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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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July 21, 1989

TO: Richard V. Smith, Permitting Supervisor

FROM: Darin Worden, Reclamation Hydrologist *DW*

RE: Conditional Approval of Water Monitoring Plan, Blue
Blaze Coal Company, Blue Blaze #1 and #2 Mines,
PRO/007/020, Folders #2 and #7, Carbon County, Utah

Synopsis

The Blue Blaze Coal Company submitted July 17, 1989, an updated water monitoring plan for Blue Blaze No. One and No. Two Mines. This memo reviews the submittal.

Analysis

Sampling locations, frequency of sampling, and parameters to be tested for were all found to be satisfactory.

Several problems were found in the text and are noted below. Updates will need to be made before final approval.

1. Page One of the PAP - Please edit the last two sentences of Paragraph One in the following manner:
"Monitoring has been initiated according to the Division's Water Monitoring Guidelines".
2. Page Two, Paragraph One, Line Three - communicates that samples will be analyzed for parameters tested in the Department's Guidelines. Please change the word "Department" to "Division".

Page 2
Memo to R. V. Smith
PRO/007/020
July 21, 1989

3. Page Four - Table for monitoring location, elevation, type, frequency, discharge measure, and reported results. For Station No. Three, please change the flow device from bucket and stop watch to Parshal Flume. See the attached table for Parshal Flume flow conversion.

Recommendation

Approve the water monitoring program under the condition that the previously listed changes are made by no later than August 15, 1989.

djh
Attachment
AT30/55-56

Table 14.—Free-flow discharge through 6-inch Parshall measuring flume in second-feet. Computed from the formula $Q=2.06 H_a^{1.53}$. (See sec. 42.)

Upper head H_a	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
Feet	Sec-ond-feet									
0.10	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.14	0.15
.20	.16	.18	.19	.20	.22	.23	.25	.26	.28	.29
.30	.31	.32	.34	.36	.38	.39	.41	.43	.45	.47
.40	.48	.50	.52	.54	.56	.58	.61	.63	.65	.67
.50	.69	.71	.73	.76	.78	.80	.82	.85	.87	.89
.60	.92	.94	.97	.99	1.02	1.04	1.07	1.10	1.12	1.15
.70	1.17	1.20	1.23	1.26	1.28	1.31	1.34	1.36	1.39	1.42
.80	1.45	1.48	1.50	1.53	1.56	1.59	1.62	1.65	1.68	1.71
.90	1.74	1.77	1.81	1.84	1.87	1.90	1.93	1.97	2.00	2.03
1.00	2.06	2.09	2.12	2.16	2.19	2.22	2.26	2.29	2.32	2.36
1.10	2.40	2.43	2.46	2.50	2.53	2.57	2.60	2.64	2.68	2.71
1.20	2.75	2.78	2.82	2.86	2.89	2.93	2.97	3.01	3.04	3.08

Table 15.—Free-flow discharge through 9-inch Parshall measuring flume in second-feet. Computed from the formula $Q=3.07 H_a^{1.53}$. (See sec. 42.)

Upper head H_a	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
Feet	Sec-ond-feet									
0.10	0.09	0.10	0.12	0.14	0.15	0.17	0.19	0.20	0.22	0.24
.20	.26	.28	.30	.32	.35	.37	.39	.41	.44	.46
.30	.49	.51	.54	.56	.59	.62	.64	.67	.70	.73
.40	.76	.78	.81	.84	.87	.90	.94	.97	1.00	1.03
.50	1.06	1.10	1.13	1.16	1.20	1.23	1.26	1.30	1.33	1.37
.60	1.40	1.44	1.48	1.51	1.55	1.59	1.63	1.66	1.70	1.74
.70	1.78	1.82	1.86	1.90	1.94	1.98	2.02	2.06	2.10	2.14
.80	2.18	2.22	2.27	2.31	2.35	2.39	2.44	2.48	2.52	2.57
.90	2.61	2.66	2.70	2.75	2.79	2.84	2.88	2.93	2.98	3.02
1.00	3.07	3.12	3.17	3.21	3.26	3.31	3.36	3.40	3.45	3.50
1.10	3.55	3.60	3.65	3.70	3.75	3.80	3.85	3.90	3.95	4.01
1.20	4.06	4.11	4.16	4.22	4.27	4.32	4.37	4.43	4.48	4.53
1.30	4.59	4.64	4.69	4.75	4.80	4.86	4.92	4.97	5.03	5.08
1.40	5.14	5.19	5.25	5.31	5.37	5.42	5.48	5.54	5.59	5.65
1.50	5.71	5.77	5.83	5.89	5.94	6.00	6.06	6.12	6.18	6.24

Use Formula Highlighted Above
 Q = Discharge
 H_a = Staff gauge reading in Flume