.0	ug/L			
1,1,1,2-Tetrachioroethane (630-20-6)	1.0	< 1.0	ug/L			
m&p Xylenes (108-38-3, 106-42-3)	2.0	< 2.0	ug/L			
o-Xylene (95-47-6)	1.0	< 1.0	ug/L			
Styrene (100-42-5)	1.0	< 1.0	ug/L			
Bromoform (75-25-2)	1.0	< 1.0	ug/L			
1,1,2,2-Tetrachloroethane (79-34-5)	2.0	< 2.0	ug/Ļ			
1,2,3-Trichloropropane (96-18-4)	2.0	< 2.0	ug/L			
Isopropyl Benzene (98-82-8)	1.0	< 1.0	ug/L			
Bromobenzene (108-86-1)	1.0	< 1.0	ug/L			
trans-1,4-Dichloro-2-Butene (110-57-6)	2.0	< 2.0	ug/L			
n-Propylbenzene (103-65-1)	1.0	< 1.0	ug/L			
2-Chlorotoluene (95-49-8)	1.0	< 1.0	ug/L			
4-Chlorotoluene (106-43-4) 1,3,5-Trimethylbenzene (108-67-8)	1.0 1.0	< 1.0 < 1.0	ug/L			
	1.0	< 1.0	ug/L ug/L			
tert-Butylbenzene (98-06-6) 1.2.4-Trimethylbenzene (95-63-6)	1.0	< 1.0	0			
	1.0	< 1.0	ug/L			
sec-Butylbenzene (135-98-8) 1,3-Dichlorobenzene (541-73-1)	1.0	< 1.0	ug/L			
1,4-Dichlorobenzene (106-46-7)	1.0	< 1.0	ug/L ug/L			
p-Isopropyltoluene (99-87-6)	1.0	< 1.0	ug/L			
1,2-Dichlorobenzene (95-50-1)	1.0	< 1.0	ug/L ug/L			
n-Butylbenzene (104-51-8)	1.0	< 1.0	ug/L			
1,2-Dibromo-3-chloropropane (96-12-8)	5.0	< 5.0	ug/L			
1,2,4-Trichlorobenzene (120-82-1)	2.0	< 2.0	ug/L			
Naphthalene (91-20-3)	3.0	< 3.0	ug/L			
Hexachlorobutadiene (87-68-3)	2.0	< 2.0	ug/L			
1,2,3-Trichlorobenzene (87-61-6)	2.0	< 2.0	ug/L			
2-Methyl Naphthalene (91-57-6)	5.0	< 5.0	ug/L			
1-Methyl Naphthalene (90-12-0)	5.0	< 5.0	ug/L			
SURROGATE % RECOVERY						
1,2-Dichloroethane-d4		101				
12-210100000000000000000000000000000000		(76 - 114)				
Toluene-d8		99				
		(88 - 110)				
Bromofluorobenzene		99				
		(86 - 115)				
		(00-110)				



GC/MS RESULTS

TEST CLIENT PROJECT # PROJECT NAME	: Volatile orgai : Nmed-Swqb : Well Sampling : Homesteak Res		8260B	PINNACLE I.D. DATE RECEIVED INSTRUMENT ID ANALYST		605009 05/03/06 GCMS2 DSR
SAMPLE ID #	CLIENT ID	MATRIX	DATE SAMPLED	DATE	DATE	DIL.
				EXTRACTED	ANALYZED	FACTOR
605009-01	RW-20A	AQUEOUS	05/02/06	N/A	05/04/06	1
PARAMETER (CAS#)	DET. LIMIT	RESULT	UNITS			
Dichlorodifluoromethane (75-71-8)	5.0	< 5.0	ug/L			
Chloromethane (74-87-3)	5.0	< 5.0	ug/L			
Vinyl Chloride (75-01-4)	5.0	< 5.0	ug/L			
Bromomethane (74-83-9)	5.0	< 5.0	ug/L			
Chloroethane (75-00-3)	5.0	< 5.0	ug/L			
Trichlorofluoromethane (75-69-4)	5.0	< 5.0	ug/L			
Acetone (67-64-1)	. 10	< 10	ug/L.			
Acrolein (107-02-8)	10	< 10	ug/L			
1,1-Dichloroethene (75-35-4)	1.0	< 1.0	ug/L			
Iodomethane (74-88-4)	5.0	< 5.0	ug/L		•	
Methylene Chloride (75-09-2)	1.0	< 1.0	ug/L			
Acrylonitrile (107-13-1)	5.0	< 5.0	ug/L.			
cis-1,2-Dichloroethene (156-59-2)	1.0	< 1.0	ug/L			
Methyl-t-butyl Ether (1634-04-4)	1.0	< 1.0	ug/L			
1,1,2-Trichlorotrifluoroethane (76-13-1)	5.0	< 5.0	ug/L			•
1,1-Dichloroethane (75-34-3)	1.0	< 1.0	ug/L			
trans-1,2-Dichloroethene (156-60-5)	1.0	< 1.0	ug/L			
2-Butanone (78-93-3)	10	< 10	ug/L			
Carbon Disulfide (75-15-0)	1.0	< 1.0	ug/L			
Bromochloromethane (74-97-5)	1.0	< 1.0	ug/L			
Chloroform (67-66-3)	1.0	< 1.0	ug/L			
2,2-Dichloropropane (594-20-7)	1.0	< 1.0	ug/L			
1,2-Dichloroethane (107-08-2)	1.0	< 1.0	ug/L			
Vinyl Acetate (108-05-4)	5.0	< 5.0	ug/L			
1,1,1-Trichloroethane (71-55-6)	1.0	< 1.0	ug/L	•		
1,1-Dichloropropene (563-58-6)	1.0	< 1.0	ug/L			
Carbon Tetrachloride (56-23-5)	1.0	< 1.0	ug/L			
Benzene (71-43-2)	1.0	< 1.0	ug/L			
1,2-Dichloropropane (78-87-5)	1.0	< 1.0	ug/L			
Trichloroethene (79-01-6)	1.0	< 1.0	ug/L			
Bromodichloromethane (75-27-4)	1.0	< 1.0	ug/L			
2-Chloroethyl Vinyl Ether (110-75-8)	10	< 10	ug/L			
cis-1,3-Dichloropropene (10061-01-5)	1.0	< 1.0	ug/L			
trans-1,3-Dichloropropene (10081-02-6)	1.0	< 1.0	ug/L			
1,1,2-Trichloroethane (79-00-5)	1.0	< 1.0	ug/L			
1,3-Dichloropropane (142-28-9)	1.0	< 1.0	ug/L			
Dibromomethane (74-95-3)	1.0	< 1.0	ug/L			
Toluene (108-88-3)	1.0	< 1.0	ug/L			
1,2-Dibromoethane (106-93-4)	1.0	< 1.0	ug/L			
4-Methyl-2-Pentanone (108-10-1)	10	< 10	ug/L			
2-Hexanone (591-78-6)	10	< 10	ug/L			
Dibromochloromethane (124-48-1)	1.0	< 1.0	ug/L			
· · ·			-			
Tetrachioroethene (127-18-4) Chlorobenzene (108-90-7)	1.0 1.0	< 1.0 < 1.0	ug/L ug/L			
0110100011201H3 (100*30*7)	1.0	~ 1.0	uyr			

2709-D Pan American Fwy, NE



GC/MS RESULTS

CLIENT : NMED-SWQB DATI PROJECT # : WELL SAMPLING INST	NACLE I.D. : TE RECEIVED : TRUMENT ID : ALYST :	605009 05/03/06 GCMS2 DSR
---	--	------------------------------------

SAMPLE			DATE	DATE	DATE	DIL.
ID #	CLIENT ID	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
605009-01	RW-20A	AQUEOUS	05/02/06	N/A	05/04/06	1
PARAMETER (CAS#)	DET. LIMIT	RESULT	UNITS			_
Ethylbenzene (100-41-4)	1.0	< 1.0	ug/L			
1,1,1,2-Tetrachloroethane (630-20-6)	1.0	< 1.0	ug/L			
m&p Xylenes (108-38-3, 106-42-3)	2.0	< 2.0	ug/L			
o-Xylene (95-47-6)	1.0	< 1.0	ug/L			
Styrene (100-42-5)	1.0	< 1.0	ug/L			
Bromoform (75-25-2)	1.0	< 1.0	ug/L			
1,1,2,2-Tetrachloroethane (79-34-5)	2.0	< 2.0	ug/L			
1,2,3-Trichloropropane (96-18-4)	2.0	< 2.0	ug/L.			
Isopropyl Benzene (98-82-8)	1.0	< 1.0	ug/L			
Bromobenzene (108-86-1)	1.0	< 1.0	ug/L			
trans-1,4-Dichloro-2-Butene (110-57-6)	2.0	< 2.0	ug/L			
n-Propylbenzene (103-65-1)	1.0	< 1.0	ug/L			
2-Chlorotoluene (95-49-8)	1.0	< 1.0	ug/L			
4-Chlorotoluene (106-43-4)	1.0	< 1.0	ug/L			
1,3,5-Trimethylbenzene (108-67-8)	1.0	< 1.0	ug/L:			
tert-Butylbenzene (98-06-6)	1.0	< 1.0	ug/L			
1,2,4-Trimethylbenzene (95-63-6)	1.0	< 1.0	ug/L			
sec-Butylbenzene (135-98-8)	1.0	< 1.0	ug/L			
1.3-Dichlorobenzene (541-73-1)	1.0	< 1.0	ug/L			
1,4-Dichlorobenzene (106-46-7)	1.0	< 1.0	ug/L			
p-Isopropyltaluene (99-87-6)	1.0	< 1.0	ug/L			
1,2-Dichlorobenzene (95-50-1)	1,0	< 1.0	ug/L			
n-Butylbenzene (104-51-8)	1.0	< 1.0	ug/L			
1,2-Dibromo-3-chloropropane (96-12-8)	5.0	< 5.0	ug/L			
1,2,4-Trichlorobenzene (120-82-1)	2.0	< 2.0	ug/L			
Naphthalene (91-20-3)	3.0	< 3.0	ug/L			
Hexachlorobutadiene (87-68-3)	2.0	< 2.0	ug/L			
1,2,3-Trichlorobenzene (87-61-6)	2.0	< 2.0	ug/L			
2-Methyl Naphthalene (91-57-6)	5.0	< 5.0	ug/L			
1-Methyl Naphthalene (90-12-0)	5.0	< 5.0	ug/L			
SURROGATE % RECOVERY						
1,2-Dichloroethane-d4		99				
		(76 - 114)				
Toluene-d8		99				
		(88 - 110)				
Bromofluorobenzene		98				
		(86 - 115)		•		



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Mr. Milton Head P.O. Box 2038 Milan, NM 87021

Subject: Analytical reports for water sample RW-15 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Head:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical reports for the water sample collected from your well on May 2, 2006. For tracking purposes, the sample from your well was designated as "RW-15". The sample taken from your well was split into two parts, with one sample sent to Energy Laboratories, the primary laboratory used for analytical services during this sampling event, and the second sample sent to Pinnacle Laboratory (listed as General Engineering on the laboratory report; note that Pinnacle Laboratory's reporting units are μ g/L, whereas we report in units of mg/L below). This was done to compare the results between the two laboratories, and is a common procedure for quality assurance in sampling. The latter sample is designated "RW-15 duplicate" in the table following.

The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water Mr. M. Head

RE: Analytical reports for water sample RW-15 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the Federal primary drinking water standard for total uranium (EPA MCL), the State standard (NMWQCC) for dissolved uranium, and both the State and secondary Federal drinking water standards for sulfate and total dissolved solids (TDS). Additionally, the analysis from Energy Laboratories indicates that your water exceeds the secondary Federal drinking water standard for total iron; however analysis of the same sample by Pinnacle Laboratories does not confirm this exceedance.

SAMPLE	Sulfate	TDS	Total iron	Uraniu	m (mg/L)
	(mg/L)	(mg/L)	(mg/L)	Total	Dissolved
Sample RW-15	857	1970	0.908	0.0686	0.0657
Sample RW-15	755	2040	0.02 (no	0.0611	0.059537
duplicate			exceedance)	(c)	(d)
EPA MCL	250 (a)	500 (a)	0.3 (a)	0.03	None
NMWQCC (b)	600	1000	None	None	0.03

MCL=Maximum Contaminant Limit (i.e., primary standard)

a. EPA Secondary Maximum Contaminant Level (i.e., secondary MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

c. <u>Includes</u> U_{234} , which comprises only 0.0058% of total uranium

d. Reported concentration excludes U234

According the Agency for Toxic Substances and Disease Registry (ASTDR), consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate, TDS, and total iron are not healthbased standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Consumption of elevated levels of iron results in aesthetic issues such as rusty colored water with sediment and metallic taste as well as orange staining. Please review the enclosed fact sheets for additional information pertaining to the effects of sulfate, TDS, and iron.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has

11.1

Mr. M. Head

RE: Analytical reports for water sample RW-15 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

asked the New Mexico Department of Health and the ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. David L. Maverson

Superfund Oversight Section

Enclosures: Laboratory analytical report from Energy Laboratories (2 page) Laboratory analytical report from Pinnacle Laboratories (7 pages) Fact Sheets:

> Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)
> ToxFAQs[™] for uranium (ATSDR)
> Sulfate in Drinking Water (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

in the second se

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-003 Client Sample ID: RW-15 Report Date: 06/06/06 Collection Date: 05/02/06 11:17 Date Received: 05/03/06 Matrix: Aqueous

					MCL		
Ana	lyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	423	mg/L		1	A2320 B	05/11/06 11:33 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:33 / th
005	Bicarbonate as HCO3	515	mg/L		1	A2320 B	05/11/06 11:33 / th
007	Chloride	215	mg/L		1	A4500-Cl B	05/04/06 15:21 / jl
139	Nitrogen, Nitrate as N	2.9	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	2.9	mg/L		0.1	E353.2	05/04/06 10:15 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:22 / jai
800	Sulfate	857	mg/L	D	30	A4500-SO4 E	05/09/06 16:28 / th
рнү	SICAL PROPERTIES						
009	pH	7.65	s.u.		0.01	A4500-H B	05/04/06 13:55 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1970	mg/L		10	A2540 C	05/05/06 14:55 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
024	Barium	0.011	mg/L		0.001	E200.8	05/05/06 03:28 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
001	Calcium	259	mg/L	D	0.6	E200.7	05/10/06 16:47 / ts
027	Chromium	0.002	mg/L		0.001	E200.8	05/05/06 03:28 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
029	Copper	0.002	mg/L		0.001	E200.8	05/05/06 03:28 / bws
032	Iron	<0.01	mg/L		0.01	E200.7	05/10/06 16:44 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
002	Magnesium	68.3	mg/L		0.5	E200.7	05/10/06 16:44 / ts
034	Manganese	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 03:28 / bws
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
037	Nickel	0.003	mg/L		0.001	E200.8	05/05/06 03:28 / bws
003	Potassium	4.4	mg/L		0.5	E200.7	05/10/06 16:44 / ts
040	Selenium	0.030	mg/L		0.001	E200.8	05/05/06 03:28 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 03:28 / bws
004	Sodium	293	mg/L		0.5	E200.7	05/10/06 16:44 / ts
015	Uranium	0.0657	mg/L		0.0003	E200.8	05/05/06 03:28 / bws
042	Vanadium	0.002	mg/L		0.001	E200.8	05/05/06 03:28 / bws
043	Zinc	0.055	mg/L		0.001	E200.8	05/05/06 03:28 / bws

 Report
 RL - Analyte reporting limit.

 Definitions:
 QCL - Quality control limit.

 D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

Homestake Mining Co Client: Project: Grants NM Lab ID: C06050172-003 Client Sample ID: RW-15

Report Date: 06/06/06 Collection Date: 05/02/06 11:17 Date Received: 05/03/06 Matrix: Aqueous

	:		MCL	1	
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.006	mg/L	0.001	E200.8	05/09/06 02:52 / bws
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
124 Barium	0.012	mg/L	0.001	E200.8	05/04/06 20:39 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
101 Calcium	254	mg/L	0.5	E200.7	05/12/06 15:36 / ts
120 Chromium	0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
129 Copper	0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
121 Iron	0.02	mg/L	0.01	E200.7	05/12/06 15:36 / ts
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
102 Magnesium	65.0	mg/L	0.5	E200.7	05/12/06 15:36 / ts
134 Manganese	0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 20:39 / sml
136 Molybdenum	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
137 Nickel	0.004	mg/L	0.001	E200.8	05/04/06 20:39 / sml
103 Potassium	3.4	mg/L	0.5	E200.7	05/12/06 15:36 / ts
140 Selenium	0.030	mg/L	0.001	E200.8	05/04/06 20:39 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 20:39 / sml
104 Sodium	296	mg/L	0.5	E200.7	05/12/06 15:36 / ts
115 Uranium	0.0686	mg/L	0.0003	E200.8	05/04/06 20:39 / sml
142 Vanadium	0.002	mg/L	0.001	E200.8	05/04/06 20:39 / sml
143 Zinc	0.057	mg/L	0.001	E200.8	05/04/06 20:39 / smi
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 12:52 / trs
)57 Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
		λ.			
192 A/C Balance (± 5)	-0.563	%		Calculation	05/15/06 11:43 / cp
194 Anions	31.3	meq/L		Calculation	05/15/06 11:43 / cp
195 Cations	31.0	meg/L		Calculation	05/15/06 11:43 / cp
79 Solids, Total Dissolved Calculated	1930	mg/L		Calculation	05/15/06 11:43 / cp
200 TDS Balance (0.80 - 1.20)	1.02	dec. %		Calculation	05/15/06 11:43 / cp

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Pinnacle Labs, Inc 2709D Pan American Freeway NE Address :

Albuquerque, New Mexico 87107 Report Date: May 17, 2006 Contact: Mr. Mitch Rubenstein Project: NMED RW-15 162062008 Client Sample ID: Project: Client ID: **PINL00405** Sample ID: Matrix: Collect Date: Receive Date: PINL001

Water 02-MAY-06 03-MAY-06 a

	Collector:			Client							
Parameter	Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analys	t Date	Time Batch	Mtd
Rad Alpha Spec Analysis	;										
Alphaspec Th, Liquid											
Thorium-228	U	0.012	+/-0.0518	0.324	+/-0.0518	1.00	pCi/L	DDR1	05/12/0	6 0810 528280	נ כ
Thorium-230	U	0.0417	+/0.0374	0.091	+/-0.0377	1.00	pCi/L				
Thorium-232	U	0.00	+/0.0336	0.091	+/0.0336	1.00	pCi/L				-
Rad Gas Flow Proportion	nal Counting										
GFPC, Ra228, Liquid				•						•	
Radium-228	Ū	0.955	+/-0.477	1.94	+/0.478	3.00	pCi/L	KSDI	05/16/0	6 1258 52910	12
Rad Radium-226							•				
Lucas Cell, Ra226, liquid	d										
Radium-226		0.547	+/-0.137	0.321	+/0.137	1.00	pCi/L	SG	05/15/0	6 1015 527246	5 3
Solid Preparation							P				
Filtration											

Method	Description	Analyst	Date	Time	Prep Batch
EPA 200.2	ICP-MS 200.2 PREP	CQH1	05/11/06	1924	527175
GL-RAD-A-02	6 Laboratory sample composite				528055
SW846 3005A	ICP-MS 3005 PREP	CQH1	05/11/06	1927	527177

Method Description 1 DOE EML HASL-300, Th-01-RC Modified EPA 904.0 Modified 2

3 EPA 903.1 Modified

GL--RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Thorium-229	Alphaspec Th, Liquid	97	(15%-125%)
Carrier/Tracer Recovery	GFPC, Ra228, Liquid	64	(15%-125%)

Notes:

4

The Qualifiers in this report are defined as follows :

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Parameter		Qualifier	Result	Uncertainty	DL	TPU	RL	Units	DF Analyst Date	Time Batch Mtd
		Client Sam Sample ID			RW-15 162062008	3		Project: Client ID:	PINL00405 PINL001	
	Project:	NMED								
	Contact:	Albuquerque Mr. Mitch R							Report Date: May 17, 20	
	Company : Address :	Pinnacle Lat 2709D Pan /	•	Freeway NE						

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Page 153 of 161

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Address :	Pinnacle Labs, Inc 2709D Pan Ameri Albuquerque, Nev	can Free	•	. ·			, , , , , , , , , , , , , , , , , , , ,	10.00		
Contact:	Mr. Mitch Rubens	tein				ĸ	eport Date: May	17, 20	06	
Project:	NMED									
	Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	D:	RW-15 162062003 Water 02-MAY-06 11:42 03-MAY-06 Client		Proj Clie	ect: nt ID:	PINL00405 PINL001			
Parameter	Qualifier	Resul		RL	Units	DF	AnalystDate	Time	Batch	Method
Electrode Analysis Feder	ral			** ** ****						
EPA 150.1 pH Federal	. .									
pH at Temp 15.2C	н	7.60	0.010	0.100	SU	1	SXS2 05/10/06	2231	526994	1
Ion Chromatography Fe	deral									
EPA 300.0 Anions-NO2	,SO4,Cl									
Nitrate-N		2.84	0.033	0.100	mg/L	1	RXM105/04/06	0545	526700	2
Nitrite-N	U	0.00	0.033	0.100	mg/L	1				
Chloride		192	3.30	10.0	mg/L	50	MAR105/04/06	1948	526700	3
Sulfate		755	5.00	20.0	mg/L	50				
Nutrient Analysis Federa	a) .									
Nitrogen, (NO3/NO2)										
Nitrogen, Nitrate/Nitrite	;	2.91	0.140	0.500	mg/L	10	KLP1 05/08/06	1314	527551	4
Solids Analysis Federal										
EPA 160.1 Solids, Disso	olved-F									
Total Dissolved Solids		2040	2.38	10.0	mg/L		GXA2 05/05/06	0854	526858	5
Titration Analysis Feder	al									
SM 2320B Total Alkalin	ity Federal									
Alkalinity, Total as CaC	203	413	0.725	1.00	mg/L		RG2 05/15/06	1639 :	528783	6
Bicarbonate alkalinity (411	0.725	1.00	mg/L					-
Carbonate alkalinity (Ca	aCO3)	2.03	0.725	1.00	mg/L					

The following Analytical Methods were performed

Method	Description	Analyst Comments
1 .	EPA 150.1	
2	EPA 300.0	
3	EPA 300.0	
4	EPA 353.1	
5 ·	EPA 160.1	
6	SM 2320B	
		:

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

			<u>Certi</u>	ficat	e of An	<u>alysis</u>	_]	
Company Address :	: Pinnacle Labs, Inc 2709D Pau Ameri Albuquerque, Nev	ican Free				Di		lued eport Date: Ma	17 2006	
Contact:	Mr. Mitch Rubens	stein						-post 2000	,, =000	
Project:	NMED							Pag	ge 1 of	2
	Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	D:	RW-15 162062008 Water 02-MAY-06 11 03-MAY-06 Client	:42		Proi Clie	ect: nt ID:	PINL00405 PINL001		
Parameter	Qualifier	Result		DL	RL	Units	DF	AnalystDate	Time Batch	Methor
Metals Analysis-ICP-M	IS									
200.2/200.8 Selenium	Federal									
Arsenic	1	1.62		1.50	5.00	ug/L	1	PRB 05/16/06	5 1737 527176	51
Iron		912		10.0	25.0	ug/L	1			
Manganese	J	1.23		1.00	5.00	ug/L	1			
Molybdenum		0.594		0.100	0.500	ug/L.	1			
Selenium		27.5		2.50	5.00	ug/L	1			
Vanadium	_ J	3.37		2.00	10.0	ug/L	1			
SW846_6020 Isotopic	Uranium									
Uranium-235		0.437		0.010	0.070	ug/L	1	PRB 05/12/06	1844 527178	32
Uranium-238		59.1		0.050	0.200	ug/L	1			r
The following Prep M	ethods were perform	ned								
Method	Description				Analyst	Date	Time	Prep Batch		• •
EPA 200.2	ICP-MS 200.2 P	REP	······································		CQHI	05/11/06	1924	527175		
SW846 3005A	ICP-MS 3005 PI	REP			CQH1	05/11/06	1927	527177		
The following Analyti	eal Methods were no	rformai	I							
Method	Description		, 			Analyst Comme	ents			
1	EPA 200.8								·····	

Notes:

The Qualifiers in this report are defined as follows :

B Target analyte was detected in the sample as well as the associated blank.

BD Results below the MDC or low tracer recovery.

E Concentration of the target analyte exceeds the instrument calibration range.

H Analytical holding time exceeded.

J Indicates an estimated value.

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

UI Uncertain identification for gamma spectroscopy.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Page 33 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan Ameri										
		Albuquerque, Nev	w Mexico 87107				R	eport Date:	May 1	7 20	06	
	Contact:	Mr. Mitch Rubens	stein					opon Dao.		., 20		
	Project:	NMED		··					Page	2	of	2
		Client Sample I Sample ID:	D: RW-15 162062008			Proje Clier	ect: nt ID:	PINL0040 PINL001	5			
Parameter		Qualifier	Result	DL	RL	Units	DF	AnalystDa	te T	ime	Batch	Method

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

M. Muria Reviewed by

-Page 34 of 161

GENERAL ENGINEERING LABORATORIES, LLC 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

		<u>C</u>	ertificat	e of An	alysis	7	OTF	HL]	
Company Address :	: Pinnacle Labs, Inc 2709D Pan American Albuquerque, New M					Ĺ			
						R	eport Date: Ma	ay 17, 2006	
Contact:	Mr. Mitch Rubenstein	l							_
Project:	<u>NMED</u>						<u>Pa</u>	ige 1 of	2
	Client Sample ID: Sample ID: Matrix: Collect Date: Receive Date: Collector:	RW-15 16206200 Water 02-MAY- 03-MAY- Client	06 11:42		Proi Clie	iect: ant ID:	PINL00405 PINL001		
Parameter	Qualifier R	lesult	DL	RL	Units	DF	AnalystDate	Time Batch	Method
Metals Analysis-ICP-M	IS								····
200.2/200.8 Selenium	Federal								
Arsenic	J	1.94	1.50	5.00	ug/L	1	PRB 05/16/0	6 1719 527176	I
Iron		908	10.0	25.0	ug/L	1			
Manganese	. U 0.	.984	1.00	5.00	ug/L	1			
Molybdenum	0.	.610	0.100	0.500	ug/L	1			
Potassium		790	80.0	300	ug/L	1			
Selenium		29.0	2.50	5.00	ug/L	1			
Vanadium		3.02	2.00	10.0	ug/L	1			-
Calcium		000	2000 500	10000 1500	ug/L		PRB 05/16/0	6 1640 527176	2
Magnesium Sodium		000	8000	25000	ug/L ug/L	100	PRB 05/17/0	6 1042 527176	3
			0000	2000	ug/L	100	IND USITIVU	0 1042 327170	5
SW846_6020 Isotopic Uranium		61.1	0.050	0.200	ug/L	,	PRB 05/12/0	6 1830 527178	4
Uranium-235		61.1 .440	0.010	0.200	ug/L	1	FKD 03/12/0	0 1830 327178	4
Uranium-238		60.6	0.010	0.200	ug/L	1			
					-0	•			
	ethods were performed								
Method	Description			Analyst	Date	Time	Prep Batch	L	
EPA 200.2	ICP-MS 200.2 PREI			CQH1	05/11/06	1924	527175		
SW846 3005A	ICP-MS 3005 PREP	•		CQHI	05/11/06	1927	527177		
The following Analyti	cal Methods were perfo	rmed							
Method	Description	THE C		A	nalyst Comme	ents			
	EPA 200.8	· · · ·							
2	EPA 200.8								
	EPA 200.8								
5 L	SW846 3005/6020								
P	3 W 640 3003/0020								
Notes: The Qualifiers in th	is report are defined as	follows :							
< Result is less that	n amount reported.								

Result is area another reported.
 Result is greater than amount reported.
 Concentration of the target analyte exceeds the instrument calibration range.
 H Analytical holding time exceeded.
 J Indicates an estimated value.

Page 23 of 161

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

	Company : Address :	Pinnacle Labs, Inc 2709D Pan American Freeway NE Albuquerque, New Mexico 87107			
	Contact: Project:	Mr. Mitch Rubenstein NMED			Report Date: May 17, 2006 Page 2 of 2
		Client Sample ID: RW-15 Sample ID: 162062003			Project: PINL00405 Client ID: PINL001
Parameter		Qualifier Result	DL	RL	Units DF AnalystDate Time Batch Method

U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.

d The 2:1 depletion requirement was not met for this sample

h Sample preparation or preservation holding time exceeded.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Reviewed by

Page 24 of 161



U.:

BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Ms. Shirley Freas P. O. Box 2760 Milan, NM 87021

Subject: Analytical report for water sample RW-54 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Freas:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 3, 2006. For tracking purposes, the sample from your well was designated as "RW-54". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standard for total dissolved solids (TDS).

Ms. S. Freas

RE: Analytical report for water sample RW-54 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	TDS (mg/L)
Sample RW-54	572
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely, Mayerson

Superfund Oversight Section

Enclosures: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets:

a seite a

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-003 Client Sample ID: RW-50 54 P

Report Date: 06/06/06 Collection Date: 05/03/06 16:40 Date Received: 05/04/06 Matrix: Aqueous

Analyses Result Units Qual RL QCL Method Analysis Date / By METALS - TOTAL 122 Aluminum 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 119 Arsenic <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 126 Gadmium <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 126 Cadmium <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 128 Cobati <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 129 Copper 0.006 mg/L 0.001 E200.7 05/17/06 16:17 / cp 121 Iron 0.21 mg/L 0.001 E200.8 05/08/06 17:32 / sml 129 Copper 0.002 mg/L 0.001 E200.7 05/17/06 16:17 / cp 121 Iro						MCL/		
122 Aluminum 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 119 Arsenic <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 124 Barium 0.027 mg/L 0.001 E200.8 05/08/06 17:32 / sml 124 Barium 0.027 mg/L 0.001 E200.8 05/08/06 17:32 / sml 126 Cadmium <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 121 fron 0.21 mg/L 0.001 E200.8 05/08/06 17:32 / sml 121 fron 0.21 mg/L 0.001 E200.7 05/17/06 16:17 / cp 123 Lead <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 124 Margaesium 37.9 mg/L 0.001 E200.8 05/08/06 17:32 / sml 135 Mercury <th>An</th> <th>alyses</th> <th>Result</th> <th>Units</th> <th>Qual 1</th> <th></th> <th></th> <th>Analysis Date / By</th>	An	alyses	Result	Units	Qual 1			Analysis Date / By
119 Arsenic <0.001 mg/L 0.001 E200.8 05/02/06 17:32 / sml 126 Barlum 0.027 mg/L 0.001 E200.8 05/02/06 17:32 / sml 126 Cadmium <0.001 mg/L 0.001 E200.8 05/02/06 17:32 / sml 126 Cadmium <0.001 mg/L 0.001 E200.8 05/02/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/02/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/02/06 17:32 / sml 121 fron 0.21 mg/L 0.001 E200.8 05/02/06 17:32 / sml 121 fron 0.21 mg/L 0.01 E200.8 05/02/06 17:32 / sml 122 kagnesim 37.9 mg/L 0.01 E200.8 05/02/06 17:32 / sml 124 Mangaese 0.007 mg/L 0.001 E200.8 05/02/06 17:32 / sml 135 Mercury <0.002 mg/L 0.001 E200.8 05/02/06 17:32 / sml 136 Molybdenu	ME	TALS - TOTAL						-
124 Barium 0.027 mg/L 0.001 E200.8 05/08/06 17:32 / sml 126 Cadmium <0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 101 Calcium 86.1 mg/L 0.65 E200.7 05/17/06 16:17 / cp 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 121 Iron 0.21 mg/L 0.001 E200.7 05/17/06 16:17 / cp 121 Iron 0.21 mg/L 0.001 E200.8 05/08/06 17:32 / sml 121 Iron 0.21 mg/L 0.001 E200.8 05/08/06 17:32 / sml 122 Magnesium 37.9 mg/L 0.001 E200.8 05/08/06 17:32 / sml 123 Magnesium 0.002 mg/L 0.0001 E200.8	122	Aluminum	0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
126 Cadmium <0.001	119	Arsenic	<0.001	mg/L	0.0	001	E200.8	05/08/06 17:32 / sml
101 Calcium 86.1 mg/L 0.5 E200.7 05/17/06 16:17 / cp 120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sml 128 Cobalt <0.001	124	Barium	0.027	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
120 Chromium 0.001 mg/L 0.001 E200.8 05/08/06 17:32 / sm1 128 Cobalt <0.001	126	Cadmium	<0.001	mg/L	0.0	101	E200.8	05/08/06 17:32 / sml
128 Cobalt <0.001	101	Calcium	86.1	mg/L	0	.5	E200.7	05/17/06 16:17 / cp
129 Copper 0.006 mg/L 0.001 E200.8 05/08/06 17:32 / sm1 121 Iron 0.21 mg/L 0.001 E200.7 05/17/06 16:17 / cp 133 Lead <0.001	120	Chromium	0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
11 0.21 mg/L 0.01 E200.7 05/17/06 16:17 / cp 133 Lead <0.001	128	Cobalt	<0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
133 Lead <0.001	129	Copper	0.006	mg/L	0.0	01	E200.8	05/08/06 17:32 / smi
102 Magnesium 37.9 mg/L 0.5 E200.7 05/17/06 16:17 / cp 134 Manganese 0.007 mg/L 0.001 E200.8 05/08/06 17:32 / sml 135 Mercury <0.002	121	Iron	0.21	mg/Ľ	Ο.	D1	E200.7	05/17/06 16:17 / cp
134 Marganese 0.007 mg/L 0.001 E200.8 05/08/06 17:32 / sml 135 Mercury <0.0002	133	Lead	<0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
135 Mercury <0.0002	102	Magnesium	37.9	mg/L	0	5	E200.7	05/17/06 16:17 / cp
136 Molybdenum 0.002 mg/L 0.001 E200.8 05/08/06 17:32 / smil 137 Nickel <0.001	134	Manganese	0.007	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
137 Nickel <0.001	135	Mercury	<0.0002	mg/L	0.0	002	E200.8	05/08/06 17:32 / sml
103 Potassium 2.3 mg/L 0.5 E200.7 05/17/06 16:17 / cp 140 Selenium 0.004 mg/L 0.001 E200.8 05/08/06 17:32 / smi 141 Silver <0.001	136	Molybdenum	0.002	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
140 Selenium 0.004 mg/L 0.001 E200.8 05/08/06 17:32 / sml 141 Silver <0.001	137	Nickel	<0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
141 Silver <0.001	103	Potassium	2.3	mg/L	0	5	E200.7	05/17/06 16:17 / cp
104 Sodium 43.6 mg/L 0.5 E200.7 05/17/06 16:17 / cp 115 Uranium 0.0044 mg/L 0.0003 E200.8 05/08/06 17:32 / sml 142 Vanadium 0.002 mg/L 0.001 E200.8 05/08/06 17:32 / sml 143 Zinc 0.031 mg/L 0.001 E200.8 05/08/06 17:32 / sml RADIONUCLIDES - DISSOLVED OVAS Radium 226 <1.0	140	Selenium	0.004	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
115 Uranium 0.0044 mg/L 0.0003 E200.8 05/08/06 17:32 / sml 142 Vanadium 0.002 mg/L 0.001 E200.8 05/08/06 17:32 / sml 143 Zinc 0.031 mg/L 0.001 E200.8 05/08/06 17:32 / sml RADIONUCLIDES - DISSOLVED Point 10 pCi/L 0.001 E903.0 05/24/06 12:11 / trs Obst 7:32 / sml Obst 7:406 12:11 / trs Obst 7:406 13:09 / cp Obst 7:406 15:11 / trs Obst 7:406 15:10 / cl <td>141</td> <td>Silver</td> <td><0.001</td> <td>mg/L</td> <td>0.0</td> <td>01</td> <td>E200.8</td> <td>05/08/06 17:32 / sml</td>	141	Silver	<0.001	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
142 Vanadium 0.002 mg/L 0.001 E200.8 05/08/06 17:32 / sml 143 Zinc 0.031 mg/L 0.001 E200.8 05/08/06 17:32 / sml RADIONUCLIDES - DISSOLVED OA5 Radium 226 <1.0	104	Sodium	43.6	mg/L	0	5	E200.7	05/17/06 16:17 / cp
143 Zinc 0.031 mg/L 0.001 E200.8 05/08/06 17:32 / sml RADIONUCLIDES - DISSOLVED 045 Radium 226 <1.0	115	Uranium	0.0044	mg/L	. 0.0	003	E200.8	
RADIONUCLIDES - DISSOLVED 045 Radium 226 <1.0	142	Vanadium	0.002	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
045 Radium 226 <1.0	143	Zinc	0.031	mg/L	0.0	01	E200.8	05/08/06 17:32 / sml
057 Radium 228 <1.0	RAD	NONUCLIDES - DISSOLVED						
048 Thorium 230 <1.0	045	Radium 226	<1.0	pCi/L	1.	0	E903.0	05/24/06 12:11 / trs
DATA QUALITY -1.52 % Calculation 05/18/06 15:49 / cp 192 A/C Balance (± 5) -1.52 % Calculation 05/18/06 15:49 / cp 194 Anions 9.95 meq/L Calculation 05/18/06 15:49 / cp 195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	057	Radium 228	<1.0	pCi/L	1.	0	RA-05	05/19/06 13:09 / pj
192 A/C Balance (± 5) -1.52 % Calculation 05/18/06 15:49 / cp 194 Anions 9.95 meq/L Calculation 05/18/06 15:49 / cp 195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	048	Thorium 230	<1.0	pCi/L	1.	0	E907.0	05/22/06 11:00 / df
194 Anions 9.95 meq/L Calculation 05/18/06 15:49 / cp 195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	DAT	A QUALITY						
194 Anions 9.95 meq/L Calculation 05/18/06 15:49 / cp 195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	192	A/C Balance (± 5)	-1.52	%			Calculation	05/18/06 15:49 / cp
195 Cations 9.66 meq/L Calculation 05/18/06 15:49 / cp 079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	194	Anions	9.95	meq/L			Calculation	•
079 Solids, Total Dissolved Calculated 563 mg/L Calculation 05/18/06 15:49 / cp	195	Cations	9.66	meq/L				
- · · · · · · · · · · · · · · · · · ·	079	Solids, Total Dissolved Calculated	563	mg/L				
	200	TDS Balance (0.80 - 1.20)	1.02	dec. %			Calculation	

RL - Analyte reporting limit. Report Definitions:

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-003 Client Sample ID: RW-50 54 **Report Date:** 06/06/06 **Collection Date:** 05/03/06 16:40 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/							
Ana	lyses	Result	Units	Qual	RL QCI	_ Method	Analysis Date / By		
MAJ	ORIONS								
075	Alkalinity, Total as CaCO3	228	mg/L		1	A2320 B	05/11/06 13:29 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 13:29 / th		
005	Bicarbonate as HCO3	278	mg/L		1	A2320 B	05/11/06 13:29 / th		
007	Chloride	31	mg/L		1	A4500-CI B	05/08/06 13:03 / ji		
139	Nitrogen, Nitrate as N	5.6	mg/L		0.1	E353.2	05/08/06 10:42 / sec		
039	Nitrogen, Nitrate+Nitrite as N	5.6	mg/L	D	0.2	E353.2	05/05/06 10:14 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:57 / jal		
008	Sulfate	25	mg/L	D	6	A4500-SO4 E	05/10/06 10:29 / th		
РНУ	SICAL PROPERTIES								
009	pН	7.95	\$.U.		0.01	A4500-H B	05/05/06 12:11 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	572	mg/L		10	A2540 C	05/05/06 15:08 / jdh		
мет	ALS - DISSOLVED								
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
024	Barium	0.027	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
001	Calcium	87.5	mg/L		0.5	E200.7	05/17/06 15:10 / cp		
027	Chromium	0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
029	Copper	0.005	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
032	Iron	0.03	mg/L		0.01	E200.7	05/17/06 15:10 / cp		
033	Lead	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
002	Magnesium	39.0	mg/L		0.5	E200.7	05/17/06 15:10 / cp		
034	Manganese	0.003	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 17:25 / sml		
036	Molybdenum	0.002	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
037	Nickel	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
003	Potassium	2.5	mg/L		0.5	E200.7	05/17/06 15:10 / cp		
)40	Selenium	0.005	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
041	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
004	Sodium	46.3	mg/L		0.5	E200.7	05/17/06 15:10 / cp		
)15	Uranium	0.0044	mg/L		0.0003	E200.8	05/08/06 17:25 / sml		
)42	Vanadium	0.002	mg/L		0.001	E200.8	05/08/06 17:25 / sml		
043	Zinc	0.024	mg/L		0.001	E200.8	05/08/06 17:25 / sml		

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. D - RL increased due to sample matrix interference. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



BILL RICHARDSON GOVERNOR State of New Mexico ENVIRONMENT DEPARTMENT Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

November 2, 2006

Ms. Shirley Freas P. O. Box 2760 Milan, NM 87021

Subject: Analytical report for water sample RW-52 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Freas:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records is a copy of the analytical report for the water sample collected from your well on May 3, 2006. For tracking purposes, the sample from your well was designated as "RW-52". The sample was analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. The sample was sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for this sample show that your water from your well exceeds the secondary Federal drinking water standard for total dissolved solids (TDS).

Ms. S. Freas

RE: Analytical report for water sample RW-52 collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

SAMPLE	TDS (mg/L)
Sample RW-52	542
EPA MCL	500 (a)
NMWQCC (b)	1000

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

The secondary drinking water standard for TDS is not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheet for additional information pertaining to the effects of TDS.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and ATSDR to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

}incerelv Maverson Superfund Oversight Section

Enclosures: Laboratory Analytical Report from Energy Labs (2 pages) Fact Sheets: Secondary Drinking Water Regulations: Guidance for Nuisance

Chemicals (EPA)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

si se Satis

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-001 Client Sample ID: RW-52 **Report Date:** 06/06/06 **Collection Date:** 05/03/06 16:55 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/							
Ana	llyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By		
MA.	JOR IONS								
075	Alkalinity, Total as CaCO3	224	mg/L		1	A2320 B	05/11/06 13:26 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 13:26 / th		
005	Bicarbonate as HCO3	273	mg/L		1	A2320 B	05/11/06 13:26 / th		
007	Chloride	4	mg/L		1	A4500-CI B	05/08/06 12:59 / ji		
139	Nitrogen, Nitrate as N	4.8	mg/L		0.1	E353.2	05/08/06 10:42 / sec		
039	Nitrogen, Nitrate+Nitrite as N	4.8	mg/L	D	0.2	E353.2	05/05/06 10:09 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:57 / jal		
008	Sulfate	185	mg/L	D	6	A4500-SO4 E	05/10/06 10:27 / th		
РНҮ	SICAL PROPERTIES								
009	pН	7.75	s.u.		0.01	A4500-H B	05/05/06 12:07 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	542	mg/L		10	A2540 C	05/05/06 15:07 / jdh		
ΜΕΤ	ALS - DISSOLVED								
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / smł		
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
024	Barium	0.026	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
001	Calcium	93.7	mg/L		0.5	E200.7	05/17/06 15:04 / cp		
027	Chromium	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
029	Copper	0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
032	Iron	0.04	mg/L		0.01	E200.7	05/17/06 15:04 / cp		
033	Lead	0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
002	Magnesium	41.2	mg/L		0.5	E200.7	05/17/06 15:04 / cp		
034	Manganese	0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 15:52 / sml		
036	Molybdenum	0.002	mg/L		0.001	É200.8	05/08/06 15:52 / sml		
037	Nickel	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
003	Potassium	2.2	mg/L		0.5	E200.7	05/17/06 15:04 / cp		
040	Selenium	0.004	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
041	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
004	Sodium	36.2	mg/L		0.5	E200.7	05/17/06 15:04 / cp		
015	Uranium	0.0042	mg/L		0.0003	E200.8	05/08/06 15:52 / sml		
042	Vanadium	0.003	mg/L		0.001	E200.8	05/08/06 15:52 / sml		
043	Zinc	0.184	mg/L		0.001	E200.8	05/08/06 15:52 / sml		

Report Definitions: RL - Analyte reporting limit.

MCL - Maximum contaminant level.

initions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

ND - Not detected at the reporting limit.





Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-001 Client Sample ID: RW-52 **Report Date:** 06/06/06 **Collection Date:** 05/03/06 16:55 **Date Received:** 05/04/06 **Matrix:** Aqueous

			MCL	1	,
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.002	mg/L	0.001	E200.8	05/08/06 16:18 / sml
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
124 Barium	0.026	mg/L	0.001	E200.8	05/08/06 16:18 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
101 Calcium	85.5	mg/L	0.5	E200.7	05/17/06 16:06 / cp
120 Chromium	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
129 Copper	0.004	mg/L	0.001	E200.8	05/08/06 16:18 / sml
121 Iron	0.17	mg/L	0.01	E200.7	05/17/06 16:06 / cp
133 Lead	0.002	mg/L	0.001	E200.8	05/08/06 16:18 / sml
102 Magnesium	38.6	mg/L	0.5	E200.7	05/17/06 16:06 / cp
134 Manganese	0.002	mg/L	0.001	E200.8	05/08/06 16:18 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/08/06 16:18 / sml
136 Molybdenum	0.002	mg/L	0.001	E200.8	05/08/06 16:18 / sml
137 Nickel	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
103 Potassium	2.4	mg/L	0.5	E200.7	05/17/06 16:06 / cp
140 Selenium	0.004	mg/L	0.001	E200.8	05/08/06 16:18 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/08/06 16:18 / sml
104 Sodium	34.8	mg/L	0.5	E200.7	05/17/06 16:06 / cp
115 Uranium	0.0042	mg/L	0.0003	E200.8	05/08/06 16:18 / sml
142 Vanadium	0.002	mg/L	0.001	E200.8	05/08/06 16:18 / sml
143 Zinc	0.211	mg/L	0.001	E200.8	05/08/06 16:18 / sml
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/24/06 12:11 / trs
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/19/06 13:09 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/22/06 11:00 / df
DATA QUALITY					
192 A/C Balance (± 5)	0.784	%		Calculation	05/18/06 15:48 / cp
194 Anions	9.55	meq/L		Calculation	05/18/06 15:48 / cp
195 Cations	9.70	meq/L		Calculation	05/18/06 15:48 / cp
079 Solids, Total Dissolved Calculated	550	mg/L	1	Calculation	05/18/06 15:48 / cp
200 TDS Balance (0.80 - 1.20)	0.990	dec. %		Calculation	05/18/06 15:48 / cp

ND - Not detected at the reporting limit.



State of New Mexico ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

BILL RICHARDSON GOVERNOR

November 1, 2006

Ms. Ann Mathis P.O. Box 7067 Grants, NM 87020

Subject: Analytical reports for water samples RW-6A and RW-6B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Ms. Mathis:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 2, 2006. For tracking purposes, the samples from your well were designated as "RW-6A" and "RW-6B". Sample RW-6A was collected before your in-line filtration system, whereas sample RW-6B was collected after the water had passed through the filtration system. The samples were analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. Both samples were sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for these samples show that water from your well exceeds the Federal primary drinking water standard for total uranium (EPA) and the State standard for

Ms. Ann Mathis

RE: Analytical reports for water samples RW-6A and RW-6B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

dissolved uranium (NMWQCC), and secondary Federal drinking water standards for sulfate and total dissolved solids (TDS).

SAMPLE	Uranium	n (mg/L)	Sulfate	TDS (mg/L)
	Total	Dissolved	(mg/L)	
Sample RW-6A	0.0334	0.0312	697	1400
Sample RW-6B	0.034	0.0317	794	1400
EPA MCL	0.03	None	250 (a)	500 (a)
NMWQCC (b)	None	0.03	600	1000

MCL=Maximum Contaminant Limit (primary standard) a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

Consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. Based on the exceedance of the primary drinking water standard for uranium, NMED recommends that you do not drink or cook with your well water. You may choose to switch to bottled water or to install an appropriate water treatment system that removes uranium, such as reverse osmosis. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affects the aesthetic qualities of the water such as taste, color and odor. However, according to the Environmental Protection Agency (EPA), consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

8 2 4

Sincerely,

David L. Mayerson Superfund Oversight Section

Encl.: Laboratory Analytical Report from Energy Labs (4 pages)

,Ms. Ann Mathis

1.6

RE: Analytical reports for water samples RW-6A and RW-6B collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 1, 2006

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQs[™] for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Homestake Mining Co **Client:** Project: Grants NM

Lab ID: C06050172-008

Client Sample ID: RW-6A

Report Date: 06/06/06 Collection Date: 05/02/06 13:55 Date Received: 05/03/06 Matrix: Aqueous

		MCL/							
Ana	llyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By		
MA.	JOR IONS								
075	Alkalinity, Total as CaCO3	276	mg/L		1	A2320 B	05/11/06 12:38 / th		
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 12:38 / th		
005	Bicarbonate as HCO3	337	mg/L		1	A2320 B	05/11/06 12:38 / th		
007	Chloride	97	mg/L		1	A4500-CI B	05/04/06 15:29 / jl		
139	Nitrogen, Nitrate as N	3.7	mg/L		0.1	E353.2	05/05/06 08:47 / sec		
039	Nitrogen, Nitrate+Nitrite as N	3.7	mg/L		0.1	E353.2	05/04/06 10:35 / jal		
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:23 / jal		
800	Sulfate	697	mg/L	D	30	A4500-SO4 E	05/09/06 16:40 / th		
РНҮ	SICAL PROPERTIES								
009	pН	7.90	s.u.		0.01	A4500-H B	05/04/06 14:10 / jdh		
010	Solids, Total Dissolved TDS @ 180 C	- 1400	mg/L		10	A2540 C	05/05/06 14:57 / jdh		
MEI	ALS - DISSOLVED								
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
024	Barium	0.013	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
001	Calcium	179	mg/L		0.5	E200.7	05/12/06 15:03 / ts		
027	Chromium	0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
029	Copper	0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
032	Iron	0.02	mg/L		0.01	E200.7	05/12/06 15:03 / ts		
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
002	Magnesium	45.3	mg/L		0.5	E200.7	05/12/06 15:03 / ts		
034	Manganese	0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 04:56 / bws		
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
037	Nickel	0.002	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
003	Potassium	3.7	mg/L		0.5	E200.7	05/12/06 15:03 / ts		
040	Selenium	0.025	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
004	Sodium	223	mg/L		0.5	E200.7	05/12/06 15:03 / ts		
015	Uranium	0.0312	mg/L		0.0003	E200.8	05/05/06 04:56 / bws		
042	Vanadium	0.001	mg/L		0.001	E200.8	05/05/06 04:56 / bws		
043	Zinc	0.018	mg/L		0.001	E200.8	05/05/06 04:56 / bws		

RL - Analyte reporting limit. Report Definitions:

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-008

Client Sample ID: RW-6A

Report Date: 06/06/06 **Collection Date:** 05/02/06 13:55 **Date Received:** 05/03/06 **Matrix:** Aqueous

					MCL/	
Ana	yses	Result	Units	Qual RL	QCL Method	Analysis Date / By
мет	ALS - TOTAL					
122	Aluminum	0.005	mg/L	0.001	E200.8	05/09/06 03:07 / bws
119	Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
124	Barium	0.014	mg/L	0.001	E200.8	05/04/06 20:52 / sml
126	Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
101	Calcium	176	mg/L	0.5	E200.7	05/12/06 16:08 / ts
120	Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
128	Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
129	Copper	0.003	mg/L	0.001	E200.8	05/04/06 20:52 / sml
121	iron	0.02	mg/L	0.01	E200.7	05/12/06 16:08 / ts
133	Lead	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
102	Magnesium	44.2	mg/L	0.5	E200.7	05/12/06 16:08 / ts
134	Manganese	0.002	mg/L	0.001	E200.8	05/04/06 20:52 / sml
135	Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 20:52 / smł
136	Molybdenum	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
137	Nickel	0.002	mg/L	0.001	E200.8	05/04/06 20:52 / sml
103	Potassium	3.5	mg/L	0.5	E200.7	05/12/06 16:08 / ts
140	Selenium	0.026	mg/L	0.001	E200.8	05/04/06 20:52 / sml
141	Silver	<0.001	mg/L	0.001	E200.8	05/04/06 20:52 / sml
104	Sodium	217	mg/L	0.5	E200.7	05/12/06 16:08 / ts
115	Uranium	0.0334	mg/L	0.0003	E200.8	05/04/06 20:52 / sml
142	Vanadium	0.002	mg/L	0.001	E200.8	05/04/06 20:52 / sml
143	Zinc	0.017	mg/L	0.001	E200.8	05/04/06 20:52 / sml
RADI	ONUCLIDES - DISSOLVED					
045	Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 17:54 / trs
057	Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 13:44 / pj
048	Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA	QUALITY					
192	A/C Balance (± 5)	0.557	%		Calculation	05/15/06 11:45 / cp
194	Anions	21.7	meq/L		Calculation	05/15/06 11:45 / cp
195	Cations	22.0	meq/L		Calculation	05/15/06 11:45 / cp
079	Solids, Total Dissolved Calculated	1380	mg/L		Calculation	05/15/06 11:45 / cp
200	TDS Balance (0.80 - 1.20)	1.01	dec. %		Calculation	05/15/06 11:45 / cp



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050172-001 Client Sample ID: RW-6B **Report Date:** 06/06/06 **Collection Date:** 05/02/06 14:05 **Date Received:** 05/03/06 **Matrix:** Aqueous

					MCL		
Ana	alyses	Result	Units	Qual	RL QCL	Method	Analysis Date / By
MA	JOR IONS						
075	Alkalinity, Total as CaCO3	286	mg/L		1	A2320 B	05/11/06 11:25 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 11:25 / th
005	Bicarbonate as HCO3	349	mg/L		1	A2320 B	05/11/06 11:25 / th
007	Chloride	92	mg/L		1	A4500-CI B	05/04/06 15:19 / jl
139	Nitrogen, Nitrate as N	3.6	mg/L		0.1	E353.2	05/05/06 08:47 / sec
039	Nitrogen, Nitrate+Nitrite as N	3.6	mg/L		0.1	E353.2	05/04/06 10:10 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/03/06 14:21 / jal
800	Sulfate	794	mg/L	D	30	A4500-SO4 E	05/09/06 16:26 / th
РНΥ	SICAL PROPERTIES						
009	pН	7.80	s.u.		0.01	A4500-H B	05/04/06 13:51 / jdh
010	Solids, Total Dissolved TDS @ 180 C	1400	mg/L		10	A2540 C	05/05/06 14:54 / jdh
MET	TALS - DISSOLVED						
022	Aluminum	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
024	Barium	0.014	mg/L		0.001	E200.8	05/05/06 01:08 / bws
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
001	Calcium	173	mg/L		0.5	E200.7	05/10/06 16:01 / ts
027	Chromium	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
029	Copper	0.009	mg/L		0.001	E200.8	05/05/06 01:08 / bws
032	Iron	<0.01	mg/L		0.01	E200.7	05/10/06 16:01 / ts
033	Lead	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
002	Magnesium	44.8	mg/L		0.5	E200.7	05/10/06 16:01 / ts
034	Manganese	0.002	mg/L		0.001	E200.8	05/05/06 01:08 / bws
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/05/06 01:08 / bws
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
037	Nickel	0.002	mg/L		0.001	E200.8	05/05/06 01:08 / bws
003	Potassium	4.2	mg/L		0.5	E200.7	05/10/06 16:01 / ts
040	Selenium	0.027	mg/L		0.001	E200.8	05/05/06 01:08 / bws
041	Silver	<0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
004	Sodium	216	mg/L		0.5	E200.7	05/10/06 16:01 / ts
015	Uranium	0.0317	mg/L		0.0003	E200.8	05/05/06 01:08 / bws
042	Vanadium	0.001	mg/L		0.001	E200.8	05/05/06 01:08 / bws
043	Zinc	0.022	mg/L		0.001	E200.8	05/05/06 01:08 / bws

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client:Homestake Mining CoProject:Grants NMLab ID:C06050172-001

Client Sample ID: RW-6B

Report Date: 06/06/06 **Collection Date:** 05/02/06 14:05 **Date Received:** 05/03/06 **Matrix:** Aqueous

			MC	L/	
Analyses	Result	Units	Qual RL QC	L Method	Analysis Date / By
METALS - TOTAL					
122 Aluminum	0.014	mg/L	0.001	E200.8	05/09/06 02:15 / bws
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
124 Barium	0.014	mg/L	0.001	E200.8	05/04/06 20:32 / sml
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
101 Calcium	173	mg/L	0.5	E200.7	05/12/06 15:29 / ts
120 Chromium	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
129 Copper	0.007	mg/L	0.001	E200.8	05/04/06 20:32 / sml
121 Iron	<0.01	mg/L	0.01	E200.7	05/12/06 15:29 / ts
133 Lead	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
102 Magnesium	43.6	mg/L	0.5	E200.7	05/12/06 15:29 / ts
134 Manganese	0.002	mg/L	0.001	E200.8	05/04/06 20:32 / sml
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/04/06 20:32 / smł
136 Molybdenum	0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
137 Nickel	0.002	mg/L	0.001	E200.8	05/04/06 20:32 / sml
103 Potassium	3.4	mg/L	0.5	E200.7	05/12/06 15:29 / ts
140 Selenium	0.027	mg/L	0.001	E200.8	05/04/06 20:32 / sml
141 Silver	<0.001	mg/L	0.001	E200.8	05/04/06 20:32 / sml
104 Sodium	219	mg/L	0.5	E200.7	05/12/06 15:29 / ts
115 Uranium	0.0340	mg/L	0.0003	E200.8	05/04/06 20:32 / sml
142 Vanadium	0.002	mg/L	0.001	E200.8	05/04/06 20:32 / sml
143 Zinc	0.019	mg/L	0.001	E200.8	05/04/06 20:32 / sml
RADIONUCLIDES - DISSOLVED					
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/27/06 10:51 / trs
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/22/06 11:21 / pj
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/18/06 10:00 / df
DATA QUALITY					
192 A/C Balance (± 5)	0.121	%		Calculation	05/15/06 11:43 / cp
194 Anions	21.8	meq/L		Calculation	05/15/06 11:43 / cp
195 Cations	21.8	meq/L		Calculation	05/15/06 11:43 / cp
079 Solids, Total Dissolved Calculated	1380	mg/L		Calculation	05/15/06 11:43 / cp
200 TDS Balance (0.80 - 1.20)	1.01	dec. %		Calculation	05/15/06 11:43 / cp

ReportRL - Analyte reporting limit.Definitions:QCL - Quality control limit.



State of New Mexico ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau Harold Runnels Building 1190 St. Francis Drive, P.O. Box 26110 Santa Fe, New Mexico 87502-6110 Telephone (505) 827-2918 Fax (505) 827-2965 Fed Ex (87505)



RON CURRY SECRETARY

DERRITH WATCHMAN-MOORE DEPUTY SECRETARY

BILL RICHARDSON GOVERNOR

November 2, 2006

Mr. W.B. Willoughby P.O. Box 1450 Grants, NM 87020

RE: Analytical reports for water samples RW-7 and RW-7A collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico.

Dear Mr. Willoughby:

Ground water sampling was conducted in the communities near the Homestake Uranium Mill Superfund Site, near Milan, New Mexico in May 2006. The sampling is part of ongoing efforts to monitor potential effects from tailings piles on ground water quality in the area around the site and to ensure that the current remediation efforts being used at the Homestake Superfund Site are protective of human health and the environment. In addition, the sampling data are being used to add to the understanding of the site, which will help improve remediation efforts as well as site management.

Enclosed for your records are copies of the analytical report for the water samples collected from your well on May 3, 2006. For tracking purposes, the samples from your well were designated as "RW-7" and "RW-7A". Sample RW-7 was collected before your in-line filtration system, whereas sample RW-7A was collected after the water had passed through the filtration system. The samples were analyzed for metals (dissolved and total), major ions, radionuclides and general water chemistry. Samples designated "dissolved" are filtered and thus do not contain particulate metal, whereas samples designated "total" are not filtered and thus measure the total concentration of the analyte in the sample. Both samples were sent to Energy Labs, the primary laboratory used for analytical services during this sampling event.

The analytical results that exceed applicable standards are summarized below. Relevant standards are included below for comparison. Federal drinking water standards (i.e., Maximum Concentration Limits [MCLs]) are based on total analyte concentrations, whereas New Mexico Water Quality Control Commission (NMWQCC) ground water quality standards are based on dissolved concentrations.

The results for these samples show that your well exceeds the Federal primary drinking water standard for total uranium (EPA) and the State standard for dissolved uranium

Mr. W.B. Willoughby

RE: Analytical reports for water samples. RW-7 and RW-7A collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico November 2, 2006

(NMWQCC), and secondary Federal drinking water standards for sulfate, and total dissolved solids (TDS). Based upon the sample results for RW-7A, your current filtration system appears reduce these contaminants to concentrations that are below applicable standards.

SAMPLE	Uranium	(mg/L)	Sulfate	TDS (mg/L)	
	Total	Dissolved	(mg/L)		
Sample RW-7	0.0540	0.0540	2340	2390	
Sample RW-7A (no exceedances)	<0.003	<0.003	38	334	
EPA MCL	0.03	None	250 (a)	500 (a)	
NMWQCC (b)	None	0.03	600	1000	

MCL=Maximum Contaminant Limit (primary standard)

a. EPA Secondary Maximum Contaminant Level (MCL)

b. New Mexico Water Quality Control Commission numerical standards for groundwater quality from 20.6.2.3103 NMAC

Consumption of elevated levels of uranium has been associated with increased risk of cancer and kidney toxicity. As stated above, your current filtration appears to reduce this contaminant to concentrations below the applicable standards. Please review the enclosed fact sheet for additional information pertaining to the health effects of uranium.

The secondary drinking water standards for sulfate and TDS are not health-based standards, and therefore the presence of these analytes only affect the aesthetic qualities of the water such as taste, color and odor. However, consumption of elevated levels of sulfate in drinking water may cause gastrointestinal problems such as diarrhea in susceptible populations such as infants and elderly. Consumption of elevated levels of TDS may result in salty, bitter or metallic taste. Please review the enclosed fact sheets for additional information pertaining to the effects of TDS and sulfate.

Thank you for your participation in the residential well survey. NMED is continuing to review and evaluate the effectiveness of the remediation system and the extent of ground water contamination related to the Homestake Mining Company site. NMED has asked the New Mexico Department of Health and the Agency of Toxic Substances and Disease Registry to review the data and provide well owners with additional information or recommendations as appropriate. NMED may contact well owners for permission to conduct follow-up or confirmatory well sampling.

Please contact me at (505) 476-3777 if you have any questions or require additional information.

Sincerely. 4 8 David L. Maverson

Superfund Oversight Section

Mr. W.B. Willoughby

و، _

۰,

RE: Analytical reports for water samples RW-7 and RW-7A collected by New Mexico Environment Department (NMED) from private well near the Homestake Mining Company site (EPA ID#: NMD007860935) Milan, New Mexico

November 2, 2006

Encl.: Laboratory Analytical Report from Energy Labs (4 pages)

Fact Sheets:

Secondary Drinking Water Regulations: Guidance for Nuisance Chemicals (EPA)

Sulfate in Drinking Water (EPA) ToxFAQs[™] for uranium (ATSDR)

Copies with enclosures:

Sai Appaji, Remedial Program Manager, EPA Region 6 Paul Michalak, Project Manager, U.S. Nuclear Regulatory Commission Len Flowers, Chief, NMDOH Environmental Health Epidemiology Bureau

1.14

11

Copies without enclosures:

Patrick Young, ATSDR Regional Representative

Files:

HMC 2006 sampling HMC 2006 correspondence



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-004

Client Sample ID: RW-7A

Report Date: 06/06/06 **Collection Date:** 05/03/06 10:32 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/					
Ana	alyses	Řesult	Units	Qual	RL QC	L Method	Analysis Date / By
MA.	JOR IONS						
075	Alkalinity, Total as CaCO3	134	mg/L		1	A2320 B	05/11/06 13:31 / th
006	Carbonate as CO3	<1	mg/L		1	A2320 B	05/11/06 13:31 / th
005	Bicarbonate as HCO3	163	mg/L		1	A2320 B	05/11/06 13:31 / th
007	Chloride	67	mg/L		1	A4500-CI B	05/08/06 13:04 / jl
139	Nitrogen, Nitrate as N	5.0	mg/L		0.1	E353.2	05/08/06 10:42 / sec
039	Nitrogen, Nitrate+Nitrite as N	5.0	mg/L	D	0.2	E353.2	05/05/06 10:17 / jal
050	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:57 / jal
008	Sulfate	38	mg/L		.1	A4500-SO4 E	05/10/06 10:30 / th
рну	SICAL PROPERTIES						
009	pН	7.53	s.u.		0.01	A4500-H B	05/05/06 12:13 / jdh
010	Solids, Total Dissolved TDS @ 180 C	334	mg/L		10	A2540 C	05/05/06 15:08 / jdh
мет	ALS - DISSOLVED						
022	Aluminum	0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
023	Arsenic	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
024	Barium	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
026	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
001	Calcium	<0.5	mg/L		0.5	E200.7	05/17/06 15:13 / cp
027	Chromium	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
028	Cobalt	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
029	Copper	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
032	Iron	0.01	mg/L		0.01	E200.7	05/18/06 15:00 / cp
033	Lead	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
002	Magnesium	<0.5	mg/L		0.5	E200.7	05/17/06 15:13 / cp
)34	Manganese	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
035	Mercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 19:05 / sml
036	Molybdenum	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
037	Nickel	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
003	Potassium	<0.5	mg/L		0.5	E200.7	05/17/06 15:13 / cp
)40	Selenium	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
041	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
004	Sodium	74.4	mg/L		0.5	E200.7	05/17/06 15:13 / cp
)15	Uranium	<0.0003	mg/L		0.0003	E200.8	05/08/06 19:05 / sml
)42	Vanadium	<0.001	mg/L		0.001	E200.8	05/08/06 19:05 / sml
043	Zinc	0.002	mg/L		0.001	E200.8	05/08/06 19:05 / sml

Report Definitions:

QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM

Lab ID: C06050216-004

Client Sample ID: RW-7A

Report Date: 06/06/06 **Collection Date:** 05/03/06 10:32 **Date Received:** 05/04/06 **Matrix:** Aqueous

	MCL/					
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By	
METALS - TOTAL						
122 Aluminum	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
124 Barium	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
101 Calcium	<0.5	mg/L	0.5	E200.7	05/17/06 16:21 / cp	
120 Chromium	0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
128 Cobalt	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
129 Copper	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
121 Iron	0.02	mg/L	0.01	E200.7	05/17/06 16:21 / cp	
133 Lead	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
102 Magnesium	<0.5	mg/L	0.5	E200.7	05/17/06 16:21 / cp	
134 Manganese	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/08/06 19:12 / sml	
136 Molybdenum	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
137 Nickel	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
103 Potassium	0.6	mg/L	0.5	E200.7	05/17/06 16:21 / cp	
140 Selenium	0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
141 Silver	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
104 Sodium	135	mg/L	0.5	E200.7	05/17/06 16:21 / cp	
115 Uranium	<0.0003	mg/L	0.0003	E200.8	05/08/06 19:12 / sml	
142 Vanadium	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
143 Zinc	<0.001	mg/L	0.001	E200.8	05/08/06 19:12 / sml	
RADIONUCLIDES - DISSOLVED						
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/24/06 12:11 / trs	
057 Radium 228	1.7	pCi/L	1.0	RA-05	05/19/06 13:09 / pj	
257 Radium 228 precision (±)	0.9	pCi/L		RA-05	05/19/06 13:09 / pj	
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/22/06 11:00 / df	
DATA QUALITY						
192 A/C Balance (± 5)	-2.99	%		Calculation	05/23/06 12:19 / cp	
194 Anions	6.26	meq/L		Calculation	05/23/06 12:19 / cp	
195 Cations	5.90	meq/L		Calculation	05/23/06 12:19 / cp	
079 Solids, Total Dissolved Calculated	363	mg/L		Calculation	05/23/06 12:19 / cp	
200 TDS Balance (0.80 - 1.20)	0.920	dec. %		Calculation	05/23/06 12:19 / cp	

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit. MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-005

Client Sample ID: RW-7

Report Date: 06/06/06 **Collection Date:** 05/03/06 10:39 **Date Received:** 05/04/06 **Matrix:** Aqueous

		MCL/					
Analy	/ses	Result	Units	Qual	RL QCI	Method	Analysis Date / By
MAJO	DR IONS						
075 /	Alkalinity, Total as CaCO3	344	mg/L		1	A2320 B	05/11/06 13:32 / th
006 (Carbonate as CO3	<1	mg/L	-	1	A2320 B	05/11/06 13:32 / th
005 E	Bicarbonate as HCO3	419	mg/L		1	A2320 B	05/11/06 13:32 / th
007 0	Chloride	236	mg/L		1	A4500-CI B	05/08/06 13:10 / jl
139 1	Nitrogen, Nitrate as N	4.0	mg/L		0.1	E353.2	05/08/06 10:42 / sec
039 N	Nitrogen, Nitrate+Nitrite as N	4.0	mg/L	D	0.2	E353.2	05/05/06 10:19 / jal
050 1	Nitrogen, Nitrite as N	<0.1	mg/L		0.1	A4500-NO2 B	05/04/06 11:57 / jal
008 8	Sulfate	2340	mg/L	D	30	A4500-SO4 E	05/10/06 10:31 / th
PHYS	ICAL PROPERTIES						
009 p	эH	7.80	s.u.		0.01	A4500-H B	05/05/06 12:15 / jdh
010 S	Solids, Total Dissolved TDS @ 180 C	2390	mg/L		10	A2540 C	05/05/06 15:09 / jdh
МЕТА	LS - DISSOLVED						
022 A	Numinum	<0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
023 A	Arsenic	<0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)24 E	Barium	0.017	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)26 C	Cadmium	<0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
001 C	Calcium	304	mg/L		0.5	E200.7	05/17/06 15:33 / cp
)27 C	Chromium	0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
028 C	Cobalt	0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)29 C	Copper	0.006	mg/L		0.001	E200.8	05/08/06 19:19 / sml
03 <u>2</u> Ir	ron	0.02	mg/L		0.01	E200.7	05/17/06 15:33 / cp
033 L	ead	<0.001	mg/L	•	0.001	E200.8	05/08/06 19:19 / sml
)02 N	Aagnesium	67.8	mg/L		0.5	E200.7	05/17/06 15:33 / cp
)34 N	langanese	0.002	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)35 N	fercury	<0.0002	mg/L		0.0002	E200.8	05/08/06 19:19 / sml
)36 N	Nolybdenum	<0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)37 N	lickel	0.003	mg/L		0.001	E200.8	05/08/06 19:19 / sml
03 P	otassium	6.3	mg/L		0.5	E200.7	05/17/06 15:33 / cp
40 S	Selenium	0.038	mg/L		0.001	E200.8	05/08/06 19:19 / sml
)41 S	Silver	<0.001	mg/L		0.001	E200.8	05/08/06 19:19 / sml
04 S	Sodium	403	mg/L		0.5	E200.7	05/17/06 15:33 / cp
15 U	Iranium	0.0540	mg/L		0.0003	E200.8	05/08/06 19:19 / sml
42 V	/anadium	0.002	mg/L		0.001	E200.8	05/08/06 19:19 / sml
43 Z	linc	0.059	mg/L		0.001	E200.8	05/08/06 19:19 / sml

Report Definitions: RL - Analyte reporting limit.

MCL - Maximum contaminant level.

QCL - Quality control limit. D - RL increased due to sample matrix interference. ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Homestake Mining Co Project: Grants NM Lab ID: C06050216-005

Client Sample ID: RW-7

Report Date: 06/06/06 **Collection Date:** 05/03/06 10:39 **Date Received:** 05/04/06 **Matrix:** Aqueous

	MCL/					
Analyses	Result	Units	Qual RL QCL	Method	Analysis Date / By	
METALS - TOTAL				• •		
122 Aluminum	0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
119 Arsenic	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
124 Barium	0.017	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
126 Cadmium	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
101 Calcium	289	mg/L	0.5	E200.7	05/17/06 16:53 / cp	
120 Chromium	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
128 Cobalt	<0.001	mg/L	0.001 "	E200.8	05/08/06 19:25 / sml	
129 Copper	0.008	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
121 Iron	0.03	mg/L	0.01	E200.7	05/17/06 16:53 / cp	
133 Lead	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
102 Magnesium	66.2	mg/L	0.5	E200.7	05/17/06 16:53 / cp	
134 Manganese	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
135 Mercury	<0.0002	mg/L	0.0002	E200.8	05/08/06 19:25 / sml	
136 Molybdenum	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
137 Nickel	0.003	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
103 Potassium	6.4	mg/L	0.5	E200.7	05/17/06 16:53 / cp	
140 Selenium	0.037	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
141 Silver	<0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
104 Sodium	401	mg/L	0.5	E200.7	05/17/06 16:53 / cp	
115 Uranium	0.0540	mg/L	0.0003	E200.8	05/08/06 19:25 / sml	
142 Vanadium	0.001	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
143 Zinc	0.090	mg/L	0.001	E200.8	05/08/06 19:25 / sml	
RADIONUCLIDES - DISSOLVED						
045 Radium 226	<1.0	pCi/L	1.0	E903.0	05/24/06 12:11 / trs	
057 Radium 228	<1.0	pCi/L	1.0	RA-05	05/19/06 13:09 / pj	
048 Thorium 230	<1.0	pCi/L	1.0	E907.0	05/22/06 11:00 / df	
DATA QUALITY						
192 A/C Balance (± 5)	0.917	%	· .	Calculation	05/18/06 15:49 / cp	
194 Anions	37.8	meq/L		Calculation	05/18/06 15:49 / cp	
195 Cations	38.5	meq/L		Calculation	05/18/06 15:49 / cp	
079 Solids, Total Dissolved Calculated	2390	mg/L		Calculation	05/18/06 15:49 / cp	
200 TDS Balance (0.80 - 1.20)	1.00	dec. %	1	Calculation	05/18/06 15:49 / cp	

ReportRL - Analyte reporting limit.Definitions:QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.