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RYAN FLYNN
Secretary

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Deputy Secretary

CERTIFIED MAIL—RETURN RECEIPT REQUESTED

April 2, 2015

Joel Lister, Rio Grande Resources Corporation Mine Manager
P. O. Box 1150
Grants, NM 87020

RE: Mt. Taylor Mine/Discharge Permit-61—New Mexico Environment Department comments on "*Operations and maintenance manual; Mine Water Treatment Unit (MWTU)—uranium IX and molybdenum/selenium treatment facility*" [text and plans] (LNV, March 19, 2015)

Dear Mr. Lister:

The New Mexico Environment Department (NMED) provides the following comments on the above-referenced document, for which it requests response from Rio Grande Resources Corporation within 30 days of your receipt of this letter.

General

1. Please submit a figure and text pertaining to containment for the molybdenum and selenium treatment plant building.

Text

Comment no.	Page	Text or reference	NMED comment
2.	1	Phase 2 – Mine operation:... - Mo 0.530 ppm - Se 0.090 ppm	NMED's review of quarterly monitoring data that was submitted during the final 3 full years of the prior mine operational period (attached) indicates the following range of concentrations (in ppm) in discharged mine water effluent: - Mo: 0.8525 (1987) to 1.317 (1989) - Se: 0.033 (1989) to 0.136 (1988)

Comment no.	Page	Text or reference	NMED comment
			Please explain how RGRC determined the molybdenum and selenium concentrations that were used for treatment process design.
3.	2	When loaded to 0.06 pounds U per cubic foot the resin will be transported…	Please describe RGRC's monitoring protocol for uranium loading of the resin.
4.	2	The Sorbster® Si-1 media…acts as a pretreatment process for the Sorbster® Se-1 media	Please explain how RGRC will monitor loading to the Sorbster® Si-1 to ensure proper functioning of the Sorbster® Se-1 media.
5.	2	Once the adsorption capacity of the [Sorbster®] media is reached, the media is disposed in a non-hazardous waste landfill…	Please describe the Sorbster® Se-1 media change-out and handling process with respect to the components shown on Plan Sheet 8.
6.	6	The mine water wet well is equipped with…a bypass line that can in emergency situations feed excess water to the radium removal system.	Please explain how RGRC will ensure compliant discharge water quality if the bypass is utilized. Also see comment #14 below.
7.	7	The IX Plant will now be bypassed and all mine water will flow from the settling ponds to the Barium Chloride Treatment Facility.	Please explain the circumstances under which RGRC would bypass the IX and molybdenum/selenium treatment plants, and how compliant discharge water quality will be ensured.
8.	9	This sump overflow [for the mine water wet well] will go directly to the radium removal system.	Please explain why this overflow would not be routed to the T-1 overflow tank for subsequent recycle through the IX and molybdenum/selenium treatment plants.
9.	11	Quality Control of Discharge Fluids	Please explain how RGRC will monitor pH adjustment operation (*i.e.*, T-6) for proper operation and

Comment no.	Page	Text or reference	NMED comment
			discharge pH compliance.
10.	11	Composite sampling will be performed for all IX Tail columns…all Mo/Se Tail columns…	Please clarify whether RGRC is proposing to collect and analyze a single sample from each tail column, or to collect samples from each tail column and then to analyze a single composited sample. If RGRC is proposing the latter protocol, please explain how RGRC will prevent the discharge of noncompliant water if samples are collected for analysis only at 8-hour intervals.
11.	11-12	The operator will grab samples every eight (8) hours…from each lead and tail Mo/Se column to determine when the Sorbster® Se-1 Media is spent…	Please describe the criteria by which the operator will determine when the Sorbster® Se-1 Media should be changed.
12.	11	The test method for Se…uses an ICP-MS with CRC detector…The test method for Mo…uses an ICP-AES…	Please clarify whether RGRC will have the requisite instrumentation on-site, and, if so, how proper instrument calibration, maintenance, and operation will be addressed.

Plans

Comment no.	Sheet reference	Comment
13.	Sheet 7	This sheet does not show provision for outflow from T-1 (*i.e.*, overflow tank). However Sheet 9 shows overflow return to the mine water wet well. Please explain.
14.	Sheet 9	Please explain the functionality of LAHH/MW with respect to precluding overflow from the mine water wet well.

Comment no.	Sheet reference	Comment
		This sheet shows overflow from T-2A/T-2B comes from these components appearing on Sheet 10; however these components are not shown on this sheet, but rather are shown on Sheet 7. Please explain. This sheet shows overflow return comes from a component appearing on Sheet 9 into the mine water wet well; however the overflow tank (*i.e.*, T-1) is shown on Sheet 7. Please explain. This sheet shows outflow from the mine water wet well is routed to the IX system appearing on Sheet 9; however inflow to the IX Plant is shown on Sheet 7. Please explain.
15.	Sheet 10	This sheet shows overflow return from T-1 is routed to Sheet 8; however overflow return to the mine water wet well is shown on Sheet 9. Please explain.

Please contact me at (505) 476-3777 or by email at david.mayerson@state.nm.us if you should have any questions on this letter.

Sincerely,

David L. Mayerson
Mining Environmental Compliance Section
Ground Water Quality Bureau
New Mexico Environment Department

Monitoring data from Mt. Taylor Mine prior operational period compiled from NMED quarterly reports

Constituent		Arsenic	Barium	Chloride	Fluoride	Molybdenum	Nitrate	Lead	Selenium	Sulfate	TDS	Uranium
3103 Standards		**0.1**	**1**	**250**	**1.6**	**1**	**10**	**0.05**	**0.05**	**600**	**1000**	**5 (0.03)**
Rpt date	**smpl period**											
3/5/1979	1st 1979	<0.02	0.58	6	0.8	<0.02	<0.02	<0.02	<0.01	200	512	0.005
10/25/1979	3rd 1979	<0.02	0.26	37	1.22	0.16	0.51	0.02	0.01	203.2	653.2	0.127
3/5/1980	4th 1979	<0.02	0.39	25.1	0.98	0.03	2.65	<0.02	<0.01	216.25	603	0.109
3/26/1980	1st 1980	<0.02	<.518	25.16	0.854	<0.02	<0.02	<0.02	<0.01	251	696	0.087
7/25/1980	2nd 1980	<0.02	<0.02	19.8	1.06	0.19	0.6	<0.02	<0.01	294	701.6	0.081
9/29/1980	3rd 1980	<0.02	0.2	22.75	1.06	0.28	0.7	<0.02	<0.01	357.28	824	0.016
1/27/1981	4th 1980	<0.02	<0.02	34.2	1.15	0.69	0.92	0.05	<0.01	400	774	0.16
6/29/1981	1st 1981	0.01	0.07	32.3	0.98	0.25	0.11	0.01	0.02	300	750	0.081
9/2/1981	2nd 1981	0.04	<0.03	32	0.97	0.54	0.14	0.01	0.03	302	776	0.184
10/26/1981	3rd 1981	0.02	0.14	23	1.3	0.65	0.56	<0.01	0.04	302	779	0.28
1/18/1982	4th 1981	0.03	0.54	28	0.91	0.36	0.51	<0.01	0.05	340	840	0.21
AVERAGE									0.035			
4/19/1982	1st 1982	0.03	0.2	22	1.1	0.55	0.2	<0.01	0.01	323	759	0.198
7/27/1982	2nd 1982	0.04	<0.1	21	394	0.72	0.2	<0.01	0.01	342	757	0.177
10/21/1982	3rd 1982	0.04	0.1	21	0.95	0.39	0.2	<0.01	0.03	204	761	0.206
1/24/1983	4th 1982	0.08	<0.1	15.8	0.81	**2.4**	2.4	<0.01	0.03	346	791	0.63
4/25/1983	1st 1983	0.08	0.1	15	0.6	**1.8**	<0.1	<0.01	0.01	284	690	0.43
7/20/1983	2nd 1983	0.04	0.2	13	0.75	1	<0.1	<0.01	0.01	310	780	0.3
9/27/1983	3rd 1983	0.02	0.3	13	1.3	0.31	<0.1	<0.01	0.04	380	760	0.21

Constituent		Arsenic	Barium	Chloride	Fluoride	Molybdenum	Nitrate	Lead	Selenium	Sulfate	TDS	Uranium
1/4/1984	4th 1983	0.02	0.3	13	1	0.33	0.2	<0.01	0.03	320	730	0.164
4/2/1984	1st 1984	<0.01	0.2	13	1.4	0.4	<0.1	<0.01	<0.01	440	780	0.174
7/20/1984	2nd 1984	0.02	<0.1	12	0.38	0.3	<0.1	<0.01	0.03	340	800	0.19
10/4/1984	3rd 1984	0.02	<0.01	13	0.82	0.22	<0.1	<0.01	0.02	370	800	0.12
1/14/1985	4th 1984	0.02	0.5	14	0.7	0.27	<0.1	<0.01	0.01	331	762	0.163
4/12/1985	1st 1985	0.02	0.2	12	0.92	0.4	<0.1	<0.01	0.02	280	808	0.453
7/24/1985	2nd 1985	0.02	0.1	11	0.9	0.32	<0.01	<0.01	0.01	328	800	0.26
10/14/1985	3rd 1985	<0.01	0.2	13	0.74	0.14	<0.1	<0.01	0.03	320	800	0.325
2/10/1986	4th 1985	0.02	0.5	12	0.84	0.26	<0.01	<0.01	0.01	340	766	0.252
4/11/1986	1st 1986	0.02	0.2	13	0.8	0.38	0.1	<0.01	0.01	310	786	0.276
7/17/1986	2nd 1986	0.02	0.2	10	**5**	0.47	0.01	<0.01	0.01	280	**1186**	0.369
10/21/1986	3rd 1986	0.03	<0.1	11	0.81	0.57	0.1	<0.01	0.01	460	842	0.444
1/22/1987	4th 1986	0.03	0.2	12	0.88	0.56	0.1	<0.01	0.01	356	806	0.595
4/24/1987	1st 1987	<0.01	<0.1	12	0.86	0.66	0.2	<0.01	0.02	345	779	0.61
7/23/1987	2nd 1987	0.02	<0.1	13	0.96	0.91	0.1	<0.01	0.02	330	754	0.59
10/21/1987	3rd 1987	<0.05	<1	13.9	0.04	**1.67**	<0.01	<0.005	**0.263**	315	734	0.73
1/25/1988	4th 1987	<0.05	<1.0	11.6	3.6	**1.12**	0.093	<0.05	0.027	293	798	0.76
						1.09		***AVG***	***0.0825***			
4/21/1988	1st 1988	0.03	0.09	11.6	0.88	0.87	0.1	<0.005	**0.124**	349	821	0.728
7/21/1988	2nd 1988	0.025	0.16	13	0.77	0.64	<0.1	<0.005	**0.095**	344	793	0.665
10/24/1988	3rd 1988	0.025	0.07	11	0.87	0.81	<0.1	<0.02	**0.11**	370	825	0.84
1/24/1988	4th 1988	0.018	0.37	13.6	0.84	**1.09**	<0.1	<0.001	**0.217**	366	819	0.891

Constituent		Arsenic	Barium	Chloride	Fluoride	Molybdenum	Nitrate	Lead	Selenium	Sulfate	TDS	Uranium
						0.8525		***AVG***	***0.1365***			
4/20/1989	1st 1989	0.022	0.41	11.2	0.81	**1.07**	0.2	<0.04	**0.062**	374	803	0.928
8/16/1989	2nd 1989	0.022	0.14	13.8	0.86	**1.66**	0.2	<0.02	0.017	394	813	0.833
10/26/1989	3rd 1989	0.023	0.21	13.7	0.85	**1.22**	<0.1	<0.004	**0.051**	353	799	1.03
1/23/1989	4th 1989	<0.001	0.03	20	0.32	<0.01	<0.1	0.004	0.003	285	903	0.017
						1.31666667		***AVG***	***0.03325***			
5/9/1990	1st 1990	0.01	0.12	14	0.9	0.73	<0.1	0.003	0.048	342	742	0.588
7/23/1990	2nd 1990	0.003	0.16	13	0.8	0.62	<0.1	<0.02	**0.072**	319	706	0.36
						0.675		***AVG***	***0.06***			

Exceedances of current standards promulgated in 20.6.2.3103 NMAC, except uranium, are shown in red font.