

0021

MEC Mangum
Engineering
Consultants

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File ACT/015/025
#2*

388 East Boynton Road • Kaysville, Utah 84037 • (801) 544-3641

9 March 1992

Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RECEIVED

MAR 10 1992

DIVISION OF
OIL GAS & MINING

Dear Pamela,

Re: Mine Water Survey, Co-Op Mining Company, Bear Canyon Mine,
ACT/015/025, Emery County, Utah

The 2nd East Bleeder Section was mined through the latter part of the summer and early part of fall in 1991. Mining in this area ceased in October 1991 because mining was approaching the edge of the permitted area boundary. At that time, some water had been encountered, but the flow was limited. During the months of November and December 1991, floor heaving was noted in the section. The sump filled with water to the extent that the source of the water was and is currently inaccessible. Due to the inability to determine the size of the sump, the flow could not be monitored. In December the sump began to overflow, allowing for monitoring. It is presumed that floor heaving in the section may be contributing to the flow.

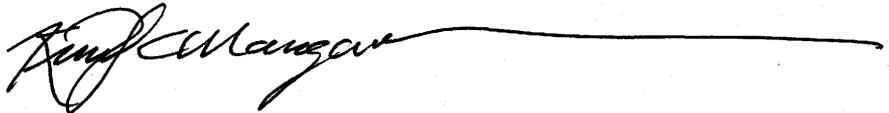
The flow is higher than the flow that has been monitored at SBC-9. SBC-9 has not decreased in flow. Flow monitoring and baseline sampling was started in January 1992 by M.E.C. Results of monitoring will be submitted with the first quarter monitoring data. The

Bear Canyon Mine
ACT/015/025
9 March 1992
Page 2

new monitoring point will be known as SBC-10.

I have included two copies of proposed pages 7-38, 7-42 and 7-42A, (Table 7.1-9 "Water Monitoring Matrix 1992 thru 1995). SBC-10 has been added and is shown monitored monthly using baseline parameters listed on Table 7.1-7 for one year. Monitoring is then shown changed to quarterly using the operational parameters. If any modifications are required by the Division please notify us. These pages have been marked "DRAFT" to differentiate them from previously approved pages. Four copies will be forwarded to the Division upon approval. If there are any questions please call.

Thank you,

A handwritten signature in black ink, appearing to read "Kimly C. Mangum", followed by a long horizontal line extending to the right.

Kimly C. Mangum, P.E.

cc: Co-Op Mining Co.

sources encountered until there is data to meet the two yr, four samples per annum requirement. New significant occurrences within the present permit area will be promptly included in the sampling program, as specified by state requirements.

Existing monitoring stations are shown on Plates 7-1 and 7-1A and listed below.

1. Under Ground Seep*	-	SBC-1
2. Portal Well**	-	SBC-2
3. Creek Well	-	SBC-3
4. Huntington Spring	-	SBC-4
5. Birch Spring	-	SBC-5
6. COP Development Spring	-	SBC-6
7. Sump #3***	-	SBC-9
8. Sump #4****	-	SBC-10

- * SBC-1 dried up in early 1988, and monitoring was discontinued.
- ** SBC-2 dry from 1987. Caved in, lost (2) quarters and relocated in 1991.
- *** Sump #1 (SBC-7) and #2 (SBC-8) dried up and discontinued in 1990.
- **** Sump #4 flow first measured Dec. 1991. Monitoring initiated Jan 1992.

Monthly sampling parameter for each of the existing monitoring stations is included in Tables 7.1-8 and 7.1-9 for 1989 through 1995.

Temporary Drill Hole Seals. Within 30 days of completion, drill holes utilized for groundwater monitoring will be sealed in a nonpermanent fashion by installing PVC surface casing with a threaded cap for access.

DRAFT

Table 7.1-9 Water Monitoring Matrix 1992 thru 1995

1992

Location	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Upper Bear Creek BC-1		opper.			opper.	field	field	opper.	field	opper.		
Lower Bear Creek BC-2		opper.			opper.	field	field	opper.	field	opper.		
Rt Fork Bear Cr. BC-3		opper.			opper.	field	field	opper.	field	opper.		
Creek Well SBC-3		opper.			opper.			opper.		opper.		
Huntington Spr. (3,4) SBC-4	base.	base.	base.	base.	base.			base.		base.		
Birch Spring (3,4) SBC-5	base.	base.	base.	base.	base.			base.		base.		
Co-Op Dev Spring SBC-6		opper.			opper.			opper.		opper.		
1st N. Bleeder #42 SBC-9		opper.			opper.			opper.		opper.		
2nd E Bleeder #3 N SBC-10	base.	base.	base.	base.	base.	base.	base.	base.	base.	base.	base.	base.

- Notes:
1. See Tables 7.1-7 and 7.2-5 for listing of water quality monitoring parameters.
 2. opper. = operational
base. = baseline
 3. Monitoring parameters to be assessed in 1992.
 4. SBC-4 and SBC-5 shall also be tested for oil and grease.

Table 7.1-9 Water Monitoring Matrix 1992 thru 1995(cont)

1993 thru 1995

Location	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Upper Bear Creek BC-1		opper.			opper.	field	field	opper.	field	opper. (3)		
Lower Bear Creek BC-2		opper.			opper.	field	field	opper.	field	opper. (3)		
Rt Fork Bear Cr. BC-3		opper.			opper.	field	field	opper.	field	opper. (3)		
Creek Well SBC-3		opper.			opper.			opper.		opper.		
Huntington Spr. (4) SBC-4		opper.			opper.			opper.		opper. (3)		
Birch Spring (4) SBC-5		opper.			opper.			opper.		opper. (3)		
Co-Op Dev Spring SBC-6		opper.			opper.			opper.		opper. (3)		
1st N. Bleeder #42 SBC-9		opper.			opper.			opper.		opper.		
2nd E Bleeder #3 N SBC-10		opper.			opper.			opper.		opper.		

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Rt Fork Bear Cr. BC-3		opper.			opper.	field	field	opper.	field	opper.		
Creek Well SBC-3		opper.			opper.			opper.		opper.		
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