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SC3 SOLDIER CREEK COAL CO.

Telephone (801) 637-6360

P.O. Box I
Price, Utah 84501

RECEIVED
OCT 20 1988
DIVISION OF
OIL, GAS & MINING

October 18, 1988

Mr. Lowell P. Braxton, Administrator
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

RE: Water Monitoring Results
Third Quarter - 1988
Soldier Creek Coal Company
ACT/007/018 and PRO/007/034

Dear Mr. Braxton:

I have enclosed the results of our water monitoring program for the third quarter of 1988.

Please contact me if you have any questions or comments concerning this information.

Sincerely,

SOLDIER CREEK COAL COMPANY

David G. Spillman
Mine Engineer

DGS/lss
Enclosures

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: G-1 (Upper Soldier Creek)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	02/26/88	05/19/88	08/18/88	
Field Measurements				
Flow, gpm	N/A	431	67	
pH, units	8.80	9.02	9.07	
Conductivity, us/cm	849	744	881	
Temperature, Water°F	34.8	68.8	81.0	
Temperature, Air °F	50.0	63.0	80.0	
Dissolved Oxygen, ppm	6.5	6.0	5.0	
Laboratory Analyses, mg/l				
Total Dissolved Solids	524	414	458	
Total Suspended Solids	828	188	6	
Total Settleable Solids/hr	1.3	-0.1	-0.4	
Total Hardness	267	284	228	
Carbonate (CO_3^{-2})	0	0	0	
Bicarbonate (HCO_3-)	388	308	354	
Calcium (Ca)	41	43	24	
Chloride (Cl-)	16	11	18	
Iron-Dissolved (Fe)	0.02	0.08	.09	
Magnesium (Mg)	40	43	41	
Manganese (Mn)	-0.01	0.01	0.01	
Potassium (k)	1	2	2	
Sodium (Na)	110	56	111	
Sulfate (SO_4^{-2})	60	86	51	
Oil & Grease	-1	-1	-1	
Cations meq/l	10.20	8.19	9.50	
Anions meq/l	9.47	8.27	8.66	
Cation/Anion Balance (%)	3.71	-0.49	4.63	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: G-2 (Upper Pine Creek)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/19/88	08/17/88	
Field Measurements				
Flow, gpm		871	30	
pH, units		8.70	9.34	
Conductivity, us/cm		526	439	
Temperature, Water°F		48	67	
Temperature, Air °F		62	85	
Dissolved Oxygen, ppm		5.2	4.5	
Laboratory Analyses, mg/l				
Total Dissolved Solids		276	230	
Total Suspended Solids		94	-2	
Total Settleable Solids/hr		-0.1	-0.1	
Total Hardness		282	217	
Carbonate (CO_3^{-2})		0	0	
Bicarbonate (HCO_3-)		258	204	
Calcium (Ca)		67	41	
Chloride (Cl-)		2	3	
Iron-Dissolved (Fe)		0.06	-0.02	
Magnesium (Mg)		28	28	
Manganese (Mn)		0.01	-0.01	
Potassium (k)		1	2	
Sodium (Na)		12	14	
Sulfate (SO_4^{-2})		19	12	
Oil & Grease		-1	-1	
Cations meq/l		6.20	5.01	
Anions meq/l		5.61	4.42	
Cation/Anion Balance (%)		5.00	6.26	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: G-5 (Lower Soldier Creek)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	02/26/88	05/20/88	08/18/88	
Field Measurements				
Flow, gpm	N/A	3,586	206	
pH, units	8.75	8.86	8.91	
Conductivity, us/cm	1429	702	1164	
Temperature, Water°F	46.6	43.5	58.0	
Temperature, Air °F	50.0	43	72.0	
Dissolved Oxygen, ppm	8.1	9.2	5.7	
Laboratory Analyses, mg/l				
Total Dissolved Solids	826	364	692	
Total Suspended Solids	118	70	16	
Total Settleable Solids/hr	-0.2	-0.2	-0.1	
Total Hardness	295	275	195	
Carbonate (CO_3^{-2})	0	0	0	
Bicarbonate (HCO_3-)	412	288	500	
Calcium (Ca)	36	46	19	
Chloride (Cl-)	148	16	45	
Iron-Dissolved (Fe)	0.07	0.04	.16	
Magnesium (Mg)	50	39	36	
Manganese (Mn)	0.01	0.01	-0.01	
Potassium (k)	9	3	14	
Sodium (Na)	218	46	222	
Sulfate (SO_4^{-2})	117	62	88	
Oil & Grease	-1	-1	-1	
Cations meq/l	15.73	7.60	14.03	
Anions meq/l	14.84	7.51	13.11	
Cation/Anion Balance (%)	2.91	0.60	3.39	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #3

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/18/88	
Field Measurements				
Flow, gpm		No Flow	No Flow	
pH, units				
Conductivity, us/cm				
Temperature, Water°F				
Temperature, Air °F				
Laboratory Analyses, mg/l				
Total Dissolved Solids				
Total Hardness				
Carbonate (CO_3^{-2})				
Bicarbonate (HCO_3-)				
Calcium (Ca)				
Chloride (Cl-)				
Iron-Dissolved (Fe)				
Magnesium (Mg)				
Manganese (Mn)				
Potassium (k)				
Sodium (Na)				
Sulfate (SO_4^{-2})				
Cations meq/l				
Anions meq/l				
Cation/Anion Balance (%)				

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #4

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/17/88	
Field Measurements				
Flow, gpm		15.0	2.5	
pH, units		8.97	8.96	
Conductivity, us/cm		522	556	
Temperature, Water°F		43.1	64.0	
Temperature, Air °F		42.0	73.0	
Laboratory Analyses, mg/l				
Total Dissolved Solids		258	272	
Total Hardness		234	234	
Carbonate (CO_3^{-2})		0	0	
Bicarbonate (HCO_3-)		229	240	
Calcium (Ca)		41	41	
Chloride (Cl-)		3	5	
Iron-Dissolved (Fe)		0.04	0.06	
Magnesium (Mg)		32	32	
Manganese (Mn)		0.01	-0.01	
Potassium (k)		1	1	
Sodium (Na)		17	25	
Sulfate (SO_4^{-2})		16	16	
Cations meq/l		5.45	5.80	
Anions meq/l		5.00	5.28	
Cation/Anion Balance (%)		4.31	4.69	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #5

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/20/88	08/18/88	

Field Measurements

Flow, gpm	265.0	15.0
pH, units	8.80	8.55
Conductivity, us/cm	578	549
Temperature, Water°F	54.0	65.0
Temperature, Air °F	59.0	80.0

Laboratory Analyses, mg/l

Total Dissolved Solids	308	346
Total Hardness	299	304
Carbonate (CO_3^{-2})	0	0
Bicarbonate (HCO_3-)	260	274
Calcium (Ca)	67	66
Chloride (Cl-)	6	6
Iron-Dissolved (Fe)	-0.02	0.02
Magnesium (Mg)	32	34
Manganese (Mn)	0.01	.01
Potassium (k)	1	2
Sodium (Na)	15	20
Sulfate (SO_4^{-2})	35	37
Cations meq/l	6.66	7.02
Anions meq/l	6.10	6.43
Cation/Anion Balance (%)	4.39	4.39

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #8

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/17/88	
Field Measurements				
Flow, gpm		18.3	3.7	
pH, units		9.17	8.75	
Conductivity, us/cm		570	563	
Temperature, Water°F		45.0	63.0	
Temperature, Air °F		43.0	73.0	
Laboratory Analyses, mg/l				
Total Dissolved Solids		322	304	
Total Hardness		241	237	
Carbonate (CO_3^{-2})		0	0	
Bicarbonate (HCO_3-)		265	266	
Calcium (Ca)		34	34	
Chloride (Cl-)		4	2	
Iron-Dissolved (Fe)		-0.02	0.10	
Magnesium (Mg)		38	37	
Manganese (Mn)		-0.01	-0.01	
Potassium (k)		1	1	
Sodium (Na)		33	34	
Sulfate (SO_4^{-2})		25	21	
Cations meq/l		6.29	6.26	
Anions meq/l		5.94	5.82	
Cation/Anion Balance (%)		2.86	3.64	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #10

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/18/88	

Field Measurements

Flow, gpm	3.0
pH, units	7.85
Conductivity, us/cm	888
Temperature, Water°F	63.0
Temperature, Air °F	82.0

Laboratory Analyses, mg/l

Total Dissolved Solids	648
Total Hardness	190
Carbonate (CO_3^{-2})	0
Bicarbonate (HCO_3-)	414
Calcium (Ca)	30
Chloride (Cl-)	9
Iron-Dissolved (Fe)	-0.02
Magnesium (Mg)	28
Manganese (Mn)	-0.01
Potassium (k)	3
Sodium (Na)	206
Sulfate (SO_4^{-2})	161
Cations meq/l	12.94
Anions meq/l	11.91
Cation/Anion Balance (%)	4.14

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #15

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/17/88	
Field Measurements				
Flow, gpm		60.0	10.0	
pH, units		8.69	8.95	
Conductivity, us/cm		614	618	
Temperature, Water°F		50.0	63.0	
Temperature, Air °F		60.0	80.0	
Laboratory Analyses, mg/l				
Total Dissolved Solids		356	338	
Total Hardness		325	317	
Carbonate (CO_3^{-2})		0	0	
Bicarbonate (HCO_3-)		292	300	
Calcium (Ca)		71	61	
Chloride (Cl-)		3	3	
Iron-Dissolved (Fe)		-0.02	.10	
Magnesium (Mg)		36	40	
Manganese (Mn)		-0.01	-0.01	
Potassium (k)		1	2	
Sodium (Na)		16	16	
Sulfate (SO_4^{-2})		31	21	
Cations meq/l		7.23	7.09	
Anions meq/l		6.57	6.52	
Cation/Anion Balance (%)		4.78	4.19	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #18

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/17/88	
Field Measurements				
Flow, gpm		60.0	No Flow	
pH, units		8.60		
Conductivity, us/cm		573		
Temperature, Water°F		62.5		
Temperature, Air °F		65.0		
Laboratory Analyses, mg/l				
Total Dissolved Solids		324		
Total Hardness		327		
Carbonate (CO_3^{-2})		0		
Bicarbonate (HCO_3-)		288		
Calcium (Ca)		75		
Chloride (Cl-)		3		
Iron-Dissolved (Fe)		-0.02		
Magnesium (Mg)		34		
Manganese (Mn)		0.01		
Potassium (k)		2		
Sodium (Na)		9		
Sulfate (SO_4^{-2})		16		
Cations meq/l		6.99		
Anions meq/l		6.38		
Cation/Anion Balance (%)		4.56		

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Spring #21

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	Site Not Accessible	05/21/88	08/17/88	
Field Measurements				
Flow, gpm		100.0	11.5	
pH, units		8.79	8.70	
Conductivity, us/cm		562	495	
Temperature, Water°F		41.5	56.0	
Temperature, Air °F		49.0	75.0	
Laboratory Analyses, mg/l				
Total Dissolved Solids		286	264	
Total Hardness		241	250	
Carbonate (CO_3^{-2})		0	0	
Bicarbonate (HCO_3-)		219	246	
Calcium (Ca)		47	49	
Chloride (Cl-)		2	1	
Iron-Dissolved (Fe)		0.02	0.02	
Magnesium (Mg)		30	31	
Manganese (Mn)		-0.01	-0.01	
Potassium (k)		1	1	
Sodium (Na)		15	17	
Sulfate (SO_4^{-2})		8	12	
Cations meq/l		5.50	5.77	
Anions meq/l		5.60	5.20	
Cation/Anion Balance (%)		-0.90	5.20	

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: UG-2N (In-Mine Ground Water)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	02/04/88	05/18/88	08/19/88	
Field Measurements				
Flow, gpm	37.5	33.3	33.3	
pH, units	7.11	7.09	7.50	
Conductivity, us/cm	1424	1402	1348	
Temperature, Water°F	62.4	63.6	63.9	
Temperature, Air °F	56.0	56.0	58.0	

Laboratory Analyses, mg/l

Total Dissolved Solids	816
Total Hardness	374
Carbonate (CO_3^{-2})	0
Bicarbonate (HCO_3-)	642
Calcium (Ca)	71
Chloride (Cl-)	32
Iron-Dissolved (Fe)	.39
Magnesium (Mg)	48
Manganese (Mn)	.06
Potassium (k)	21
Sodium (Na)	190
Sulfate (SO_4^{-2})	84
Cations meq/l	16.39
Anions meq/l	15.50
Cation/Anion Balance (%)	2.79

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: UG-3N8E (In-Mine Ground Water)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	02/04/88	05/18/88	08/19/88	
Field Measurements				
Flow, gpm	50.0	5.2	7.4	
pH, units	8.43	7.91	8.28	
Conductivity, us/cm	1093	1141	1435	
Temperature, Water°F	51.3	54.2	55.4	
Temperature, Air °F	54.0	57.0	57.0	

Laboratory Analyses, mg/l

Total Dissolved Solids	870
Total Hardness	372
Carbonate (CO_3^{-2})	0
Bicarbonate (HCO_3-)	360
Calcium (Ca)	47
Chloride (Cl-)	143
Iron-Dissolved (Fe)	.16
Magnesium (Mg)	62
Manganese (Mn)	-0.01
Potassium (k)	16
Sodium (Na)	202
Sulfate (SO_4^{-2})	185
Cations meq/l	16.74
Anions meq/l	15.09
Cation/Anion Balance (%)	5.18

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: UG-Shaft (In-Mine Ground Water)

Scheduled Sample Month	Feb	May	Aug	Nov
Sample Date	02/04/88	05/19/88	08/19/88	
Field Measurements				
Flow, gpm	10.0	8.3	3.9	
pH, units	6.88	6.83	6.82	
Conductivity, us/cm	1566	1398	1156	
Temperature, Water°F	46.3	47.2	50.1	
Temperature, Air °F	45.0	49.0	53.0	

Laboratory Analyses, mg/l

Total Dissolved Solids	820
Total Hardness	616
Carbonate (CO_3^{-2})	0
Bicarbonate (HCO_3-)	370
Calcium (Ca)	120
Chloride (Cl-)	15
Iron-Dissolved (Fe)	.02
Magnesium (Mg)	77
Manganese (Mn)	.02
Potassium (k)	10
Sodium (Na)	73
Sulfate (SO_4^{-2})	321
Cations meq/l	15.79
Anions meq/l	14.56
Cation/Anion Balance (%)	4.05

Note: Negative Sign "-" denotes that value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: UG-10E (Water First Encountered on 04/11/88)

Scheduled Sample Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sample Date					05/18/88	06/22/88		08/14/88	09/03/88			
Field Measurements												
Flow, gpm					62.5	62.5		N/A	62.5			
pH, units					8.55	8.37		8.40				
Conductivity, us/cm					1464	1443		1496				
Temperature, Water °F					62.2	62.8		60.7				
Temperature, Air °F					56.0	56.0		57.0				
Laboratory Analyses, mg/1												
Total Dissolved Solids					834			914				
Total Hardness					139			166				
Carbonate (CO)					46			0				
Bicarbonate (HCO)					663			720				
Calcium (Ca)					13			22				
Chloride (Cl-)					25			36				
Iron-Dissolved (Fe)					-0.02			.09				
Magnesium (Mg)					26			27				
Manganese (Mn)					-0.01			-0.01				
Potassium (k)					17			17				
Sodium (Na)					302			325				
Sulfate (SO)					39			60				
Cations meq/1					16.51			18.06				
Anions meq/1					15.70			16.67				
Cation/Anion Balance (%)					2.51			4.00				

Note: Negative sign "-" denotes that the value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Scheduled Sample Month	Feb	May	Aug	Nov

Sample Site ID: 5-1 (Well)

Sample Date	Site Not Accessible	05/21/88	08/17/88
Water Level Measurement, ft.		309.0	311.5

Sample Site ID: 10-2 (Well)

Sample Date	Site Not Accessible	05/21/88	08/17/88
Water Level Measurement, ft.		715.9	717.7

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: MW-2 (Mine Water Discharge)

Scheduled Sample Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sample Date	01/22/88	02/10/88	03/17/88	04/22/88	05/19/88	06/17/88	07/27/88	08/18/88	09/14/88			
Field Measurements												
Flow, gpm	230	620	300	300	200	200	300	300	400			
pH, units	8.42	8.70	8.75	8.70	8.45	8.85	8.90	8.88	8.92			
Conductivity, us/cm	1434	1939	1725	1521	1690	1565	1479	1403	1208			
Temperature, Water °F	46.2	51.5	50.0	59.4	59.9	59.0	60.5	61.0	58.8			
Temperature, Air °F	9.0	32.0	32.0	55.0	63.0	75.0	78.0	75.0	63.0			
Laboratory Analyses, mg/l												
Total Dissolved Solids	832	1126	1552	1004	1002	976	896	860	766			
Total Suspended Solids	2	2	42	4	2	6	6	2	-2			
Total Settleable Solids/hr	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			
Iron, Dissolved (Fe)	0.51	0.15	0.06	0.04	0.17	.11	.16	.17	.05			
Iron, Total (Fe)	1.16	0.69	1.94	0.37	0.23	.13	.31	.27	.09			
Manganese (Mn)	0.01	0.01	0.02	0.01	-0.01	-0.01	.01	.01	.01			
Oil & Grease	1	1	1	1	-1	-1	-1	1	2			

Note: Negative sign "-" denotes that the value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: MW-1 (Mine Water Discharge)

Scheduled Sample Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sample Date	No Discharge	No Discharge	No Discharge	No Discharge	No Discharge	No Discharge	No Discharge	No Discharge	No Discharge			
Field Measurements												
Flow, gpm												
pH, units												
Conductivity, us/cm												
Temperature, Water °F												
Temperature, Air °F												
Laboratory Analyses, mg/l												
Total Dissolved Solids												
Total Suspended Solids												
Total Settleable Solids/hr												
Iron, Dissolved (Fe)												
Iron, Total (Fe)												
Manganese (Mn)												
Oil & Grease												

Note: Negative sign "-" denotes that the value is less than.

Soldier Creek Coal Company
Hydrologic Monitoring Program
Summarized Results for 1988

Sample Site ID: Banning 001

Scheduled Sample Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sample Date	No Discharge	No Discharge	No Discharge	No Discharge	05/20/88	06/15/88	07/01/88	08/18/88	09/15/88			
Field Measurements												
Flow, gpm					32.0	66.0	60.0	0.0	24.0			
pH, units					7.76	8.33	8.60	8.75	8.42			
Conductivity, us/cm					4110	3790	3790	3980	3960			
Temperature, Water °F					54.8	55.7	64.0	63.8	60.0			
Temperature, Air °F					68.0	-	-	-	70.0			
Laboratory Analyses, mg/l												
Total Dissolved Solids					3872	4074	3972	3906	3942			
Total Suspended Solids					4	4	-2	2	6			
Total Settleable Solids/hr					-0.1	-0.1	-0.1	-0.1	-0.1			
Iron, Dissolved (Fe)					0.4	.03	.04	.10	.08			
Iron, Total (Fe)					0.5	.10	.07	.23	.13			
Manganese (Mn)					-0.01	-0.01	-0.01	-0.01	.01			
Oil & Grease					-1	-1	-1	1	2			

Note: Negative sign "-" denotes that the value is less than.

PERMITTEE NAME/ADDRESS (*Include Facility Name/Location if different*)

NAME Soldier Creek Coal Company

ADDRESS P.O. Box I
Price, Utah 84501

FACILITY Soldier Canyon Mine

LOCATION Discharge Pipe (MW-2)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (*NPDES*)
DISCHARGE MONITORING REPORT (*DMR*)

Form Approved.
OMB No. 2040-0004
Approval expires 9-30-85

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
UT-0023680	003

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	88	07	01	TO	88	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	SAMPLE MEASUREMENT	0.247	0.247	MGD	*	*	*	MGD	0	1/30	Meter
	PERMIT REQUIREMENT	*	*		*	*	*		0	"	"
Solids: Total Suspended	SAMPLE MEASUREMENT				2	3	6	MG/L	0	"	GR
	PERMIT REQUIREMENT				*	25	70			"	"
Solids: Total Dissolved	SAMPLE MEASUREMENT				766	841	896	MG/L	0	"	"
	PERMIT REQUIREMENT				*	*	1,500			"	"
pH	SAMPLE MEASUREMENT				8.88	8.90	8.92	SU	0	"	"
	PERMIT REQUIREMENT				6.5	*	9.0			"	"
Oil & Grease	SAMPLE MEASUREMENT				1	1	2	MG/L	0	"	"
	PERMIT REQUIREMENT				*	*	10			"	"
Iron: Total	SAMPLE MEASUREMENT				0.09	0.22	0.27	MG/L	0	"	"
	PERMIT REQUIREMENT				*	*	2.0			"	"
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
David G. Spillman
Mine Engineer
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (*Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.*)

David G. Spillman
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
801	637-6360	88	10	11

COMMENT AND EXPLANATION OF ANY VIOLATIONS (*Reference all attachments here*)

Note: There was no discharge from point source 001 (MW-1) and 002 (sediment pond)

PERMITTEE NAME/ADDRESS (*Include Facility Name/Location if different*)

NAME: Soldier Creek Coal Company
ADDRESS: P.O. Box I
Price, UT 84501

FACILITY: Banning Siding Loadout
LOCATION: Carbon County, UT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (*NPDES*)
DISCHARGE MONITORING REPORT (*DMR*)

Form Approved.
OMB No. 2040-0004
Approval expires 9-30-85

(2-16) PERMIT NUMBER: UT-0023817

(17-19) DISCHARGE NUMBER: 001

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	88	07	01	TO	88	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
Flow	SAMPLE MEASUREMENT	8,002	8,466	GPD	*	*	*	GPD	0	1/30	Meter
	PERMIT REQUIREMENT	*	*		*	*	*			"	"
Solids: Total Suspended	SAMPLE MEASUREMENT				2	3	6	MG/L	0	"	GR
	PERMIT REQUIREMENT				*	25	70			"	"
Solids: Total Dissolved	SAMPLE MEASUREMENT				3906	3940	3972	MG/L	03	"	"
	PERMIT REQUIREMENT				*	*	3,000			"	"
pH	SAMPLE MEASUREMENT				8.42	8.59	8.75	SU	0	"	"
	PERMIT REQUIREMENT				6.5	*	9.0			"	"
Oil & Grease	SAMPLE MEASUREMENT				1	1	2	MG/L	0	"	"
	PERMIT REQUIREMENT				0	0	10			"	"
Iron: Total	SAMPLE MEASUREMENT				0.07	0.14	0.23	MG/L	0	"	"
	PERMIT REQUIREMENT				0	0	2.0			"	"
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
David G. Spillman
Mine Engineer
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (*Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.*)

David G. Spillman
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
801	637-6360	88	10	11
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (*Reference all attachments here*)
Monthly samples rouninely exeeeded theetotal dissolved solids limitations The appropriate noncompliance letters are attached.

SOLDIER CREEK COAL CO.

Telephone (801) 637-6360

P.O. Bo
Price, Utah 84

July 14, 1988

U.S. Environmental Protection Agency
999 18th Street, 8WM-C
One Denver Place
Denver, CO 80202-2405

RE: NPDES Permit UT-0023817
Noncompliance Notification

To Whom It May Concern:

Enclosed are the copies of our Banning discharge analyses for the months of June and July under permit UT-0023817. The analyses show that the total dissolved solids (TDS) for June was 4074 mg/l and for July was 3972 mg/l and these results exceed the 3000 mg/l TDS daily maximum limitation specified in our permit.

As stated in a previous letter, the TDS of the groundwater within the area normally exceed 3000 mg/l, so we are now proceeding to change our TDS daily maximum limitation.

If you have any questions concerning this matter, please contact me.

Sincerely,

C.P. Allen
Mine Engineer

CPA/lss
Enclosures

xc: State of Utah, Bureau of Water Pollution Control
State of Utah, Division of Oil, Gas & Mining

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING
Sample Date Time: 06/15/88 09:30

Lab No. : 88-W1/03526
Date Received: 06/21/88

Parameters			Analysis Date
Oil and Grease	-1.	mg/l	06/29/88
Solids, total dissolved	4074.	mg/l	06/22/88
Solids, total suspended	4.	mg/l	06/22/88
Solids, settleable	-.1	ml/l/hr	06/22/88
Iron, dissolved	.03	mg/l	06/30/88
Iron, total	.10	mg/l	06/28/88
Manganese, total	-.01	mg/l	06/28/88

Remarks: Lab Filtering Required on "GREEN" Bottle #3526
Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

BANNING DISCHARGE UT-0023817 JULY/1988

IDC	- P# - M#	Description	Result	Units
S'SOLIDS		Solids,settleable (smpl)	-.1	ml/hr
SS'VOL.		Sample Volume (SS)	1000.	ml
SS		Solids, settleable	-.1	ml/l/hr
TSS'WT1		Initial Weight (TSS)	23.1878	g
TSS'WT2		Final Weight (TSS)	23.1878	g
TSS'VOL		Sample Volume (TSS)	50.	ml
TSS		Solids, total suspended	-2.	mg/l
TDS'WT1		Initial Wt. (TDS)	51.2778	g
TDS'WT2		Final Wt. (TDS)	51.4764	g
TDS'VOL		Sample Volume (TDS)	50.	ml
TDS		Solids, total dissolved	3972.	mg/l
FE'T		Iron, total	.07	mg/l
FE'TUG		Iron, total	70.	ug/l
MN'T		Manganese, total	.01	mg/l
MN'TUG		Manganese, total	10.	ug/l
SO4'WT1		Initial Weight (SO4)	24.3190	g
SO4'VOL		Sample Volume (SO4)	20.	ml
SO4'WT2		Final Weight (SO4)	24.4322	g
SO4		Sulfate	2330.	mg/l
SO4'MEQ		Sulfate	48.93	meq/l
SO4'CL		Sulfate	2330.	mg/l
N'NH3		Nitrogen, ammonia	.06	mg/l
HG'D		Mercury, dissolved	-.0001	mg/l
HG'DUG		Mercury, dissolved	-.1	ug/l
P'ORTH'D		Phosphorus, ortho diss	.02	mg/l
PO4		Phosphate	.1	mg/l
PB'D		Lead, dissolved	-.02	mg/l
PB'DUG		Lead, dissolved	-20.	ug/l
AS'D		Arsenic, dissolved	-.001	mg/l
AS'DUG		Arsenic, dissolved	-1.	ug/l
SE'D		Selenium, dissolved	.029	mg/l
SE'DUG		Selenium, dissolved	29.	ug/l
F		Fluoride	.2	mg/l

SC3 SOLDIER CREEK COAL CO.
Telephone (801) 637-6360
P.O. Box I
Price, Utah 84501

September 12, 1988

U.S. Environmental Protection Agency
999 18th Street, 8WM-C
One Denver Place
Denver, CO 80202-2405

RE: NPDES Permit UT-0023817
Noncompliance Notification

Gentlemen:

Enclosed is a copy of our Banning discharge analysis under permit UT-0023817. This analysis shows that the total dissolved solids (TDS) of the sample is 3906 mg/l, which exceeds the 3000 mg/l daily maximum discharge limitation specified in our permit. Due to the high TDS of the water in this area, it is felt that this value will be exceeded quite frequently.

Please contact us if you have any questions concerning this matter.

Sincerely,

SOLDIER CREEK COAL COMPANY

C.P. Allen
Mine Engineer

CPA/lss
Enclosure

xc: State of Utah, Bureau of Water Pollution Control
State of Utah, Division of Oil, Gas and Mining

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING
Sample Date Time: 08/18/88 09:00

Lab No. : 88-WI/04713
Date Received: 08/23/88

Parameters

Oil and Grease	1.	mg/l
Solids, total dissolved	3906.	mg/l
Solids, total suspended	2.	mg/l
Solids, settleable	-.1	ml/l/hr
Iron, dissolved	.10	mg/l
Iron, total	.23	mg/l
Manganese, total	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

SC3 SOLDIER CREEK COAL CO.
Telephone (801) 637-6360
P.O. Box I
Price, Utah 84501

October 5, 1988

U.S. Environmental Protection Agency
999 18th Street, 8WM-C
One Denver Place
Denver, CO 80202-2405

RE: NPDES Permit UT-0023817
Noncompliance Notification

Gentlemen:

Enclosed is a copy of our Banning discharge analysis under permit UT-0023817. This analysis shows that the total dissolved solids (TDS) of the sample is 3942 mg/l, which exceeds the 3000 mg/l daily maximum discharge limitation specified in our permit. Due to the high TDS of the water in this area, it is felt that this value will be exceeded quite frequently.

Please contact us if you have any questions concerning this matter.

Sincerely,

SOLDIER CREEK COAL COMPANY

C.P. Allen
Mine Engineer

CPA/lss
Enclosure

xc: State of Utah, Bureau of Water Pollution Control
State of Utah, Division of Oil, Gas and Mining

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING DISCHARGE
Sample Date Time: 09/15/88 12:00

Lab No. : 88-WI/05255
Date Received: 09/19/88

Parameters			Analysis Date
Oil and Grease	2.	mg/l	09/22/88
Solids, total dissolved	3942.	mg/l	09/21/88
Solids, total suspended	6.	mg/l	09/21/88
Solids, settleable	-.1	ml/l/hr	09/26/88
Iron, dissolved	.08	mg/l	09/27/88
Iron, total	.13	mg/l	09/27/88
Manganese, total	.01	mg/l	09/27/88

Remarks:
Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING 001
Sample Date Time: 07/01/88 13:00

Lab No. : 88-WI/03903
Date Received: 07/05/88

Parameters

Alkalinity as CaCO3	344.	mg/l
Bicarbonate as CaCO3	344	mg/l
Boron, dissolved	.08	mg/l
Calcium, dissolved	290.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	115.	mg/l
Fluoride	.2	mg/l
Hardness as CaCO3	2250.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	372.	mg/l
Nitrogen, ammonia	.06	mg/l
Nitrate as N, dissolved	.42	mg/l
Nitrite as N, dissolved	-.01	mg/l
Oil and Grease	-1.	mg/l
Phosphate	.1	mg/l
Phosphorus, ortho diss	.02	mg/l
Potassium, dissolved	4.	mg/l
Sodium, dissolved	294.	mg/l
Sulfate	2330.	mg/l
Sulfide as S	.4	mg/l
Cations (sum)	58.04	meq/l
Anions (sum)	59.03	meq/l
Cation-Anion Balance	-.85	%
Solids, total dissolved	3972.	mg/l
Solids, total suspended	-2.	mg/l
Solids, settleable	-.1	ml/l/hr
Aluminum, dissolved	-.05	mg/l
Arsenic, dissolved	-.001	mg/l
Barium, dissolved	.07	mg/l
Cadmium, dissolved	-.005	mg/l
Chromium, dissolved	-.01	mg/l
Copper, dissolved	-.01	mg/l
Iron, dissolved	.04	mg/l
Iron, total	.07	mg/l
Lead, dissolved	-.02	mg/l
Manganese, total	.01	mg/l
Manganese, dissolved	-.01	mg/l
Mercury, dissolved	-.0001	mg/l
Molybdenum, dissolved	-.05	mg/l
Nickel, dissolved	-.02	mg/l
Selenium, dissolved	.029	mg/l
Zinc, dissolved	.05	mg/l

Remarks: Lab Filtering Required on "GREEN" Bottle

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: MW-2
Sample Date Time: 07/27/88 10:10

Lab No. : 88-WI/04296
Date Received: 07/29/88

Parameters			Analysis Date
Oil and Grease	-1.	mg/l	08/03/88
Solids, total dissolved	896.	mg/l	08/01/88
Solids, total suspended	6.	mg/l	08/01/88
Solids, settleable	-.1	ml/l/hr	08/01/88
Iron, dissolved	.16	mg/l	08/09/88
Iron, total	.31	mg/l	08/02/88
Manganese, total	.01	mg/l	08/02/88

Remarks: Lab Filtering Required on "GREEN" Bottle
Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 4
Sample Date Time: 08/17/88 10:45

Lab No. : 88-WI/04699
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	240.	mg/l
Bicarbonate as CaCO3	240	mg/l
Calcium, dissolved	41.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	5.	mg/l
Hardness as CaCO3	234.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	32.	mg/l
Potassium, dissolved	1.	mg/l
Sodium, dissolved	25.	mg/l
Sulfate	16.	mg/l
Cations (sum)	5.80	meq/l
Anions (sum)	5.28	meq/l
Cation-Anion Balance	4.69	%
Solids, total dissolved	272.	mg/l
Iron, dissolved	.06	mg/l
Manganese, dissolved	-.01	mg/l

Remarks: Lab Filtering Required on "GREEN" Bottles #4699-4713

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 5 Lab No. : 88-WI/04700
Sample Date Time: 08/18/88 12:30 Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	274.	mg/l
Bicarbonate as CaCO3	274	mg/l
Calcium, dissolved	66.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	6.	mg/l
Hardness as CaCO3	304.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	34.	mg/l
Potassium, dissolved	2.	mg/l
Sodium, dissolved	20.	mg/l
Sulfate	37.	mg/l
Cations (sum)	7.02	meq/l
Anions (sum)	6.43	meq/l
Cation-Anion Balance	4.39	%
Solids, total dissolved	346.	mg/l
Iron, dissolved	.02	mg/l
Manganese, dissolved	.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 8
Sample Date Time: 08/17/88 10:10

Lab No. : 88-WI/04701
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	266.	mg/l
Bicarbonate as CaCO3	266	mg/l
Calcium, dissolved	34.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	2.	mg/l
Hardness as CaCO3	237.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	37.	mg/l
Potassium, dissolved	1.	mg/l
Sodium, dissolved	34.	mg/l
Sulfate	21.	mg/l
Cations (sum)	6.26	meq/l
Anions (sum)	5.82	meq/l
Cation-Anion Balance	3.64	%
Solids, total dissolved	304.	mg/l
Iron, dissolved	.10	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 10
Sample Date Time: 08/18/88 13:15

Lab No. : 88-WI/04702
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	414.	mg/l
Bicarbonate as CaCO3	414	mg/l
Calcium, dissolved	30.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	9.	mg/l
Hardness as CaCO3	190.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	28.	mg/l
Potassium, dissolved	3.	mg/l
Sodium, dissolved	206.	mg/l
Sulfate	161.	mg/l
Cations (sum)	12.94	meq/l
Anions (sum)	11.91	meq/l
Cation-Anion Balance	4.14	%
Solids, total dissolved	648.	mg/l
Iron, dissolved	-.02	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 15
Sample Date Time: 08/17/88 12:45

Lab No. : 88-WI/04703
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	300.	mg/l
Bicarbonate as CaCO3	300	mg/l
Calcium, dissolved	61.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	3.	mg/l
Hardness as CaCO3	317.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	40.	mg/l
Potassium, dissolved	2.	mg/l
Sodium, dissolved	16.	mg/l
Sulfate	21.	mg/l
Cations (sum)	7.09	meq/l
Anions (sum)	6.52	meq/l
Cation-Anion Balance	4.19	%
Solids, total dissolved	338.	mg/l
Iron, dissolved	.10	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: SPRING 21 Lab No. : 88-WI/04704
Sample Date Time: 08/17/88 11:20 Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	246.	mg/l
Bicarbonate as CaCO3	246	mg/l
Calcium, dissolved	49.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	1.	mg/l
Hardness as CaCO3	250.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	31.	mg/l
Potassium, dissolved	1.	mg/l
Sodium, dissolved	17.	mg/l
Sulfate	12.	mg/l
Cations (sum)	5.77	meq/l
Anions (sum)	5.20	meq/l
Cation-Anion Balance	5.20	%
Solids, total dissolved	264.	mg/l
Iron, dissolved	.02	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: UG-10E
Sample Date Time: 08/19/88 09:04

Lab No. : 88-WI/04705
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	720.	mg/l
Bicarbonate as CaCO3	720	mg/l
Calcium, dissolved	22.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	36.	mg/l
Hardness as CaCO3	166.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	27.	mg/l
Potassium, dissolved	17.	mg/l
Sodium, dissolved	325.	mg/l
Sulfate	60.	mg/l
Cations (sum)	18.06	meq/l
Anions (sum)	16.67	meq/l
Cation-Anion Balance	4.00	%
Solids, total dissolved	914.	mg/l
Iron, dissolved	.09	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: UG-SHAFT
Sample Date Time: 08/19/88 08:25

Lab No. : 88-WI/04706
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	370.	mg/l
Bicarbonate as CaCO3	370	mg/l
Calcium, dissolved	120.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	15.	mg/l
Hardness as CaCO3	616.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	77.	mg/l
Potassium, dissolved	10.	mg/l
Sodium, dissolved	73.	mg/l
Sulfate	321.	mg/l
Cations (sum)	15.79	meq/l
Anions (sum)	14.56	meq/l
Cation-Anion Balance	4.05	%
Solids, total dissolved	820.	mg/l
Iron, dissolved	.02	mg/l
Manganese, dissolved	.02	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: UG-3N8E
Sample Date Time: 08/18/88 08:50

Lab No. : 88-WI/04707
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	360.	mg/l
Bicarbonate as CaCO3	360	mg/l
Calcium, dissolved	47.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	143.	mg/l
Hardness as CaCO3	372.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	62.	mg/l
Potassium, dissolved	16.	mg/l
Sodium, dissolved	202.	mg/l
Sulfate	185.	mg/l
Cations (sum)	16.74	meq/l
Anions (sum)	15.09	meq/l
Cation-Anion Balance	5.18	%
Solids, total dissolved	870.	mg/l
Iron, dissolved	.16	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: UG-SN
Sample Date Time: 08/19/88 09:22

Lab No. : 88-WI/04708
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	642.	mg/l
Bicarbonate as CaCO3	642	mg/l
Calcium, dissolved	71.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	32.	mg/l
Hardness as CaCO3	374.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	48.	mg/l
Potassium, dissolved	21.	mg/l
Sodium, dissolved	190.	mg/l
Sulfate	84.	mg/l
Cations (sum)	16.39	meq/l
Anions (sum)	15.50	meq/l
Cation-Anion Balance	2.79	%
Solids, total dissolved	816.	mg/l
Iron, dissolved	.39	mg/l
Manganese, dissolved	.06	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: G1
Sample Date Time: 08/18/88 13:55

Lab No. : 88-WI/04709
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	354.	mg/l
Bicarbonate as CaCO3	354	mg/l
Calcium, dissolved	24.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	18.	mg/l
Hardness as CaCO3	228.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	41.	mg/l
Oil and Grease	-1.	mg/l
Potassium, dissolved	2.	mg/l
Sodium, dissolved	111.	mg/l
Sulfate	51.	mg/l
Cations (sum)	9.50	meq/l
Anions (sum)	8.66	meq/l
Cation-Anion Balance	4.63	%
Solids, total dissolved	458.	mg/l
Solids, total suspended	6.	mg/l
Solids, settleable	-.4	ml/l/hr
Iron, dissolved	.09	mg/l
Manganese, dissolved	.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: G2
Sample Date Time: 08/17/88 13:50

Lab No. : 88-WI/04710
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	204.	mg/l
Bicarbonate as CaCO3	204	mg/l
Calcium, dissolved	41.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	3.	mg/l
Hardness as CaCO3	217.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	28.	mg/l
Oil and Grease	-1.	mg/l
Potassium, dissolved	2.	mg/l
Sodium, dissolved	14.	mg/l
Sulfate	12.	mg/l
Cations (sum)	5.01	meq/l
Anions (sum)	4.42	meq/l
Cation-Anion Balance	6.26	%
Solids, total dissolved	230.	mg/l
Solids, total suspended	-2.	mg/l
Solids, settleable	-.1	ml/l/hr
Iron, dissolved	-.02	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: G5
Sample Date Time: 08/18/88 10:30

Lab No. : 88-WI/04711
Date Received: 08/23/88

Parameters

Alkalinity as CaCO3	500.	mg/l
Bicarbonate as CaCO3	500	mg/l
Calcium, dissolved	19.	mg/l
Carbonate as CaCO3	0	mg/l
Chloride	45.	mg/l
Hardness as CaCO3	195.	mg/l
Hydroxide as CaCO3	0	mg/l
Magnesium, dissolved	36.	mg/l
Oil and Grease	-1.	mg/l
Potassium, dissolved	14.	mg/l
Sodium, dissolved	222.	mg/l
Sulfate	88.	mg/l
Cations (sum)	14.03	meq/l
Anions (sum)	13.11	meq/l
Cation-Anion Balance	3.39	%
Solids, total dissolved	692.	mg/l
Solids, total suspended	16.	mg/l
Solids, settleable	-.1	ml/l/hr
Iron, dissolved	.16	mg/l
Manganese, dissolved	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: MW2
Sample Date Time: 08/18/88 10:50

Lab No. : 88-WI/04712
Date Received: 08/23/88

Parameters

Oil and Grease	1.	mg/l
Solids, total dissolved	860.	mg/l
Solids, total suspended	2.	mg/l
Solids, settleable	-.1	ml/l/hr
Iron, dissolved	.17	mg/l
Iron, total	.27	mg/l
Manganese, total	.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING
Sample Date Time: 08/18/88 09:00

Lab No. : 88-WI/04713
Date Received: 08/23/88

Parameters

Oil and Grease	1.	mg/l
Solids, total dissolved	3906.	mg/l
Solids, total suspended	2.	mg/l
Solids, settleable	-.1	ml/l/hr
Iron, dissolved	.10	mg/l
Iron, total	.23	mg/l
Manganese, total	-.01	mg/l

Remarks:

Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen/S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: MW2
Sample Date Time: 09/14/88 12:30

Lab No. : 88-WI/05181
Date Received: 09/16/88

Parameters			Analysis Date
Oil and Grease	2.	mg/l	09/22/88
Solids, total dissolved	766.	mg/l	09/21/88
Solids, total suspended	-2.	mg/l	09/21/88
Solids, settleable	-.1	ml/l/hr	09/26/88
Iron, dissolved	.05	mg/l	09/23/88
Iron, total	.09	mg/l	09/20/88
Manganese, total	.01	mg/l	09/20/88

Remarks: Lab Filtering Required on "GREEN" Bottle
Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.

Client : Soldier Creek Coal Company
Address : P.O. Box 1
Price, Utah 84501
Attn. : Mr. Dave Spillman
P.O. No.:

Sample ID: BANNING DISCHARGE
Sample Date Time: 09/15/88 12:00

Lab No. : 88-WI/05255
Date Received: 09/19/88

Parameters			Analysis Date
Oil and Grease	2.	mg/l	09/22/88
Solids, total dissolved	3942.	mg/l	09/21/88
Solids, total suspended	6.	mg/l	09/21/88
Solids, settleable	-.1	ml/l/hr	09/26/88
Iron, dissolved	.08	mg/l	09/27/88
Iron, total	.13	mg/l	09/27/88
Manganese, total	.01	mg/l	09/27/88

Remarks:
Note: Negative sign "-" denotes that the value is less than "<"

Ralph V. Poulsen, Laboratory Director

Ralph V. Poulsen /S.H.