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JUN 17 1987
DIVISION OF
OIL, GAS & MINING

WATER MONITORING REPORT

FOURTH QUARTER - 1986

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-1			ST-2		
	OCT	NOV	DEC	OCT	NOV	DEC
Flow Rate G.P.M.	97.9					
Air Temperature °F	42					
Water Temperature °F	40					
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	298			224		
Alkalinity, Bicarbonate "	298			224		
Alkalinity, Carbonate "	0					
Chloride mg/l $CaCO_3$	11			<1		
Conductivity uhmos/cm	1250			450		
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1			<1		
pH units	8.2			8.2		
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	978			296		
Solids, Total Suspended mg/l	10			<2		
Sulfate mg/l	475			31		
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	146			62		
Iron mg/l						
Magnesium mg/l	106			27		
Manganese mg/l						
Potassium mg/l	6			1		
Selenium mg/l						
Silica mg/l						
Sodium mg/l	12			4		
Zinc mg/l						
Iron (Diss.) mg/l	.03			<.02		
Total Organic Carbon mg/l						

NO SAMPLING REQUIRED ON STREAMS NOV-MARCH

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-2A			ST-2B		
	OCT			OCT		
Flow Rate G.P.M.	111			74		
Air Temperature °F	49			42		
Water Temperature °F	36			39		
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	246			284		
Alkalinity, Bicarbonate "	246			284		
Alkalinity, Carbonate "	0			0		
Chloride mg/l $CaCO_3$	<1			10		
Conductivity uhmos/cm	480			800		
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1			<1		
pH units	8.2			8.1		
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	312			548		
Solids, Total Suspended mg/l	<2			<2		
Sulfate mg/l	41			179		
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	65			94		
Iron mg/l						
Magnesium mg/l	30			64		
Manganese mg/l						
Potassium mg/l	1			4		
Selenium mg/l						
Silica mg/l						
Sodium mg/l	2			12		
Zinc mg/l						
Iron (Diss.) mg/l	<.02			<.02		
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 3			ST- 3A		
	OCT			OCT		
Flow Rate G.P.M.	36					
Air Temperature °F	50					
Water Temperature °F	39					
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	352					
Alkalinity, Bicarbonate "	352					
Alkalinity, Carbonate "	0					
Chloride mg/l $CaCO_3$	342					
Conductivity uhmos/cm	2390					
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1					
pH units	8.0					
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha				NO WATER		
Gross Beta						
Solids, Total Dissolved mg/l	1742					
Solids, Total Suspended mg/l	<2					
Sulfate mg/l	572					
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	199					
Iron mg/l						
Magnesium mg/l	186					
Manganese mg/l						
Potassium mg/l	9					
Selenium mg/l						
Silica mg/l						
Sodium mg/l	137					
Zinc mg/l						
Iron (Diss.) mg/l	.07					
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-3B			ST-4		
	OCT			OCT		
Flow Rate G.P.M.				15.5		
Air Temperature °F				61		
Water Temperature °F				41		
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	406			314		
Alkalinity, Bicarbonate "	406			314		
Alkalinity, Carbonate "	0			0		
Chloride mg/l $CaCO_3$	548			43		
Conductivity uhmos/cm	2670			1280		
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1			<1		
pH units	8.0			8.1		
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1718			970		
Solids, Total Suspended mg/l	16			<2		
Sulfate mg/l	280			412		
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	197			129		
Iron mg/l						
Magnesium mg/l				106		
Manganese mg/l	96					
Potassium mg/l	8			5		
Selenium mg/l						
Silica mg/l						
Sodium mg/l	267			27		
Zinc mg/l						
Iron (Diss.) mg/l	.03			.02		
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 4A			ST- 4B		
	OCT			OCT		
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	306					
Alkalinity, Bicarbonate "	306					
Alkalinity, Carbonate "	0					
Chloride mg/l $CaCO_3$	2					
Conductivity uhmos/cm	820					
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1					
pH units	8.3					
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha				NO WATER		
Gross Beta						
Solids, Total Dissolved mg/l	570					
Solids, Total Suspended mg/l	<2					
Sulfate mg/l	191					
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	96					
Iron mg/l						
Magnesium mg/l						
Manganese mg/l	70					
Potassium mg/l	3					
Selenium mg/l						
Silica mg/l						
Sodium mg/l	10					
Zinc mg/l						
Iron (Diss.) mg/l	<.02					
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 5			ST- 6		
	OCT			OCT		
Flow Rate G.P.M.	242			346		
Air Temperature °F	60			53		
Water Temperature °F	46			41		
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	294			262		
Alkalinity, Bicarbonate "	294			262		
Alkalinity, Carbonate "	0			0		
Chloride mg/l $CaCO_3$	64			9		
Conductivity uhmos/cm	1460			1030		
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1			1		
pH units	8.1			7.9		
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1132			798		
Solids, Total Suspended mg/l	2			198		
Sulfate mg/l	515			350		
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	133			122		
Iron mg/l						
Magnesium mg/l	139			81		
Manganese mg/l						
Potassium mg/l	5			6		
Selenium mg/l						
Silica mg/l						
Sodium mg/l	34			18		
Zinc mg/l						
Iron (Diss.) mg/l	.2			.05		
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 6A			ST-		
	OCT					
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$	270					
Alkalinity, Bicarbonate "	270					
Alkalinity, Carbonate "	0					
Chloride mg/l $CaCO_3$	3					
Conductivity uhmos/cm	750					
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<1					
pH units	8.0					
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	518					
Solids, Total Suspended mg/l	36					
Sulfate mg/l	173					
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	85					
Iron mg/l						
Magnesium mg/l	59					
Manganese mg/l						
Potassium mg/l	2					
Selenium mg/l						
Silica mg/l						
Sodium mg/l	11					
Zinc mg/l						
Iron (Diss.) mg/l	<.02					
Total Organic Carbon mg/l						

SPRING MONITORING REPORT

4th Quarter 1986

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-4	SP-5	SP-6	SP-8
Flow Rate	g.p.m.	.84	1.6	6.3		7.9	7.6
Air Temperature	°F	39	45	43		57	52
Water Temperature	°F	34	46	36		55	41
Alkalinity, Total	mg/l	172	200	255		225	350
Alkalinity, Bicarb.	mg/l	170	200	255		225	350
Alkalinity, Carbonate	mg/l	0	0	0		0	0
Chloride	mg/l	<1.0	<1.0	2		<1.0	3
Coliform, Fecal	MPN/100 ml						
Coliform, Total	MPN/100 ml						
Conductivity	umhos/cm	350	398	490		423	712
Fluoride	mg/l						
Hardness, Total	mg/l $CaCO_3$						
Nitrogen, Ammonia	mg/l						
Nitrogen, Nitrate	mg/l						
Oil and Grease	mg/l						
pH	units	8.1	8.0	8.3		8.2	8.2
Phosphorus, Ortho	mg/l						
Phosphorus, Total	mg/l						
Solids, Total Diss.	mg/l	232	234	274		226	428
Solids, Total Susp.	mg/l	162	306	4		12	2
Sulfate	mg/l	10	10	12		6	66
Sulfide	mg/l						
Turbidity	mg/l						
Total Cations	mg/l						
Total Anions	meq/l						
Calcium	mg/l	55	66	70		64	103
Iron, Dissolved	mg/l	.08	.16	<.02		<.02	<.02
Magnesium	mg/l	11	13	25		16	45
Manganese	mg/l						
Potassium	mg/l	2	1	1		<1.0	2
Sodium	mg/l	6	1	1		<1.0	8

INACCESSIBLE

SPRING MONITORING REPORT

4th Quarter 1986

EFFLUENT CHARACTERISTIC		SP-9	SP-11	SP-12	SP-13	SP-14	
Flow Rate	g.p.m.	7.6	.37	.3	.75	9.7	
Air Temperature	°F	65	36	44	56	40	
Water Temperature	°F	50	41	41	47	36	
Alkalinity, Total	mg/l	200	295	264	405	204	
Alkalinity, Bicarb.	mg/l	200	295	264	405	204	
Alkalinity, Carbonate	mg/l	0	0	0	0	0	
Chloride	mg/l	<1.0	3	<1.0	17	<1.0	
Coliform, Fecal	MPN/100 ml						
Coliform, Total	MPN/100 ml						
Conductivity	umhos/cm	386	624	440	1190	390	
Fluoride	mg/l						
Hardness, Total	mg/l $CaCO_3$						
Nitrogen, Ammonia	mg/l						
Nitrogen, Nitrate	mg/l						
Oil and Grease	mg/l						
pH	units	8.1	8.2	8.1	7.8	8.2	
Phosphorus, Ortho	mg/l						
Phosphorus, Total	mg/l						
Solids, Total Diss.	mg/l	214	356	320	820	226	
Solids, Total Susp.	mg/l	42	90	208	24	24	
Sulfate	mg/l	16	60	14	317	<2.0	
Sulfide	mg/l						
Turbidity	mg/l						
Total Cations	mg/l						
Total Anions	meq/l						
Calcium	mg/l	53	84	68	134	54	
Iron, Dissolved	mg/l	.02	<.02	.06	<.02	.02	
Magnesium	mg/l	22	38	30	94	16	
Manganese	mg/l						
Potassium	mg/l	1	1	2	3	1	
Sodium	mg/l	3	2	6	13	4	

MINE WATER DISCHARGE REPORT

First Half Year 1986

STATION D001

Parameters	January	February	March	April	May	June
Flow Rate G.P.M.	INACCESSIBLE		NO DISCH.	NO DISCH.	72	NO DISCH.
Suspended Solids Total, Mg/L					<.5	
Dissolved Solids Total, Mg/L					677	
Manganese, Total Mg/L					<.01	
Iron, Total Mg/L					.11	
Iron, Dissolved Mg/L					<.05	
Alkalinity, Mg/L					354	
Acidity, Mg/L					<1.0	
pH					6.7	
Oil & Grease Mg/L					<.5	
BOD_5, Mg/L						
Coliform, Total MPN/100 ML						
Coliform, Fecal MPN/100 ML						
Conductivity umhos/cm					1100	

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MINE WATER DISCHARGE REPORT

Second Half of Year 1986

STATION D001

Parameters	July	August	September	October	November	December
Flow Rate G.P.M.	Approx. 500gpm	NO DISCH.	NO DISCH.	NO DISCH	NO DISCH.	72
Suspended Solids Total, Mg/L	<.5					6
Dissolved Solids Total, Mg/L	662					686
Manganese, Total Mg/L	<.01					.01
Iron, Total Mg/L	<.05					.07
Iron, Dissolved Mg/L	<.05					<.02
Alkalinity, Mg/L	362					360
Acidity, Mg/L	<1					0
pH	7.4					7.4
Oil & Grease Mg/L	<.5					<1.0
BOD_5, Mg/L						
Coliform, Total MPN/100 ML						
Coliform, Fecal MPN/100 ML						
Conductivity umhos/cm	1100					988

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MINE WATER DISCHARGE REPORT

First Half Year 1986

STATION D002

Parameters	January	February	March	April	May	June
Flow Rate G.P.M.	109	NO DISCH.	504	398	451	346
Suspended Solids Total, Mg/L	3.0		2.0	<.5	<.5	4.0
Dissolved Solids Total, Mg/L	634		578	588	572	608
Manganese, Total Mg/L	<.01		<.01	.02	<.01	.02
Iron, Total Mg/L	<.05		.14	<.05	<.05	<.05
Iron, Dissolved Mg/L	<.05		<.05	<.05	<.05	<.05
Alkalinity, Mg/L	308		330	300	270	320
Acidity, Mg/L	<1		<1	<1	<1	<1
pH	7.2		7.7	7.05	6.8	7.6
Oil & Grease Mg/L	<.5		<.5	<.5	<.5	<.5
BOD_5, Mg/L	<1		<1			<1
Coliform, Total MPN/100 ML			<2			
Coliform, Fecal MPN/100 ML			<2			
Conductivity umhos/cm	1005		1080	1000	900	1000

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MINE WATER DISCHARGE REPORT

Second Half of Year 1986

STATION D002

Parameters	July	August	September	October	November	December
Flow Rate G.P.M.	NO DISCH.	233	172	NO DISCH	203	425
Suspended Solids Total, Mg/L		2	<2.0		<2.0	6
Dissolved Solids Total, Mg/L		580	604		614	622
Manganese, Total Mg/L		<.01	<.01		<.01	<.01
Iron, Total Mg/L		.02	.11		<.02	<.02
Iron, Dissolved Mg/L		<.02	<.02		<.02	<.02
Alkalinity, Mg/L		278	276		294	304
Acidity, Mg/L		0	0		0	0
pH		8.1	8.0		7.4	7.7
Oil & Grease Mg/L		<1	1.0		<1	<1
BOD_5, Mg/L						
Coliform, Total MPN/100 ML						
Coliform, Fecal MPN/100 ML						
Conductivity umhos/cm		968	840		920	898

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MINE WATER DISCHARGE REPORT

First Half Year 1986

STATION D010

Parameters	January	February	March	April	May	June
Flow Rate G.P.M.	IN ACCESSIBLE			4.6	7.6	8.6
Suspended Solids Total, Mg/L				14	<.5	8.0
Dissolved Solids Total, Mg/L				305	348	362
Manganese, Total Mg/L				.03	<.01	.01
Iron, Total Mg/L				.29	.05	.06
Iron, Dissolved Mg/L				.13	<.05	<.05
Alkalinity, Mg/L				269	268	268
Acidity, Mg/L				<1	<1	<1
pH				7.5	7.1	7.75
Oil & Grease Mg/L				<.5	<.5	<.5
BOD_5, Mg/L						<1
Coliform, Total MPN/100 ML						≥2400
Coliform, Fecal MPN/100 ML						<2
Conductivity umhos/cm				655	700	685

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MINE WATER DISCHARGE REPORT

Second Half of Year 1986

STATION D010

Parameters	July	August	September	October	November	December
Flow Rate G.P.M.	6.9	5.3	4.0	4.0	4.0	
Suspended Solids Total, Mg/L	<.5	2	<2.0	<2.0	<2.0	
Dissolved Solids Total, Mg/L	350	340	342	364	324	
Manganese, Total Mg/L	<.01	<.01	<.01	<.01	<.01	
Iron, Total Mg/L	<.05	<.02	.05	<.02	.24	
Iron, Dissolved Mg/L	<.05	.07	<.02	<.02	<.02	
Alkalinity, Mg/L	266	246	252	266	244	
Acidity, Mg/L	<1	0	0	0	0	
pH	7.65	8.1	8.1	8.2	7.7	
Oil & Grease Mg/L	<.5	<1	1.0	<1.0	<1	
BOD_5, Mg/L						
Coliform, Total MPN/100 ML						
Coliform, Fecal MPN/100 ML						
Conductivity umhos/cm	690	635	568	490	573	

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JUN 17 1987
DIVISION OF
OIL, GAS & MINING

WATER MONITORING REPORT

THIRD QUARTER - 1986

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-1			ST-2		
	July	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.	124	61.8	72.1			
Air Temperature °F	55	60	44			
Water Temperature °F	52	57	48			
Acidity mg/l $CaCO_3$	<1.0			<1.0		
Alkalinity, Total mg/l $CaCO_3$		304	302		195	212
Alkalinity, Bicarbonate "		304	302		185	200
Alkalinity, Carbonate "			0		10	12
Chloride mg/l $CaCO_3$	14	12	10	3	<1	1
Conductivity uhmos/cm	1650	1380	1340	383	391	428
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<1.0	1.0	<.5	1.0	1.0
pH units	8.15	8.1	8.2	8.2	8.4	8.5
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1174	1094	1044	177	220	254
Solids, Total Suspended mg/l	4.0	12	34	16	2	6
Sulfate mg/l	750	584	560	22	25	29
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	166	151	147	50	47	61
Iron mg/l	<.05	.16	.03	<.05	.03	<.02
Magnesium mg/l	136	126	125	20	27	26
Manganese mg/l						
Potassium mg/l	8	7	7	1	1	1
Selenium mg/l						
Silica mg/l						
Sodium mg/l	11	12	10	3	3	2
Zinc mg/l						
Iron (Diss.) mg/l						
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS		ST-2A			ST-2B		
		JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate	G.P.M.	133	89	81	306	118	59
Air Temperature	°F	55	60	44	55	60	44
Water Temperature	°F	50	53	42	52	56	44
Acidity	mg/l $CaCO_3$	<1			<1		
Alkalinity, Total	mg/l $CaCO_3$		214	226		224	300
Alkalinity, Bicarbonate	"		210	222		224	296
Alkalinity, Carbonate	"		4	4		0	4
Chloride	mg/l $CaCO_3$	3	5	1	6	4	8
Conductivity	uhmos/cm	444	449	462	530	582	786
Fluoride	mg/l						
Kjeldahl N	mg/l						
Nitrogen, Nitrate	mg/l						
Nitrogen, Nitrite	mg/l						
Oil & Grease	mg/l	<.5	<1.0	1.0	<.5	<1.0	1.0
pH	units	8.15	8.4	8.4	8.2	8.2	8.4
Phosphorus, Total	mg/l						
Radioactivity: Gross Alpha							
Gross Beta							
Solids, Total Dissolved	mg/l	238	260	274	293	348	504
Solids, Total Suspended	mg/l	1.0	10	2	2.0	<2	2
Sulfate	mg/l	26	31	31	65	84	144
Arsenic	mg/l						
Cadmium	mg/l						
Calcium	mg/l	56	54	63	58	60	71
Iron	mg/l	<.05	<.02	<.02	<.05	<.02	<.02
Magnesium	mg/l	25	30	29	32	45	61
Manganese	mg/l						
Potassium	mg/l	1	1	2	2	2	3
Selenium	mg/l						
Silica	mg/l						
Sodium	mg/l	3	4	3	5	5	7
Zinc	mg/l						
Iron (Diss.)	mg/l						
Total Organic Carbon	mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 3			ST- 3A		
	JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.	74	31	36			
Air Temperature °F	63	66	44			
Water Temperature °F	52	54	45			
Acidity mg/l $CaCO_3$	<1			<1		
Alkalinity, Total mg/l $CaCO_3$		278	318		188	210
Alkalinity, Bicarbonate "		278	318		108	210
Alkalinity, Carbonate "		0	0		80	0
Chloride mg/l $CaCO_3$	293	306	316	4	1	4
Conductivity uhmos/cm	2130	2150	2170	440	432	487
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	1.0	<1.0	2.0	<.5	<1.0	1.0
pH units	7.7	8.1	8.2	7.9	8.5	8.2
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1267	1410	1502	229	240	306
Solids, Total Suspended mg/l	2.0	20	14	1.0	8	48
Sulfate mg/l	450	508	508	31	43	62
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	130	130	148	44	44	56
Iron mg/l						
Magnesium mg/l	125	147	157	31	32	38
Manganese mg/l						
Potassium mg/l	10	8	11	1	1	4
Selenium mg/l						
Silica mg/l						
Sodium mg/l	130	135	138	4	5	4
Zinc mg/l						
Iron (Diss.) mg/l	<.05	<.02	.03	<.05	<.02	<.02
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 3B			ST- 4		
	JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.				15	21	21
Air Temperature °F				64	64	48
Water Temperature °F				52	54	48
Acidity mg/l $CaCO_3$	<1.0			<1.0		
Alkalinity, Total mg/l $CaCO_3$		348	400		250	292
Alkalinity, Bicarbonate "		348	400		250	292
Alkalinity, Carbonate "		0	0		0	8
Chloride mg/l $CaCO_3$	368	746	795	44	46	50
Conductivity uhmos/cm	2000	3160	3290	1200	1220	1190
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	1.2	<1.0	1.0	<.5	<1.0	2.0
pH units	8.0	7.9	8.1	8.1	8.1	8.4
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1043	1952	2046	722	834	858
Solids, Total Suspended mg/l	7.0	30	6	<.5	18	26
Sulfate mg/l	235	282	294	360	395	391
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	108	152	173	82	89	102
Iron mg/l						
Magnesium mg/l	71	113	122	96	108	104
Manganese mg/l						
Potassium mg/l	8	10	14	5	4	8
Selenium mg/l						
Silica mg/l						
Sodium mg/l	190	393	413	23	30	29
Zinc mg/l						
Iron (Diss.) mg/l	<.05	.02	.04	<.05	<.02	<.02
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 4A			ST- 4B		
	JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$	<1.0					
Alkalinity, Total mg/l $CaCO_3$		258	270			
Alkalinity, Bicarbonate "		258	254			
Alkalinity, Carbonate "		0	16			
Chloride mg/l $CaCO_3$	4	3	4			
Conductivity uhmos/cm	690	714	692			
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l				NO WATER	NO WATER	NO WATER
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<1.0	1.0			
pH units	8.05	8.3	8.5			
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	367	464	454			
Solids, Total Suspended mg/l	<.5	6	<2.0			
Sulfate mg/l	145	156	140			
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	56	63	70			
Iron mg/l						
Magnesium mg/l	50	70	61			
Manganese mg/l						
Potassium mg/l	2	2	3			
Selenium mg/l						
Silica mg/l						
Sodium mg/l	7	8	7			
Zinc mg/l						
Iron (Diss.) mg/l	<.05	<.02	<.02			
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 5			ST- 6		
	JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.	389	292	242	346	118	279
Air Temperature °F	68	69	49	68	—	55
Water Temperature °F	56	59	50	56	—	51
Acidity mg/l $CaCO_3$	<1.0			<1.0		
Alkalinity, Total mg/l $CaCO_3$		260	280		224	254
Alkalinity, Bicarbonate "		260	280		224	254
Alkalinity, Carbonate "		0	0		0	0
Chloride mg/l $CaCO_3$	44	50	55	6	5	7
Conductivity uhmos/cm	1275	1320	1300	860	775	801
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<1.0	1.0	<.5	<1.0	2
pH units	8.05	8.2	8.2	8.0	8.1	8.1
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	795	930	990	487	534	562
Solids, Total Suspended mg/l	2.0	24	12	117	198	160
Sulfate mg/l	440	447	473	225	228	233
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l	100	104	127	80	71	93
Iron mg/l						
Magnesium mg/l	94	112	125	58	69	64
Manganese mg/l						
Potassium mg/l	6	5	7	5	3	4
Selenium mg/l						
Silica mg/l						
Sodium mg/l	26	35	36	9	12	11
Zinc mg/l						
Iron (Diss.) mg/l	<.05	.08	.03	<.05	.03	<.02
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-6A			ST-7		
	JULY	AUG	SEPT	JULY	AUG	SEPT
Flow Rate G.P.M.						449
Air Temperature °F						49
Water Temperature °F						38
Acidity mg/l $CaCO_3$	<1.0					
Alkalinity, Total mg/l $CaCO_3$		226	242			216
Alkalinity, Bicarbonate "		226	242			216
Alkalinity, Carbonate "		0	0			0
Chloride mg/l $CaCO_3$	5	3	5			4
Conductivity uhmos/cm	605	666	651			446
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l		<.02				
Nitrogen, Nitrite mg/l		<.02				
Oil & Grease mg/l	<0.5	<1.0	2			1.0
pH units	8.2	8.2	8.2			8.0
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	326	408	428			250
Solids, Total Suspended mg/l	3.0	<2	152			6
Sulfate mg/l	110	144	140			27
Arsenic mg/l		<.001				
Cadmium mg/l		<.005				
Calcium mg/l	58	59	78			51
Iron mg/l						
Magnesium mg/l	43	57	53			31
Manganese mg/l		<.01				
Potassium mg/l	2	2	3			1
Selenium mg/l		<.001				
Silica mg/l						
Sodium mg/l	7	9	10			3
Zinc mg/l		<.01				
Iron (Diss.) mg/l	<.05	<.02	<.02			<.02
Total Organic Carbon mg/l						

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WATER MONITORING REPORT

SECOND QUARTER - 1986

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-1			ST-2		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate G.P.M.	287	467	137			
Air Temperature °F	—	—	68			
Water Temperature °F	—	—	52			
Acidity mg/l $CaCO_3$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$	13	8	10	4	3	2
Conductivity uhmos/cm	1110	800	1200	470	385	409
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	.5	<.5	<.5	<.5	<.5	<.5
pH units	7.3	7.6	8.1	7.55	7.8	8.15
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	717	471	810	267	223	223
Solids, Total Suspended mg/l	13	26	10	88.5	549	13
Sulfate mg/l	350	265	400	28	18	14
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l		80	122		62	58
Iron mg/l						
Magnesium mg/l	85	54	87	25	16	20
Manganese mg/l	.02			.04		
Potassium mg/l	4	3	4.8	1	1	1
Selenium mg/l						
Silica mg/l						
Sodium mg/l	10	7	8.7	4	3	2.6
Zinc mg/l						
Iron (Diss.) mg/l	.08	.07	.05	.16	.18	<.05
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST-2A			ST-2B		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate G.P.M.	530	1584	546	597	597	736
Air Temperature °F	63	70	55	60	68	55
Water Temperature °F	50	48	50	54	50	52
Acidity mg/l $CaCO_3$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$	4	3	3	8	4	4
Conductivity uhmos/cm	493	410	440	680	470	488
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<.5	3.6	<.5	<.5	<.5
pH units	7.8	8.0	8.1	8.0	8.0	8.15
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	259	212	235	344	264	267
Solids, Total Suspended mg/l	75	506	7.0	20	544	32
Sulfate mg/l	32	16	21	85	34	39
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l		60	60		62	62
Iron mg/l						
Magnesium mg/l	26	16	20	38	22	27
Manganese mg/l	.06			.01		
Potassium mg/l	1	1	1	2	1	1.4
Selenium mg/l						
Silica mg/l						
Sodium mg/l	4	3	2.8	6	3	3.8
Zinc mg/l						
Iron (Diss.) mg/l	.13	<.05	<.05	<.05	<.05	<.05
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 3			ST- 4		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate G.P.M.	77.3	193	144	~1gpm	332	175
Air Temperature °F	58	—	—	—	—	64
Water Temperature °F	47	—	—	—	—	52
Acidity mg/l $CaCO_3$	<1.0	<1.0	<1.0		<1.0	<1.0
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$	353	182	154		17	19
Conductivity uhmos/cm	2500	1600	1415		900	900
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<.5	<.5		<.5	<.5
pH units	7.85	8.0	8.0		8.15	7.5
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	1457	971	858		496	537
Solids, Total Suspended mg/l	<.5	268	56		435	38
Sulfate mg/l	650	325	250		180	205
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l		116	104		90	80
Iron mg/l						
Magnesium mg/l	145	84	75		55	62
Manganese mg/l	.06					
Potassium mg/l	9	6	5.4		3	3
Selenium mg/l						
Silica mg/l						
Sodium mg/l	137	82	75		12	14.5
Zinc mg/l						
Iron (Diss.) mg/l	.06	<.05	.06		<.05	<.05
Total Organic Carbon mg/l						

TOO LOW TO SAMPLE

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC	ST 3A			ST 3B		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$	4	3	4	292	73	90
Conductivity umhos/cm	495	470	422	1900	900	905
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<.5	<.5	<.5	<.5	<.5
pH units	8.25	8.1	8.2	7.95	8.15	7.4
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	242	260	236	952	485	521
Solids, Total Suspended mg/l	170	385	7.0	12	34	11
Sulfate mg/l	50	29	26	245	105	50
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l		56	48		84	76
Iron mg/l						
Magnesium mg/l	.31	28	28	74	41	39
Manganese mg/l	.05			.08		
Potassium mg/l	1	1	1.3	5	3	3.1
Selenium mg/l						
Silica mg/l						
Sodium mg/l	4	4	4	124	40	60
Zinc mg/l						
Iron (Diss.) mg/l	.11	<.05	<.05	.15	.06	.06
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC	ST4A			ST4B		
	APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$	<1.0	<1.0	<1.0		<1.0	<1.0
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$	7	3	4		5	4
Conductivity umhos/cm	900	550	590		600	580
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l	<.5	<.5	<.5	NO WATER	<.5	<.5
pH units	8.1	8.15	8.05		8.2	8.1
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l	485	303	315		319	297
Solids, Total Suspended mg/l	<.5	175	1		481	9
Sulfate mg/l	230	48	69		60	71
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l		64	60		66	56
Iron mg/l						
Magnesium mg/l	63	30	35		31	36
Manganese mg/l	<.01					
Potassium mg/l	2	1	1.5		1	1.6
Selenium mg/l						
Silica mg/l						
Sodium mg/l	8	4	5.6		5	6
Zinc mg/l						
Iron (Diss.) mg/l	<.05	<.05	<.05		<.05	<.05
Total Organic Carbon mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST5			ST6		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	869	>1584	1050	242	≈1584	389
Air Temperature	°F	72	—	—	60	—	76
Water Temperature	°F	58	—	—	46	—	61
Acidity	mg/l $CaCO_3$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total	mg/l $CaCO_3$						
Alkalinity, Bicarbonate	"						
Alkalinity, Carbonate	"						
Chloride	mg/l $CaCO_3$	35	20	24	8	4	5
Conductivity	umhos/cm	1200	820	855	890	600	680
Fluoride	mg/l						
Kjeldahl N	mg/l						
Nitrogen, Nitrate	mg/l						
Nitrogen, Nitrite	mg/l						
Oil & Grease	mg/l	<.5	<.5	<.5	.6	<.5	<.5
pH	units	8.2	8.15	7.8	8.1	8.1	7.9
Phosphorus, Total	mg/l						
Radioactivity: Gross Alpha							
Gross Beta							
Solids, Total Dissolved	mg/l	700	489	489	493	315	376
Solids, Total Suspended	mg/l	11	190	40	<.5	127	24
Sulfate	mg/l	365	185	200	240	80	125
Arsenic	mg/l						
Cadmium	mg/l						
Calcium	mg/l		84	76		68	58
Iron	mg/l						
Magnesium	mg/l	87	49	52	60	30	44
Manganese	mg/l	.03			.02		
Potassium	mg/l	5	3	3	3	2	2.1
Selenium	mg/l						
Silica	mg/l						
Sodium	mg/l	21	13	16	11	6	8.9
Zinc	mg/l						
Iron (Diss.)	mg/l	<.05	<.05	<.05	<.05	<.05	<.05
Total Organic Carbon	mg/l						

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS		ST-6A			ST-7		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.						
Air Temperature	°F						
Water Temperature	°F						
Acidity	mg/l $CaCO_3$	<1.0	<1.0	<1.0		<1.0	
Alkalinity, Total	mg/l $CaCO_3$						
Alkalinity, Bicarbonate	"						
Alkalinity, Carbonate	"						
Chloride	mg/l $CaCO_3$	5	3	4		3	
Conductivity	uhmos/cm	610	500	590		450	
Fluoride	mg/l						
Kjeldahl N	mg/l						
Nitrogen, Nitrate	mg/l						
Nitrogen, Nitrite	mg/l						
Oil & Grease	mg/l	1.0	<.5	<.5		<.5	
pH	units	8.1	8.1	7.9		8.2	
Phosphorus, Total	mg/l						
Radioactivity: Gross Alpha							
Gross Beta							
Solids, Total Dissolved	mg/l	395	268	312		241	
Solids, Total Suspended	mg/l	32.5	125	31		171	
Sulfate	mg/l	110	31	72		10	
Arsenic	mg/l						
Cadmium	mg/l						
Calcium	mg/l						
Iron	mg/l						
Magnesium	mg/l	46	21	33		18	
Manganese	mg/l	.03					
Potassium	mg/l	2	1	1.5		1	
Selenium	mg/l						
Silica	mg/l						
Sodium	mg/l	7	4	6		3	
Zinc	mg/l						
Iron (Diss.)	mg/l	<.05	<.05	<.05		<.05	
Total Organic Carbon	mg/l						

SPRING MONITORING REPORT

2nd Quarter 1986

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-4	SP-5	SP-6	SP-8
Flow Rate	g.p.m.	2.3	2.0	41.3	8	32.3	13
Air Temperature	°F	62	69	50	65	56	69
Water Temperature	°F	60	50	48	42	44	45
Alkalinity, Total	mg/l	147	232	260	296	253	312
Alkalinity, Bicarb.	mg/l	179	283	317	361	309	380
Alkalinity, Carbonate	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloride	mg/l	4	5	2	4	2	4
Coliform, Fecal	MPN/100 ml						
Coliform, Total	MPN/100 ml						
Conductivity	umhos/cm	320	460	498	640	473	700
Fluoride	mg/l						
Hardness, Total	mg/l $CaCO_3$						
Nitrogen, Ammonia	mg/l						
Nitrogen, Nitrate	mg/l						
Oil and Grease	mg/l						
pH	units	6.8	7.7	7.45	7.1	7.8	7.55
Phosphorus, Ortho	mg/l						
Phosphorus, Total	mg/l						
Solids, Total Diss.	mg/l	182	263	290	352	227	357
Solids, Total Susp.	mg/l	1.0	2.0	1.0	<.5	6.0	1.0
Sulfate	mg/l	18	24	18	43	4	45
Sulfide	mg/l						
Turbidity	mg/l						
Total Cations	mg/l	3.43	5.28	5.64	6.98	4.85	7.3
Total Anions	meq/l	3.43	5.28	5.63	6.93	5.19	7.29
Calcium	mg/l	54	80	80	92	82	80
Iron, Dissolved	mg/l	.09	<.05	<.05	<.05	<.05	<.05
Magnesium	mg/l	7	14	19	26	8	37
Manganese	mg/l						
Potassium	mg/l	.7	.7	.5	.9	.3	1.3
Sodium	mg/l	3.5	2.9	2.1	5.5	2.0	5.6

SPRING MONITORING REPORT

2nd Quarter 1986

EFFLUENT CHARACTERISTIC		SP-9	SP-11	SP-12	SP-13	SP-14	
Flow Rate	g.p.m.	7.9	2	2.3	1.5	10.5	
Air Temperature	°F	58	55	60	—	—	
Water Temperature	°F	51	48	49	—	—	
Alkalinity, Total	mg/l	197	288	300	350	106	
Alkalinity, Bicarb.	mg/l	240	351	366	427	129	
Alkalinity, Carbonate	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloride	mg/l	3	4	4	14	2	
Coliform, Fecal	MPN/100 ml						
Coliform, Total	MPN/100 ml						
Conductivity	umhos/cm	385	660	605	1130	230	
Fluoride	mg/l						
Hardness, Total	mg/l $CaCO_3$						
Nitrogen, Ammonia	mg/l						
Nitrogen, Nitrate	mg/l						
Oil and Grease	mg/l						
pH	units	7.75	7.85	7.45	8.1	6.8	
Phosphorus, Ortho	mg/l						
Phosphorus, Total	mg/l						
Solids, Total Diss.	mg/l	197	332	332	715	132	
Solids, Total Susp.	mg/l	37	174	24	79	<.	
Sulfate	mg/l	4	65	3	260	15	
Sulfide	mg/l						
Turbidity	mg/l						
Total Cations	mg/l	4.03	7.22	5.95	12.89	2.5	
Total Anions	meq/l	4.11	7.23	6.17	12.81	2.49	
Calcium	mg/l	48	84	82	120	36	
Iron, Dissolved	mg/l	<.05	<.05	<.05	<.05	.13	
Magnesium	mg/l	18	34	19	76	7	
Manganese	mg/l						
Potassium	mg/l	.5	1	1.4	3.5	.9	
Sodium	mg/l	2.7	4	6.0	12	2.2	

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DIVISION OF
OIL, GAS & MINING

WATER MONITORING REPORT

FIRST QUARTER - 1986

UNITED STATES FUEL COMPANY

HIAWATHA, UTAH 84527

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTICS	ST- 1			ST- 2		
	Jan	Feb	March	Jan	Feb	March
Flow Rate G.P.M.						
Air Temperature ^{o}F						
Water Temperature ^{o}F						
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$						
Conductivity uhmos/cm						
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l						
pH units						
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l						
Solids, Total Suspended mg/l						
Sulfate mg/l						
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l						
Iron mg/l						
Magnesium mg/l						
Manganese mg/l						
Potassium mg/l						
Selenium mg/l						
Silica mg/l						
Sodium mg/l						
Zinc mg/l						
Iron (Diss.) mg/l						
Total Organic Carbon mg/l						

INACCESSIBLE

INACCESSIBLE

STREAM MONITORING REPORT 198

EFFLUENT CHARACTERISTICS	ST-2A			ST-2B		
	JAN	FEB	MARCH	JAN	FEB	MARCH
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$						
Conductivity uhmos/cm						
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l						
pH units						
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l						
Solids, Total Suspended mg/l						
Sulfate mg/l						
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l						
Iron mg/l						
Magnesium mg/l						
Manganese mg/l						
Potassium mg/l						
Selenium mg/l						
Silica mg/l						
Sodium mg/l						
Zinc mg/l						
Iron (Diss.) mg/l						
Total Organic Carbon mg/l						

INACCESSIBLE

INACCESSIBLE

STREAM MONITORING REPORT 198

EFFLUENT CHARACTERISTICS		ST- 3			ST- 4		
		JAN	FEB	MARCH			
Flow Rate	G.P.M.	41.2	41.2	67	Dry	Dry	8.2
Air Temperature	°F	20	38	42			38
Water Temperature	°F	32	42	32			32
Acidity	mg/l $CaCO_3$	<1.0	<1.0	<1.0			<1.0
Alkalinity, Total	mg/l $CaCO_3$	366	360				
Alkalinity, Bicarbonate	"						
Alkalinity, Carbonate	"						
Chloride	mg/l $CaCO_3$	392	355	308			51
Conductivity	uhmos/cm	2550	2420	2550			1300
Fluoride	mg/l						
Kjeldahl N	mg/l						
Nitrogen, Nitrate	mg/l	.12	.05				
Nitrogen, Nitrite	mg/l						
Oil & Grease	mg/l	<.5	<.5	<.5			<.5
pH	units	7.45	7.75	7.2			7.9
Phosphorus, Total	mg/l						
Radioactivity: Gross Alpha							
Gross Beta							
Solids, Total Dissolved	mg/l	1583	1514	1468			754
Solids, Total Suspended	mg/l	13.0	2.0	52			44
Sulfate	mg/l	650	760	510			300
Arsenic	mg/l						
Cadmium	mg/l						
Calcium	mg/l						
Iron	mg/l	.16	.28				
Magnesium	mg/l			149			86
Manganese	mg/l	.07	.08	.08			.02
Potassium	mg/l			9			5
Selenium	mg/l						
Silica	mg/l						
Sodium	mg/l			136			42
Zinc	mg/l						
Iron (Diss.)	mg/l	<.05	<.05	<.05			.06
Total Organic Carbon	mg/l						

STREAM MONITORING REPORT 19

EFFLUENT CHARACTERISTICS	ST- 4A			ST- 4B		
	JAN	FEB	MARCH	JAN	FEB	MARCH
Flow Rate G.P.M.	Dry	Dry	Dry	Dry	Dry	Dry
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$						
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "						
Chloride mg/l $CaCO_3$						
Conductivity uhmos/cm						
Fluoride mg/l						
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l						
pH units						
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l						
Solids, Total Suspended mg/l						
Sulfate mg/l						
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l						
Iron mg/l						
Magnesium mg/l						
Manganese mg/l						
Potassium mg/l						
Selenium mg/l						
Silica mg/l						
Sodium mg/l						
Zinc mg/l						
Iron (Diss.) mg/l						
Total Organic Carbon mg/l						

STREAM MONITORING REPORT 198

EFFLUENT CHARACTERISTICS		ST- 5			ST- 6		
		JAN	FEB	MARCH	JAN	FEB	MARCH
Flow Rate	G.P.M.	265	332.5	1030	204	INACC-ESSIBLE	193
Air Temperature	°F	35	44	46	36	50	46
Water Temperature	°F	35	34	35	34	34	43
Acidity	mg/l $CaCO_3$	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total	mg/l $CaCO_3$	317	304		285	214	
Alkalinity, Bicarbonate	"						
Alkalinity, Carbonate	"						
Chloride	mg/l $CaCO_3$	41	47	44	7	11	8
Conductivity	uhmos/cm	1500	1410	1498	1100	900	1100
Fluoride	mg/l						
Kjeldahl N	mg/l						
Nitrogen, Nitrate	mg/l	.25	.16		.08	.05	
Nitrogen, Nitrite	mg/l						
Oil & Grease	mg/l	<.5	<.5	<.5	<.5	<.5	<.5
pH	units	7.8	7.65	7.8	7.6	7.85	7.85
Phosphorus, Total	mg/l						
Radioactivity: Gross Alpha							
Gross Beta							
Solids, Total Dissolved	mg/l	986	954	889	677	534	667
Solids, Total Suspended	mg/l	11	8	135	35	785	488.5
Sulfate	mg/l	450	480	440	305	278	285
Arsenic	mg/l						
Cadmium	mg/l						
Calcium	mg/l						
Iron	mg/l	.17	.31		.35	2.34	
Magnesium	mg/l			111			83
Manganese	mg/l	.04	.04	.03	.03	.17	.08
Potassium	mg/l						4
Selenium	mg/l						
Silica	mg/l						
Sodium	mg/l						15
Zinc	mg/l						
Iron (Diss.)	mg/l	<.05	<.05	<.05	<.05	.05	.07
Total Organic Carbon	mg/l						

STREAM MONITORING REPORT 198

EFFLUENT CHARACTERISTICS	ST-6A			ST-7		
	JAN	FEB	MARCH			
Flow Rate G.P.M.						
Air Temperature °F						
Water Temperature °F						
Acidity mg/l $CaCO_3$			<1.0			
Alkalinity, Total mg/l $CaCO_3$						
Alkalinity, Bicarbonate "						
Alkalinity, Carbonate "	INACCESSIBLE	INACCESSIBLE		MONITORED		
Chloride mg/l $CaCO_3$			6			
Conductivity uhmos/cm			925	JUNE &		
Fluoride mg/l				OCTOBER		
Kjeldahl N mg/l						
Nitrogen, Nitrate mg/l						
Nitrogen, Nitrite mg/l						
Oil & Grease mg/l			<.5			
pH units			7.8			
Phosphorus, Total mg/l						
Radioactivity: Gross Alpha						
Gross Beta						
Solids, Total Dissolved mg/l			498			
Solids, Total Suspended mg/l			102			
Sulfate mg/l			205			
Arsenic mg/l						
Cadmium mg/l						
Calcium mg/l						
Iron mg/l						
Magnesium mg/l			68			
Manganese mg/l			<.01			
Potassium mg/l			3			
Selenium mg/l						
Silica mg/l						
Sodium mg/l			10			
Zinc mg/l						
Iron (Diss.) mg/l			<.05			
Total Organic Carbon mg/l						

MINE WATER DISCHARGE MONITORING REPORT

DATE *First Quarter 1986* *0001*

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January					INACCESSIBLE									
February					INACCESSIBLE									
March					NO DISCHARGE									
April														
May														
June														
July														
August														
September														
October														
November														
December														

MINE WATER DISCHARGE MONITORING REPORT

DATE *First Quarter 1986 D002*

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January	108.9	3.0	634	<.01	<.05	<.05	308	<1.0	7.2	<.5	<1			1005
February	NO DISCHARGE													
March	504.4	2.0	578	<.01	.14	.14	330	<1.0	7.7	<.5	<1	<2	<2	1080
April														
May														
June														
July														
August														
September														
October														
November														

MINE WATER DISCHARGE MONITORING REPORT

DATE *First Quarter 1986 D010*

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January					INACCESSIBLE									
February					INACCESSIBLE									
March					INACCESSIBLE									
April														
May														
June														
July														
August														
September														
October														
November														
December														

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DIVISION OF OIL
GAS & MINING

SURFACE AND GROUNDWATER MONITORING REPORT

Third Quarter - 1985

United States Fuel Company

Hiawatha, Utah 84527

SPRING MONITORING REPORT
DATE: 3rd Quarter 1985

EFFLUENT CHARACTERISTIC		SP-8					
		July	Aug	Sept			
Flow Rate	G.P.M.	10	8.3	9.3			
PH	Units	7.55	7.45	7.5			
Air Temp.	°F	61	68	58			
Water Temp.	°F	53	44	44			
Conductivity	umhos/cm	780	800	710			
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	433	442	449			
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	<.05	<.05	<.05			
Dissolved Iron	Mg/L	<.05	<.05	<.05			
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	4	4			
Sulfate	Mg/L	70	98	106			
Nitrate NO_3-N	Mg/L	.01	<.01	<.01			
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

Date: 3rd Quarter 19[redacted] STREAM MONITORING REPORT [redacted]

EFFLUENT CHARACTERISTIC		ST-1			ST-2		
		July	Aug.	Sept.	July	Aug.	Sept.
Flow Rate	G.P.M.	193	93	61.8			
PH	Units	8.15	7.4	7.5	8.15	7.7	7.7
Air Temp.	°F	57	70	63			
Water Temp.	°F	51	57	50			
Conductivity	umhos/cm	1050	1550	1395	425	410	393
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	21.0	37.0	13.0	26.0	6.0	<0.5
Total Dissolved Solids	Mg/L	747	1185	1144	266	225	271
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	.03	.07	.08	<0.01	<0.01	<0.01
Total Iron	Mg/L	.18	.39	.21	0.10	.07	.05
Dissolved Iron	Mg/L	<.05	<.05	<.05	<.05	<.05	<.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	9	12	12	3	3	4
Sulfate	Mg/L	360	600	556	27	28	29
Nitrate NO_3-N	Mg/L	.06	.08	.15	.06	<.01	.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	257	250	295	222	208	200

Date: 3rd Quarter 19[redacted] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-2A			ST-2B		
		July	Aug	Sept	July	Aug.	Sept.
Flow Rate	G.P.M.	292	119	59.2	561	117	41.2
PH	Units	8.2	7.6	7.7	7.95	7.7	7.7
Air Temp.	°F	60	66	64	59	70	64
Water Temp.	°F	51	53	47	55	55	47
Conductivity	umhos/cm	450	465	430	492	600	710
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	18.0	7.0	2.0	20.0	7.0	3.0
Total Dissolved Solids	Mg/L	266	267	289	268	343	495
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Iron	Mg/L	.13	.08	<.05	.12	.10	.06
Dissolved Iron	Mg/L	<.05	<.05	<.05	<.05	<.05	<.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	3	4	4	5	6	10
Sulfate	Mg/L	—	34	34	50	63	182
Nitrate NO_3-N	Mg/L	<.01	.11	.01	.02	.07	.02
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	235	216	222	232	225	277

Date: 3rd Quarter 19[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3			ST-3A		
		July	Aug.	Sept.	July	Aug.	Sept.
Flow Rate	G.P.M.	62	36	41			
PH	Units	7.85	7.7	7.55	8.2		
Air Temp.	°F	59	72	64			
Water Temp.	°F	52	58	49			
Conductivity	umhos/cm	1900	2150	2010	448		
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0		
Total Suspended Solids	Mg/L	44	8.0	1.0	32		
Total Dissolved Solids	Mg/L	1183	1361	1492	266		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	.07	.02	.03	.01	NO WATER	NO WATER
Total Iron	Mg/L	.51	.11	.13	.20		
Dissolved Iron	Mg/L	<.05	<.05	<.05	<.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	239	301	270	3		
Sulfate	Mg/L	380	500	576	33		
Nitrate NO_3-N	Mg/L	.09	<.01	.12	.03		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5		
ALKALINITY	Mg/L	307	258	309	232		

Date: 3rd Quarter 19[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3B			ST-4		
		July	Aug.	Sept	July	Aug	Sept
Flow Rate	G.P.M.				52	31	10.3
PH	Units	8.15	7.6		8.0	7.8	7.6
Air Temp.	°F				59	83	60
Water Temp.	°F				53	57	48
Conductivity	umhos/cm	489	2200		1210	1300	1180
Acidity	Mg/L	<1.0	<1.0		<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	27	6.0		19	12	14
Total Dissolved Solids	Mg/L	302	1358		810	797	873
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	.01	.03	NO	<.01	<.01	<.01
Total Iron	Mg/L	.16	.09		.07	.09	<.05
Dissolved Iron	Mg/L	<.05	<.05		<.05	<.05	<.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L			WATER			
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	332		38	42	40
Sulfate	Mg/L	55	400		360	355	336
Nitrate NO_3-N	Mg/L	.04	.28		.26	.20	.18
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<.5	.6		<.5	<.5	<.5
ALKALINITY	Mg/L	237	347		285	234	264

Date: 3rd Quarter 198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		July	Aug	Sept	July	Aug	Sept
Flow Rate	G.P.M.						
PH	Units	8.15	7.8	7.65	8.3		
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	670	720	800	670		
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0		
Total Suspended Solids	Mg/L	<0.5	6.0	2.0	2.0		
Total Dissolved Solids	Mg/L	397	450	558	401		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<.01	<.01	<.01	<.01		
Total Iron	Mg/L	<.05	<.05	<.05	<.05		
Dissolved Iron	Mg/L	<.05	<.05	<.05	<.05	NO	NO
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L					WATER	WATER
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	5	6	4		
Sulfate	Mg/L	100	98	201	100		
Nitrate NO_3-N	Mg/L	<.01	<.01	<.01	<.01		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<.5	<.5	<.5	<.5		
ALKALINITY	Mg/L	268	257	285	244		

Date: 3rd Quarter 198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-5			ST-6		
		July	Aug	Sept	July	Aug	Sept
Flow Rate	G.P.M.	809	265	328	120	104	—
PH	Units	8.3	7.9	7.7	8.1	7.9	7.55
Air Temp.	°F	63	78	59	71	73	63
Water Temp.	°F	57	57	50	71	62	50
Conductivity	umhos/cm	1010	1320	1200	990	1320	975
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	71	8.0	7.0	186	8.0	16
Total Dissolved Solids	Mg/L	598	906	939	616	906	689
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						
Dissolved Iron	Mg/L						
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L	295	400	432	300	400	326
Nitrate NO_3-N	Mg/L	.10	.16	.11	.04	.16	.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	289	263	255	258	263	253

Date: 3rd Quarter 1985 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		July	Aug	Sept	July	Aug	Sept
Flow Rate	G.P.M.						175
PH	Units	7.1	7.8	7.65			7.65
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	700	800	715			411
Acidity	Mg/L	<1.0	<1.0	<1.0			<1.0
Total Suspended Solids	Mg/L	22	9.0	2.0			4.0
Total Dissolved Solids	Mg/L	416	478	501			290
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	.03	.05	.03			<.01
Total Iron	Mg/L	.09	.25	.09			.06
Dissolved Iron	Mg/L	<.05	<.05	<.05			<.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L	100	200	201			33
Nitrate NO_3-N	Mg/L	.08	.04	<.01			.13
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	.7	<0.5	<0.5			<0.5
ALKALINITY	Mg/L	276	244	258			208

MINE WATER DISCHARGE MONITORING REPORT

D001 DATE 3rd Quarter 1985 Mohrland Water Discharge

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July						No	Overflow							
August						No	Overflow							
September	67	2.0	669	.03	.12	<.05	367	<1.0	7.0	<0.5	<1	4	<2	1000
October														
November														
December														

MINE WATER DISCHARGE MONITORING REPORT

D002 DATE 3rd Quarter 1985 Town Water Overflow

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July						No	Water							
August	78.7	8.0	622	<.01	<.05	<.05	280	<1.0	7.6	<.5				980
September	275.8	<.5	662	.1	<.05	<.05	294	<1.0	7.1	<.5	<1	4	<2	900
October														
November														
December														

MINE WATER DISCHARGE MONITORING REPORT

D010 DATE 3rd Quarter 1985 King #4 Vent Tunnel

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July	8	1.0	319	<.01	<.05	<.05	242	<1.0	8.0	<.5	<1	150	9	493
August	7	8.0	704	<.01	<.05	<.05	354	<1.0	7.6	<.5				1100
September	6.3	1.0	331	<.01	<.05	<.05	232	<1.0	7.35	<.5	<1	7	7	495
October														
November														
December														

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DIVISION OF OIL
GAS & MINING

SURFACE AND GROUNDWATER MONITORING PLAN

2nd Quarter 1985

United States Fuel Company

Hiawatha, Utah 84527

RING MONITORING REPORT

DATE: 2nd QUARTER -1985

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
		JUNE	JUNE	JUNE.	JUNE	JUNE.	JUNE
Flow Rate	G.P.M.	10.6	5.9	6.3	27.6	10.3	7.2
PH	Units	7.1	7.35	7.5	7.7	7.35	7.6
Air Temp.	°F	70	69	63	69	71	69
Water Temp.	°F	49	49	45	49	41	45
Conductivity	umhos/cm	290	458	460	492	480	460
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	189	241	233	264	340	234
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	0.13	0.12	0.15	0.07	<0.05	0.06
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	5	3	2	4	2
Sulfate	Mg/L	11	10	10	10	23	7
Nitrate NO_3-N	Mg/L	0.40	0.52	0.25	0.19	0.08	0.19
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

RING MONITORING REPORT

DATE: 2nd QUARTER -1985

EFFLUENT CHARACTERISTIC		SP-7	SP-8			SP-9	SP-10
		JUNE	APRIL	MAY	JUNE	JUNE	JUNE
Flow Rate	G.P.M.	27.6		60	23.9	5.9	15.3
PH	Units	7.7		7.65	7.65	7.8	7.8
Air Temp.	°F	67		53	73	72	67
Water Temp.	°F	42		41	42	55	47
Conductivity	umhos/cm	458		750	800	392	475
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	232		437	412	195	246
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	<0.05		<0.05	<0.05	0.07	<0.05
Dissolved Iron	Mg/L	<0.05		<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L		INACCESSIBLE				
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	2		5	4	3	3
Sulfate	Mg/L	6		43	49	9	12
Nitrate NO_3-N	Mg/L	0.29		0.08	0.01	0.16	0.09
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

Date: 2nd QUARTER-19[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-1			ST-2		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	229	332	21			
PH	Units	8.1	7.5	7.6	8.15	7.35	7.70
Air Temp.	°F	49	65	80			
Water Temp.	°F	40	47	57			
Conductivity	umhos/cm	1010	710	1490	415	372	380
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	17	27	12	112	4.0	10.0
Total Dissolved Solids	Mg/L	715	469	1061	244	226	229
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.02	0.02	0.08	0.04	0.01	0.02
Total Iron	Mg/L	0.21	0.19	0.43	0.62	0.18	0.18
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	16	8	16	6	3	4
Sulfate	Mg/L	325	85	505	24	14	18
Nitrate NO_3-N	Mg/L	0.08	0.04	0.11	0.18	0.04	0.09
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	268	211	291	218	183	178

Date: 2nd QUARTER-1989 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-2A			ST-2B		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	514	1071	160	404	1584	133
PH	Units	8.2	7.5	7.7	7.8	7.65	7.8
Air Temp.	°F	41	62	77	41	65	75
Water Temp.	°F	37	47	56	37	49	59
Conductivity	umhos/cm	445	410	425	495	440	500
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	68	<0.5	9.0	37	174	7.0
Total Dissolved Solids	Mg/L	257	235	242	298	256	300
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.03	0.01	0.02	0.02	0.08	0.02
Total Iron	Mg/L	0.42	0.17	0.24	0.39	0.40	0.27
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	6	4	4	8	4	5
Sulfate	Mg/L	25	15	23	50	22	42
Nitrate NO_3-N	Mg/L	<0.01	0.04	0.12	<0.01	<0.01	0.09
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	236	202	206	238	204	207

Date: 2nd QUARTER-1985 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST - 3			ST - 3A		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	62	182	74			
PH	Units	7.9	7.7	7.55	7.8	7.85	8.00
Air Temp.	°F	49	67	65			
Water Temp.	°F	41	51	55			
Conductivity	umhos/cm	2306	1300	1890	995	440	402
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	<0.5	184	10	26	77	40
Total Dissolved Solids	Mg/L	1229	811	1164	570	251	226
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.05	0.19	0.04	<0.01	0.01	<0.01
Total Iron	Mg/L	0.12	1.91	0.32	0.16	0.25	0.12
Dissolved Iron	Mg/L	<0.05	0.12	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	303	136	262	10	4	4
Sulfate	Mg/L	500	205	410	205	24	28
Nitrate NO_3-N	Mg/L	0.08	<0.01	0.13	0.18	<0.01	0.06
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.7	<0.5	<0.5	0.6
ALKALINITY	Mg/L	320	277	273	319	210	185

Date: 2nd QUARTER-1985 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3B			ST-4		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.					278	72
PH	Units	7.75	7.60	8.0		7.55	7.55
Air Temp.	°F					50	70
Water Temp.	°F					41	51
Conductivity	umhos/cm	905	520	463		810	1150
Acidity	Mg/L	<1.0	<1.0	<1.0		<1.0	<1.0
Total Suspended Solids	Mg/L	<0.5	35	24		3.0	1.0
Total Dissolved Solids	Mg/L	546	303	254		512	605
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	0.01		0.03	<0.01
Total Iron	Mg/L	<0.05	0.14	0.11		0.34	0.15
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05		<0.05	<0.05
Calcium	Mg/L				NO WATER		
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	11	5	4		17	32
Sulfate	Mg/L	220	45	40		130	265
Nitrate NO_3-N	Mg/L	0.04	<0.01	0.06		0.14	0.34
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5		<0.5	<0.5
ALKALINITY	Mg/L	289	233	200		275	276

Date: 2nd QUARTER-1985 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.						
PH	Units	7.8	7.6	7.7	8.0	7.95	7.95
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	700	510	670	800	520	650
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	85	<0.5	2.0	70	71	82
Total Dissolved Solids	Mg/L	392	307	339	436	343	347
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.02	<0.01	<0.01	0.02	0.01	<0.01
Total Iron	Mg/L	0.44	0.06	<0.05	0.43	0.27	0.07
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	7	4	5	18	6	6
Sulfate	Mg/L	125	38	72	145	60	90
Nitrate NO_3-N	Mg/L	0.02	0.08	0.02	<0.01	0.09	0.09
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
ALKALINITY	Mg/L	287	233	237	284	244	218

Date: 2nd QUARTER - 198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-5			ST-6		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	404	1351	44	700	736	530
PH	Units	7.8	7.95	8.1	8.0	7.85	7.95
Air Temp.	°F	35	53	69	37	59	49
Water Temp.	°F	39	44	57	37	55	49
Conductivity	umhos/cm	905	790	1100	700	590	800
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	68	75	8.0	194	12	39
Total Dissolved Solids	Mg/L	566	463	649	397	349	475
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.03	0.03	0.02	0.04	<0.01	0.01
Total Iron	Mg/L	0.39	0.46	0.23	0.69	0.08	0.34
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	29	20	34	7	6	6
Sulfate	Mg/L	250	120	265	150	70	204
Nitrate NO_3-N	Mg/L	0.02	0.24	0.12	<0.01	0.06	0.06
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.9	<0.5	<0.5	1.3
ALKALINITY	Mg/L	244	248	248	239	217	233

Date: 2nd QUARTER-1985 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.						766
PH	Units	8.0	7.9	7.9			7.75
Air Temp.	°F						69
Water Temp.	°F						51
Conductivity	umhos/cm	595	510	640			390
Acidity	Mg/L	<1.0	<1.0	<1.0			<1.0
Total Suspended Solids	Mg/L	385	12	44			4.5
Total Dissolved Solids	Mg/L	305	299	343			200
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.08	<0.01	0.01			<0.01
Total Iron	Mg/L	0.96	0.08	0.24			0.12
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05			<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	6	5	5			3
Sulfate	Mg/L	66	55	85			14
Nitrate NO_3-N	Mg/L	<0.01	0.03	0.07			0.40
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5			<0.5
ALKALINITY	Mg/L	235	218	239			197

D-001

MOHRLAND WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER -1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April	146	<0.5	695	0.01	0.12	<0.05	257	<1.0	7.45	<0.5				1090
May	<5	7.0	674	0.03	0.14	<0.05	359	<1.0	7.30	<0.5				1050
June	<2	3.0	698	0.06	0.76	<0.05	358	<1.0	6.95	<0.5	<1.0	9	<2	1100
July														
August														
September														
October														
November														
December														

D-002

TOWN WATER OVERFLOW

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER-1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April	79	<0.5	600	<0.01	<0.05	<0.05	288	<1.0	7.60	<0.5				975
May	172	6.0	607	0.01	0.18	<0.05	286	<1.0	7.25	<0.5				990
June	<5	2.0	712	0.03	0.40	<0.05	356	<1.0	7.30	<0.5	<1.0	<2	<2	1100
July														
August														
September														
October														
November														
December														

D-010

KING #4 VENT TUNNEL

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER - 1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April	—					NO	OVER	FLOW						
May	10	5.0	333	0.05	0.32	<0.05	245	<1.0	7.60	<0.5				600
June	11	<0.5	333	0.02	0.19	<0.05	242	<1.0	7.60	<0.5	<1.0	18	2	600
July														
August														
September														
October														
November														
December														

File ACT/007/011
#9

(copy to Dave H.)

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APR 25 1985

DIVISION OF OIL
GAS & MINING

SURFACE AND GROUNDWATER MONITORING PLAN

1st Quarter 1985

United States Fuel Company

Hiawatha, Utah 84527

SPRING MONITORING REPORT

DATE: 1st QUARTER - 1985

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
Flow Rate	G.P.M.						
PH	Units						
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm						
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L						
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						
Dissolved Iron	Mg/L						
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L						
Nitrate NO_3-N	Mg/L						
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE

SPRING MONITORING REPORT

DATE: 1ST QUARTER - 1985

EFFLUENT CHARACTERISTIC		SP-7	SP-8			SP-9	SP-10
Flow Rate	G.P.M.						
PH	Units						
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm						
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L						
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						
Dissolved Iron	Mg/L						
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L						
Nitrate NO_3-N	Mg/L						
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE

Date: 1st QUARTER - 198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-1			ST-2		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.			153			
PH	Units			8.05			
Air Temp.	°F			49			
Water Temp.	°F			39			
Conductivity	umhos/cm			1404			
Acidity	Mg/L			<1.0			
Total Suspended Solids	Mg/L			26.0			
Total Dissolved Solids	Mg/L			997			
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L			0.03			
Total Iron	Mg/L			0.25			
Dissolved Iron	Mg/L			<0.05			
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L			13			
Sulfate	Mg/L			500			
Nitrate NO_3-N	Mg/L			0.06			
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L			<0.5			
ALKALINITY	Mg/L			301			

INACCESSIBLE

INACCESSIBLE

Date: 1st QUARTER-198[redacted] STREAM MONITORING REPORT [redacted]

EFFLUENT CHARACTERISTIC		ST-2 A			ST-2B		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH.
Flow Rate	G.P.M.						133
PH	Units						8.0
Air Temp.	°F						45
Water Temp.	°F						37
Conductivity	umhos/cm						745
Acidity	Mg/L						<1.0
Total Suspended Solids	Mg/L						<0.5
Total Dissolved Solids	Mg/L						414
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						0.02
Total Iron	Mg/L						0.11
Dissolved Iron	Mg/L						<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						8
Sulfate	Mg/L						150
Nitrate NO_3-N	Mg/L						<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						<0.5
ALKALINITY	MG/L						268

INACCESSIBLE

INACCESSIBLE

Date: 1st QUARTER -19[redacted] STREAM MONITORING REPORT [redacted]

EFFLUENT CHARACTERISTIC		ST-3			ST-3A		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.	INACCESSIBLE		62			
PH	Units	7.7	7.3	7.75			
Air Temp.	°F	35	39	51			
Water Temp.	°F	33	35	35			
Conductivity	umhos/cm	2337	2276	2295			
Acidity	Mg/L	<1.0	<1.0	<1.0			
Total Suspended Solids	Mg/L	13	15	3.0			
Total Dissolved Solids	Mg/L	1568	1588	1534			
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.06	0.10	0.06			
Total Iron	Mg/L	0.45	0.18	0.12			
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05			
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	275	285	294			
Sulfate	Mg/L	580	510	500			
Nitrate NO_3-N	Mg/L	0.13	0.04	0.06			
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5			
ALKALINITY	MG/L	370	348	357			

INACCESSIBLE

NO WATER

Date: 1st QUARTER -19[redacted] STREAM MONITORING REPORT [redacted]

EFFLUENT CHARACTERISTIC		ST-3B			ST-4		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.						52
PH	Units						8.0
Air Temp.	°F						59
Water Temp.	°F						31
Conductivity	umhos/cm						999
Acidity	Mg/L						<1.0
Total Suspended Solids	Mg/L						36
Total Dissolved Solids	Mg/L						657
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						0.05
Total Iron	Mg/L						0.30
Dissolved Iron	Mg/L						<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						28
Sulfate	Mg/L						275
Nitrate NO_3-N	Mg/L						0.04
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						<0.5
ALKALINITY	Mg/L						257

INACCESSIBLE NO WATER

INACCESSIBLE NO WATER

Date: 1st QUARTER-198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.						
PH	Units						
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm						
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L						
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						
Dissolved Iron	Mg/L						
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L						
Nitrate NO_3-N	Mg/L						
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE

INACCESSIBLE

Date: 1st QUARTER-[redacted] STREAM MONITORING REPORT [redacted]

EFFLUENT CHARACTERISTIC		ST-5			ST-6		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.	242	306	483	74	148	182
PH	Units	7.7	7.6	8.0	7.75	7.55	7.8
Air Temp.	°F	41	37	57	41	45	57
Water Temp.	°F	37	40	47	33	39	45
Conductivity	umhos/cm	1353	1236	999	1107	979	883
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	5.0	164	36	90	541	125
Total Dissolved Solids	Mg/L	890	851	657	701	648	671
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.01	<0.01	0.05	0.03	0.10	0.04
Total Iron	Mg/L	0.19	0.09	0.30	0.44	2.56	0.40
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	28	38	28	9	13	9
Sulfate	Mg/L	345	320	275	295	255	300
Nitrate NO_3-N	Mg/L	0.10	0.03	0.04	0.04	0.03	0.06
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	1.6	1.1
ALKALINITY	Mg/L	293	261	257	282	247	245

Date: 1ST QUARTER-198 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		JAN.	FEB.	MARCH	JAN.	FEB.	MARCH
Flow Rate	G.P.M.						
PH	Units			8.05			
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm			756			
Acidity	Mg/L			<1.0			
Total Suspended Solids	Mg/L			651			
Total Dissolved Solids	Mg/L			452			
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L			0.02			
Total Iron	Mg/L			<0.05			
Dissolved Iron	Mg/L			<0.05			
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L			5.0			
Sulfate	Mg/L			175			
Nitrate NO_3-N	Mg/L			<0.01			
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L			1.5			
ALKALINITY	Mg/L			235			

INACCESSIBLE

INACCESSIBLE

D-001
MOHRLAND WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 1st QUARTER - 1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January				INACCESSIBLE										
February				INACCESSIBLE										
March				NO WATER "NO DISCHARGE"										
April														
May														
June														
July														
August														
September														
October														
November														
December														

D-002
TOWN WATER OVERFLOW

MINE WATER DISCHARGE MONITORING REPORT

DATE 1st QUARTER - 1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January	425	<0.5	651	<0.01	<0.05	<0.05	300	<1.0	7.5	<0.5				1045
February	300	4.0	673	0.02	0.07	<0.05	280	<1.0	7.5	0.6				937
March	373	<0.5	586	<0.01	0.06	<0.05	303	<1.0	7.1	<0.5	<1	<2	<2	983
April														
May														
June														
July														
August														
September														
October														
November														
December														

D - 010

KING #4 VENT TUNNEL

MINE WATER DISCHARGE MONITORING REPORT

DATE 1st QUARTER - 1985

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														

INACCESSIBLE

File ACT/007/011
#9

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JAN 21 1985
DIVISION OF
OIL, GAS & MINING

SURFACE AND GROUNDWATER MONITORING PLAN

4th Quarter 1984

United States Fuel Company

Hiawatha, Utah 84527

SPRING MONITORING REPORT
DATE: 4th QUARTER-1984

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
		OCT.	OCT.	OCT.	OCT.	OCT.	OCT.
Flow Rate	G.P.M.						7.9
PH	Units						7.8
Air Temp.	°F						35
Water Temp.	°F						37
Conductivity	umhos/cm						450
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L						261
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						<0.05
Dissolved Iron	Mg/L						<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						6
Sulfate	Mg/L						7
Nitrate NO_3-N	Mg/L						0.02
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE FOR UNEXPECTED SNOW

SPRING MONITORING REPORT

DATE: 4th QUARTER-1984

EFFLUENT CHARACTERISTIC		SP-7	SP-8			SP-9	SP-10
		Oct.	Oct.	Nov.	Dec.	Oct.	
Flow Rate	G.P.M.	9.2	9.4			6.6	Not enough water
PH	Units	7.7	7.6			7.8	7.4
Air Temp.	°F	37	37			34	32
Water Temp.	°F	39	39			33	30
Conductivity	umhos/cm	460	800			380	600
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	267	480			225	348
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	0.06	<0.05			0.33	0.16
Dissolved Iron	Mg/L	<0.05	<0.05			<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	6	9			6	10
Sulfate	Mg/L	6	70			6	17
Nitrate NO_3-N	Mg/L	0.03	<0.01			0.03	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE

Date: 4th QUARTER - 1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST - 1			ST - 2		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.	103					
PH	Units	7.35			7.5		
Air Temp.	°F	31					
Water Temp.	°F	37					
Conductivity	umhos/cm	1425			500		
Acidity	Mg/L	<1.0			<1.0		
Total Suspended Solids	Mg/L	22			17		
Total Dissolved Solids	Mg/L	1035			254		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.02			<0.01		
Total Iron	Mg/L	0.13			<0.05		
Dissolved Iron	Mg/L	<0.05			<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	14			7		
Sulfate	Mg/L	530			25		
Nitrate NO_3-N	Mg/L	0.09			<0.01		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5			<0.5		
ALKALINITY	Mg/L	282			222		

INACCESSIBLE

INACCESSIBLE

Date: 4th QUARTER-1987 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-2A			ST-2B		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.	118			96.2		
PH	Units	7.45			7.4		
Air Temp.	°F	27			29		
Water Temp.	°F	33			32		
Conductivity	umhos/cm	550			690		
Acidity	Mg/L	<1.0			<1.0		
Total Suspended Solids	Mg/L	12			18		
Total Dissolved Solids	Mg/L	294			353		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01			<0.01		
Total Iron	Mg/L	<0.05			<0.05		
Dissolved Iron	Mg/L	<0.05			<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	8			10		
Sulfate	Mg/L	31			69		
Nitrate NO_3-N	Mg/L	<0.01			0.01		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5			<0.5		
ALKALINITY	MG/L	243			252		

INACCESSIBLE

INACCESSIBLE

Date: 4th QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3			ST-3A		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.	36.1	36.1	30.9			
PH	Units	7.45	7.3	7.75	7.35		
Air Temp.	°F	45	27	23			
Water Temp.	°F	32	33	33			
Conductivity	umhos/cm	2300	2300	2400	1000		
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0		
Total Suspended Solids	Mg/L	<0.5	9.0	4.0	8.0		
Total Dissolved Solids	Mg/L	1494	1541	1630	581		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.07	0.05	0.03	<0.01		
Total Iron	Mg/L	0.10	0.06	0.20	0.08		
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	10	256	260	10		
Sulfate	Mg/L	515	500	510	200		
Nitrate NO_3-N	Mg/L	0.07	0.05	0.06	<0.01		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5		
ALKALINITY	Mg/L	335	358	385	310		

NO WATER

Date: 4th QUARTER-1989 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST - 3B			ST - 4		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.				30.9		
PH	Units	7.3			7.4		
Air Temp.	°F				49		
Water Temp.	°F				37		
Conductivity	umhos/cm	900			1300		
Acidity	Mg/L	<1.0			<1.0		
Total Suspended Solids	Mg/L	<0.5			12		
Total Dissolved Solids	Mg/L	549			846		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01			<0.01		
Total Iron	Mg/L	<0.05			<0.05		
Dissolved Iron	Mg/L	<0.05			<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	11			25		
Sulfate	Mg/L	190			345		
Nitrate NO_3-N	Mg/L	<0.01			0.05		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5			<0.5		
ALKALINITY	MG/L	245			290		

NO WATER

NO WATER

Date: 4th QUARTER-[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.						
PH	Units	7.3			7.7		
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	900			750		
Acidity	Mg/L	<1.0			<1.0		
Total Suspended Solids	Mg/L	<0.5			1.0		
Total Dissolved Solids	Mg/L	537			442		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01			<0.01		
Total Iron	Mg/L	<0.05			0.20		
Dissolved Iron	Mg/L	<0.05			<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	9			8		
Sulfate	Mg/L	165			125		
Nitrate NO_3-N	Mg/L	<0.01			0.02		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5			<0.5		
ALKALINITY	Mg/L	288			258		

NO WATER

NO WATER

Date: 4th QUARTER - 19[illegible]

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST - 5			ST - 6		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.	664	88.9	103.6	684	148	118.4
PH	Units	7.5	7.45	7.5	7.1	7.2	7.5
Air Temp.	°F	47	31	31	43	31	27
Water Temp.	°F	41	38	33	42	37	33
Conductivity	umhos/cm	1295	1350	1490	1000	1050	1150
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	4.0	3.0	2.0	428	15	<0.5
Total Dissolved Solids	Mg/L	855	934	1021	613	689	751
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.01	0.04	0.02	0.10	0.01	0.01
Total Iron	Mg/L	0.18	0.22	0.13	0.90	0.14	0.13
Dissolved Iron	Mg/L	<0.05	0.07	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	22	49	37	9	9	10
Sulfate	Mg/L	320	370	400	255	255	270
Nitrate NO_3-N	Mg/L	0.01	0.07	0.05	<0.01	0.02	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	288	300	311	264	263	290

Date: 4th QUARTER - 19[illegible]

STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		OCT.	NOV.	DEC.	OCT.	NOV.	DEC.
Flow Rate	G.P.M.						
PH	Units	7.3					
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	780					
Acidity	Mg/L	<1.0					
Total Suspended Solids	Mg/L	1284					
Total Dissolved Solids	Mg/L	448					
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.33					
Total Iron	Mg/L	1.79					
Dissolved Iron	Mg/L	0.16					
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	10					
Sulfate	Mg/L	120					
Nitrate NO_3-N	Mg/L	<0.01					
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5					
ALKALINITY	Mg/L	310					

INACCESSIBLE

INACCESSIBLE

D-001

MOHRLAND WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 4th QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July														
August														
September														
October	543	2.0	742	0.03	0.17	<0.05	354	<1.0	7.4	<0.5				1110
November	—													
December														

INACCESSIBLE

D-002
TOWN WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 4th QUARTER -1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July														
August														
September														
October	275.8	1.0	604	<0.01	0.05	<0.05	272	<1.0	7.1	<0.5				1000
November	323	0.5	636	0.01	0.07	<0.05	285	<1.0	7.15	<0.5				1000
December	96.8	<0.5	659	0.01	<0.05	<0.05	307	<1.0	7.15	<0.5	<1	<3	<3	1010

D-010

KING #4 VENT TUNNEL

MINE WATER DISCHARGE MONITORING REPORT

DATE 4th QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														

NO DISCHARGE

INACCESSIBLE

FILE ACT/007/011
FOLDER # 9

Rev. 3/82
Field No. 1

☐ TC ☑ PC ☐ TM ☑ PM ☐ Nut ☐ BOD ☐ Pest. ☐ Rad. ☐ Bact. ☐ Spec.

Date Recd.: _____
Received By: _____

UTAH STATE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH
WATER ANALYSES

Sample No. 701

Storet No. _____ 702
Water Syst. No. _____ 703 Source No. _____ 704
Date Collected 840891 714 (yr. mo. dy.)
Time Collected 1530 610 (24-hour clock)
Water Rights No. _____ 707

Exact Description of sampling Point 646
BYPASS CULVERT OUTLET
TO MIDDLE FORK MILLER
CREEK KING 84

Supply Owned by _____ 712
Sample Type 04 710

Sample Collected by _____ 713

SEND REPORT TO: Phone _____
TOM WRIGHT 715
DIVISION OIL GAS & MINING 648
SLC UTAH 84114 717
zip code

Sample Source 03 719
01 Spring, 02 Well, 03 Stream, 04 Lake, 06 Dist. syst., 07 Effluent, 08 Storm sewer, 14 Other, 15 Tunnel, 18 Artesian well, 19 Swimming pool

County 04 611
01 Beaver, 02 Box Elder, 03 Cache, 04 Carbon, 05 Daggett, 06 Davis, 07 Duchesne, 08 Emery, 09 Garfield, 10 Grand, 11 Iron, 12 Juab, 13 Kane, 14 Millard, 15 Morgan, 16 Piute, 17 Rich, 18 Salt Lake, 19 San Juan, 20 Sanpete, 21 Sevier, 22 Summit, 23 Tooele, 24 Uintah, 25 Utah, 26 Wasatch, 27 Washington, 28 Wayne, 29 Weber

Current use ☐ 708
Proposed use ☐ 709
1. Culinary
2. Agriculture
3. Industrial
4. Other

Cost Code _____ 770

1 FIELD TESTS

Temperature (°C)	792	CO_2, mg/l	572
D.O., mg/l	793	Depth, m	609
Sp. Cond. µ mhos	653	Cl Resid., mg/l	753
pH	651	Flow, MGD	652
Sp. Gravity	608	Flow, GPM	604
Transparency, m	649	Flow, cfs	659

2 WASTEWATER ANALYSIS

Temperature (°C) _____ 650 pH _____ 782 BACT. LAB. No. _____

	mg/l		mg/l		
☐ B.O.D.$_5$	794	☐ T.O.C.	671	☐ M.P.N. Total Coliforms/100ml	658
☑ Tot. Sus. Solids	787 (5)	☐ C.O.D.	777	☐ M.P.N. Fecal Coliforms/100ml	657
☐ NO_2+NO_3,N	602	☐ Cyanide	775	☐ Fecal Strep C/100ml.	656
☐ T.K.N.	778	☐ Phenolics	783	☐ M.F. Total Coliforms/100ml.	654
☐ Oil & Grease	780	☐ Sulfide	672	☐ M.F. Fecal Coliforms/100ml.	655
				☐ Plate Count-Org./ml.	599

3 Filtered ☐ Unfiltered ☐

me/l	CATIONS	mg/l	ug/l (ppb)	
	Ammonia as N			722
	Arsenic			723
	Barium			724
	Boron			725
	Cadmium			727
	Calcium			728
	Chromium			729
	Chromium, Hex. as Cr			730
	Copper			732
	Iron, dissolved			733
	Lead			734
	Magnesium			737
	Manganese			738
	Nickel			740
	Potassium			742
	Selenium			743
	Silver			744
	Sodium			745
	Zinc			749
	TOTAL CATIONS			

☒ Sp. Cond. µmhos/cm. 810 762
☑ TDS @ 180°C 210 786

4 CHEMICAL ANALYSIS

pH, units _____

me/l	ANIONS	mg/l	
	Bicarbonate		758
	Carbon Dioxide		759
	Carbonate		760
	Chloride		763
	CO_3 Solids		
	Fluoride		765
	Hydroxide		767
	Nitrate as N		605
	Nitrite as N		606
	Phosphorus, Ortho as P		607
	Silica, dissolved as SiO_2		750
	Sulfate		772
	TOTAL ANIONS		
	GRAND TOTAL		
	Tot. Phosphorus		785
	Total Alk. as $CaCO_3$		752
	T. Hdns. as $CaCO_3$		754
	Surfactant as MBAS		773
	Turbidity, as NTU		757
	Sp. Gravity		608

TOTAL METALS ANALYSIS

5 CATIONS

CATIONS	mg/l	ug/l (ppb)	
Aluminum			800
Arsenic			660
Barium			661
Beryllium			801
Cadmium			662
Chromium			663
Cobalt			804
Copper			664
Gold			700
☑ Iron		50	755
Lead			665
☑ Manganese		10	666
Mercury			739
Molybdenum			802
Nickel			667
Selenium			668
Silver			669
Uranium,			601
Vanadium			803
Zinc			670

6 RADIOLOGICS

	pc/l-g		pc/l-g	
☐ Alpha, gross		621	^{89}Sr	633
Beta, gross		623	^{131}I	635
Tritium, ^3H		625	^{134}Cs	637
^{226}Radium		627	^{137}Cs	639
^{228}Radium		629		
^{90}Sr		631		

Analyses Approved By: [illegible] Date: 8/10/84

INTERPRETATION OF ANALYSES:
Remarks:

Based on State Standards, this sample was:

	Satisfactory	Conditional	Unsatisfactory
B.O.D.$_5$			
Tot. Sus. Solids			
M.P.N. Total Coliform.			
M.P.N. Fecal Coliform.			

By _____
ENVIRONMENTAL HEALTH

10-23
Please copy to Wayne TX.

FILE: ACT/007/01
Folder #9

SURFACE AND GROUNDWATER MONITORING PLAN

3rd Quarter 1984

RECEIVED
OCT 22 1984
DIVISION OF OIL
GAS & MINING

United States Fuel Company

Hiawatha, Utah 84527

SPRING MONITORING REPORT

DATE: 3rd QUARTER -1984

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
		JULY	JULY	JULY	JULY	JULY	JULY
Flow Rate	G.P.M.	12.8	6.9	6.6	34.1	8.7	14.2
PH	Units	7.4	7.5	7.5	7.7	7.4	7.4
Air Temp.	°F	72	80	67	65	71	57
Water Temp.	°F	60	51	47	49	42	49
Conductivity	umhos/cm	330	425	480	500	600	435
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	213	240	261	277	370	183
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	<0.05	0.06	0.31	0.18	<0.05	0.07
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	3	3	3	5	2
Sulfate	Mg/L	11	8	9	10	25	7
Nitrate NO_3-N	Mg/L	0.13	0.20	0.09	0.02	<0.01	0.10
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

SPRING MONITORING REPORT

DATE: 3rd QUARTER - 1984

EFFLUENT CHARACTERISTIC		SP-7	SP-8			SP-9	SP-10
		JULY	JULY	AUG.	SEP.	JULY	JULY
Flow Rate	G.P.M.	36	13	8.3		7.9	18
PH	Units	7.5	7.4	7.35	7.6	7.7	7.8
Air Temp.	°F	67	63	67		69	67
Water Temp.	°F	41	45	45		53	47
Conductivity	umhos/cm	455	800	850	825	430	495
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L	254	411	434	452	240	280
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L	<0.05	<0.05	<0.05	0.05	<0.05	0.29
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	3	5	5	6	4	5
Sulfate	Mg/L	5	95	60	70	6	14
Nitrate NO_3-N	Mg/L	0.04	0.04	<0.01	<0.01	0.06	0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

Date: 3rd QUARTER - 1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-1			ST-2		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.	82	82	52			
PH	Units	7.8	7.8	7.9	7.4	7.85	7.9
Air Temp.	°F	67	72	45			
Water Temp.	°F	55	57	45			
Conductivity	umhos/cm	1550	1510	1500	390	390	415
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	16	11	13	9	<0.5	<0.5
Total Dissolved Solids	Mg/L	1214	1091	1105	223	212	242
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.04	0.05	0.05	<0.01	<0.01	<0.01
Total Iron	Mg/L	0.30	0.21	0.25	0.10	0.06	0.07
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	12	12	12	3	3	4
Sulfate	Mg/L	700	590	620	18	20	22
Nitrate NO_3-N	Mg/L	0.14	0.08	0.02	<0.01	<0.01	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	0.7	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	300	290	295	202	180	201

Date: 3rd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-2A			ST-2B		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.	182	67	118	204	126	104
PH	Units	7.4	7.9	8.0	7.7	7.7	7.8
Air Temp.	°F	64	67	41	66	72	47
Water Temp.	°F	52	55	42	55	59	41
Conductivity	umhos/cm	430	460	470	550	610	700
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	<0.5	<0.5	<0.5	18	4.0	<0.5
Total Dissolved Solids	Mg/L	255	255	267	302	333	376
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Iron	Mg/L	<0.05	0.06	<0.05	0.11	0.08	0.09
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	4	4	6	7	8
Sulfate	Mg/L	24	25	25	50	73	62
Nitrate NO_3-N	Mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	226	218	222	235	235	262

Date: 3rd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3			ST-3A		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.	41	31	52			
PH	Units	7.8	7.6	7.7	7.6	7.9	8.1
Air Temp.	°F	66	75	47			
Water Temp.	°F	57	57	39			
Conductivity	umhos/cm	1900	2150	2250	405	480	600
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	52	15.0	< 0.5	4.0	<0.5	< 0.5
Total Dissolved Solids	Mg/L	1308	1372	1471	242	273	323
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.04	0.04	0.06	<0.01	<0.01	<0.01
Total Iron	Mg/L	0.42	0.33	0.17	<0.05	<0.05	<0.05
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	253	280	285	4	5	5
Sulfate	Mg/L	380	390	490	30	40	58
Nitrate NO_3-N	Mg/L	0.06	0.09	<0.01	0.04	0.04	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	310	291	322	194	216	238

Date: 3rd QUARTER- 1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3B			ST-4		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.				52	21	36
PH	Units	8.2	7.7	8.0	7.7	7.5	7.8
Air Temp.	°F				63	71	57
Water Temp.	°F				53	51	39
Conductivity	umhos/cm	465	610	750	1200	1280	1300
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	9.0	<0.5	1.0	58	21	1.0
Total Dissolved Solids	Mg/L	272	326	422	801	849	853
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Iron	Mg/L	<0.05	<0.05	<0.05	0.18	0.13	<0.05
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	4	6	8	33	38	39
Sulfate	Mg/L	50	69	150	360	350	400
Nitrate NO_3-N	Mg/L	0.02	<0.01	<0.01	0.12	0.06	0.04
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	1.3	<0.5
ALKALINITY	Mg/L	222	225	234	281	272	279

Date: 3rd QUARTER - 1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.						
PH	Units	7.8	7.7	7.8	7.5	7.7	8.0
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	700	800	880	800	800	860
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	<0.5	<0.5	<0.5	6	1.0	34
Total Dissolved Solids	Mg/L	405	464	513	477	446	499
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Total Iron	Mg/L	<0.05	<0.05	0.09	0.10	0.11	0.09
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	5	6	5	5	6	6
Sulfate	Mg/L	110	140	170	170	145	175
Nitrate NO_3-N	Mg/L	0.04	<0.01	<0.01	<0.01	0.01	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	260	272	298	261	250	286

Date: 3rd QUARTER 1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-5			ST-6		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.	718	373	193	254	292	182
PH	Units	7.7	7.8	7.9	8	7.6	7.8
Air Temp.	°F	65	75	54	70	81	55
Water Temp.	°F	57	55	45	62	65	53
Conductivity	umhos/cm	1150	1380	1300	700	810	890
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	46	11.0	9.0	47	90.0	<0.5
Total Dissolved Solids	Mg/L	795	944	872	443	496	578
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.04	0.05	<0.01	<0.01	<0.01	<0.01
Total Iron	Mg/L	0.44	0.30	0.24	0.14	0.44	0.05
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	28	39	33	7	7	9
Sulfate	Mg/L	350	355	360	165	210	230
Nitrate NO_3-N	Mg/L	0.04	0.08	0.03	0.02	<0.01	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5		<0.5	<0.5	2.8
ALKALINITY	Mg/L	281	276	274	231	218	229

Date: 3rd QUARTER-198[illegible] STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		JULY	AUG.	SEP.	JULY	AUG.	SEP.
Flow Rate	G.P.M.				628		
PH	Units	7.5	7.5	7.9	8.1		
Air Temp.	°F				66		
Water Temp.	°F				53		
Conductivity	umhos/cm	650	700	775	415		
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0		
Total Suspended Solids	Mg/L	23	17	<0.5	37		
Total Dissolved Solids	Mg/L	371	396	444	255		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	<0.01	0.02		
Total Iron	Mg/L	<0.05	0.09	<0.05	0.22		
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	5	6	6	4		
Sulfate	Mg/L	120	140	150	16		
Nitrate NO_3-N	Mg/L	<0.01	<0.01	<0.01	0.08		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.5	<0.5		
ALKALINITY	Mg/L	243	223	259	220		

D-001

MOHRLAND WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 3rd QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July	5.0	<0.5	714	<0.01	0.08	<0.05	368	<1.0	7.0	<0.5	<1.0	<2	<2	1100
August	5.0	<0.5	739	0.04	0.18	<0.05	365	<1.0	7.2	<0.5				1150
September	2.0	<0.5	725	0.06	0.28	<0.05	359	<1.0	7.1	<0.5				1100
October														
November														
December														

D-002
TOWN WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 3rd QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July	109	<0.5	639	<0.01	<0.05	<0.05	364	<1.0	7.1	<0.5	<1.0	<2	<2	1100
August	24	<0.5	636	<0.01	<0.05	<0.05	255	<1.0	7.3	0.9				1000
September	194	<0.5	654	<0.01	0.12	<0.05	291	<1.0	7.3	<0.5				1000
October														
November														
December														

D-010

KING #4 VENT TUNNEL

MINE WATER DISCHARGE MONITORING REPORT

DATE 3rd QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April														
May														
June														
July	7.9	<0.5	349	<0.01	<0.05	<0.05	256	<1.0	7.7	<0.5	<1.0	<2	<2	600
August	6.3	<0.5	322	<0.01	<0.05	<0.05	236	<1.0	7.5	1.2				600
September	6.6	4.5	355	0.05	0.44	<0.05	275	<1.0	7.7	<0.5				610
October														
November														
December														

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APR 18 1984

DIVISION OF OIL GAS & MINING

Rev. 7/80

Field No. 2

☐ TC ☐ TM ☐ Nut
☐ PC ☐ PM ☐ BOD

☐ Pest. ☐ Rad. ☐ Bact. ☐ Spec.

Date Recd.: _____

Received By: _____

UTAH STATE DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH
WATER ANALYSES

RT. 70 WAYNE

Sample No. 701

Storet No. ____ 702

Water Syst. No. ____ 703 Source No. ____ 704

Date Collected 8 1 0 3 2 9 714 (yr. mo. dy.)

Time Collected 1 5 3 0 610 (24-hour clock)

Water Rights No. ____ 707

Exact Description of sampling Point 646
US FUEL CO. MAIN TUNNEL COMPLEX
INLET CULVERT FOR WATER TAKEN FROM
CARBON RIVER 9 FT INSIDE CULVERT

Supply Owned by ____ 712

Sample Type ____ 710

Sample Collected by 713
DAVID LOF

SEND REPORT TO: Phone 5 3 3 5 7 7 1
715 DIV. OIL GAS & MINING
648 4241 STATE OFFICE BLDG
717 SLC, UT 8 4 1 1 4 (zip code)

719 Sample Source
01 Spring, 02 Well, 03 Stream, 04 Lake, 06 Dist. syst., 07 Effluent, 08 Storm sewer, 14 Other, 15 Tunnel, 18 Artesian well, 19 Swimming pool

611 County
01 Beaver, 02 Box Elder, 03 Cache, 04 Carbon, 05 Daggett, 06 Davis, 07 Duchesne, 08 Emery, 09 Garfield, 10 Grand, 11 Iron, 12 Juab, 13 Kane, 14 Millard, 15 Morgan, 16 Piute, 17 Rich, 18 Salt Lake, 19 San Juan, 20 Sanpete, 21 Sevier, 22 Summit, 23 Tooele, 24 Uintah, 25 Utah, 26 Wasatch, 27 Washington, 28 Wayne, 29 Weber

Current use ____ 708
Proposed use ____ 709

1. Culinary
2. Agriculture
3. Industrial
4. Other 902.6

1 FIELD TESTS

Temperature (°C)	792	CO_2, mg/l	572
D.O., mg/l	793	Depth, m	609
Sp. Cond. µ mhos	653	Cl Resid., mg/l	753
pH	651	Flow, MGD	652
Sp. Gravity	608	Flow, GPM	604
Transparency, m	649	Flow cfs	659

2 WASTEWATER ANALYSIS

Temperature (°C) 650 | pH 782 | BACT. LAB. No.

	mg/l		mg/l		
X B.O.D.$_5$	794	T.O.C.	671	M.P.N. Total Coliforms/100ml	658
Tot. Sus. Solids	787	C.O.D.	777	M.P.N. Fecal Coliforms/100ml	657
NO_2+NO_3,N	602	Cyanide	775	Fecal Strep C/100ml.	656
T.K.N.	778	Phenolics	783	X M.F. Total Coliforms/100ml.	654 TNTC
Oil & Grease	780	Sulfide	672	X M.F. Fecal Coliforms/100ml.	655 TNTC
				Plate Count-Org./ml.	599

3 Filtered | Unfiltered

me/l	CATIONS	mg/l	ug/l (ppb)	
	Ammonia as N			722
	Arsenic			723
	Barium			724
	Boron			725
	Cadmium			727
	Calcium			728
	Chromium			729
	Chromium, Hex. as Cr			730
	Copper			732
	Iron, dissolved			733
	Lead			734
	Magnesium			737
	Manganese			738
	Nickel			740
	Potassium			742
	Selenium			743
	Silver			744
	Sodium			745
	Zinc			749

TOTAL CATIONS _____

4 CHEMICAL ANALYSIS

pH, units

me/l	ANIONS	mg/l	
	Bicarbonate		758
	Carbon Dioxide		759
	Carbonate		760
299	X Chloride	105	763
	CO_3 Solids		
	Fluoride		765
	Hydroxide		767
	Nitrate as N		605
	Nitrite as N		606
	X Phosphorus, Ortho as P	400	607
	Silica, dissolved as SiO_2		750
	Sulfate		772

TOTAL ANIONS _____
GRAND TOTAL _____

Tot. Phosphorus		785
Total Alk. as $CaCO_3$		752
T. Hdns. as $CaCO_3$		754
Surfactant as MBAS		773
Turbidity, as NTU		757
Sp. Gravity		608

TOTAL METALS ANALYSIS

5 CATIONS	mg/l	ug/l (ppb)	
Aluminum			800
Arsenic			660
Barium			661
Beryllium			801
Cadmium			662
Chromium			663
Cobalt			804
Copper			664
Gold			700
Iron			755
Lead			665
Manganese			666
Mercury			739
Molybdenum			802
Nickel			667
Selenium			668
Silver			669
Uranium,			601
Vanadium			803
Zinc			670

6

Sp. Cond. µmhos/cm.		762
TDS @ 180°C		786

7 RADIOLOGICS

	pc/l-g		pc/l-g	
Alpha, gross		621	^{89}Sr	633
Beta, gross		623	^{131}I	635
Tritium, ^3H		625	^{134}Cs	637
^{226}Radium		627	^{137}Cs	639
^{228}Radium		629		
^{90}Sr		631		

INTERPRETATION OF ANALYSES:
Remarks:

Based on State Standards, this sample was:

	Satisfactory	Conditional	Unsatisfactory
B.O.D.$_5$			
Tot. Sus. Solids			
M.P.N. Total Coliform.			
M.P.N. Fecal Coliform.			

Analyses Approved By: REH Date: 8/04/16

By _____
ENVIRONMENTAL HEALTH

RECEIVED

JUL 30 1984

DIVISION OF OIL
GAS & MINING

Wayne

SURFACE AND GROUNDWATER MONITORING PLAN

2nd Quarter 1984

United States Fuel Company

Hiawatha, Utah 84527

SPRING MONITORING REPORT

DATE: 2nd QUARTER - 1984

EFFLUENT CHARACTERISTIC		SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
Flow Rate	G.P.M.						
PH	Units						
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm						
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L						
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L						
Dissolved Iron	Mg/L						
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L						
Sulfate	Mg/L						
Nitrate NO_3-N	Mg/L						
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L						
ALKALINITY	Mg/L						

INACCESSIBLE

SPRING MONITORING REPORT

DATE: 2nd QUARTER-1984

EFFLUENT CHARACTERISTIC		SP-7	SP-8			SP-9	SP-10
			APRIL	MAY	JUNE		
Flow Rate	G.P.M.		35.5	165.5	32		
PH	Units		7.2	7.3	7.4		
Air Temp.	°F		47	65	55		
Water Temp.	°F		41	42	43		
Conductivity	umhos/cm		700	774	800		
Acidity	Mg/L						
Total Suspended Solids	Mg/L						
Total Dissolved Solids	Mg/L		407	428	408		
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L						
Total Iron	Mg/L		< 0.05	< 0.05	0.05		
Dissolved Iron	Mg/L	INACCESSIBLE	< 0.05	< 0.05	< 0.05		
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L		5	4	5	INACCESSIBLE	
Sulfate	Mg/L		70	45	55		
Nitrate NO_3-N	Mg/L		< 0.01	0.03	0.02		
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L		< 0.5				
ALKALINITY	Mg/L						

Date: 2nd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-1			ST-2		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	184	229	310			
PH	Units	7.8	7.6	7.6		8.0	7.6
Air Temp.	°F	49	67	67			
Water Temp.	°F	36	44	47			
Conductivity	umhos/cm	1350	688	1000		430	415
Acidity	Mg/L	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Total Suspended Solids	Mg/L	8.0	48.5	20		60.0	7
Total Dissolved Solids	Mg/L	1024	409	641		241	198
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	0.02	0.03		0.02	0.02
Total Iron	Mg/L	0.12	0.30	0.15		0.24	0.15
Dissolved Iron	Mg/L	<0.05	0.11	<0.05		0.11	<0.05
Calcium	Mg/L				INACCESSIBLE		
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	16	6	8		2	2
Sulfate	Mg/L	510	150	270		11	14
Nitrate NO_3-N	Mg/L	0.06	0.18	0.07		0.16	0.06
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	0.8	<0.5		0.8	<0.5
ALKALINITY	Mg/L	323	205	238		215	195

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EFFLUENT CHARACTERISTIC		ST-2A			ST-2B		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.		1849	1135	389	1849	1135
PH	Units		7.9	7.7	7.4	7.95	7.8
Air Temp.	°F		67	68	48	67	68
Water Temp.	°F		45	49	37	49	51
Conductivity	umhos/cm		430	440	750	430	480
Acidity	Mg/L		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Suspended Solids	Mg/L		87.0	16	12	114	24
Total Dissolved Solids	Mg/L		255	225	453	263	243
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L		0.03	<0.01	<0.01	0.03	0.02
Total Iron	Mg/L		0.36	0.05	0.19	0.42	<0.05
Dissolved Iron	Mg/L		0.11	<0.05	<0.05	0.10	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L		3	3	10	3	4
Sulfate	Mg/L		12	14	140	18	26
Nitrate NO_3-N	Mg/L		0.16	0.06	0.03	0.15	0.11
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L		0.9	1.0	<0.5	<0.5	0.5
ALKALINITY	Mg/L		222	201	267	234	203

INACCESSIBLE

Date: 2nd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-3			ST-3A		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	62	456	287			
PH	Units	7.4	7.7	7.8	7.4	8.1	7.85
Air Temp.	°F	51	75	75			
Water Temp.	°F	45	49	55			
Conductivity	umhos/cm	2250	946	1200	975	473	475
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	5.5	343	14	8.0	103	20
Total Dissolved Solids	Mg/L	1512	595	692	621	271	243
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.06	0.19	0.18	<0.01	0.03	0.02
Total Iron	Mg/L	0.16	1.92	1.68	0.15	0.31	0.13
Dissolved Iron	Mg/L	<0.05	0.06	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	351	75	8	8	4	4
Sulfate	Mg/L	500	120	205	190	200	21
Nitrate NO_3-N	Mg/L	0.01	<0.01	<0.01	0.03	0.06	0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	307	276	259	334	250	206

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EFFLUENT CHARACTERISTIC		ST-3B			ST-4		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.				21	1089	220
PH	Units	7.6	7.8	7.5	7.4	8.1	7.7
Air Temp.	°F				60	77	77
Water Temp.	°F				51	47	54
Conductivity	umhos/cm	1100	533	925	1300	688	875
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	4.0	125.5	27	23.5	241	159
Total Dissolved Solids	Mg/L	684	294	552	909	360	528
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	0.03	0.15	0.01	0.05	0.04
Total Iron	Mg/L	0.06	0.21	0.47	0.16	0.60	0.43
Dissolved Iron	Mg/L	<0.05	0.05	0.07	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	60	5	5	43	10	15
Sulfate	Mg/L	195	50	185	405	95	160
Nitrate NO_3-N	Mg/L	0.04	0.06	<0.01	0.04	0.08	0.03
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.7	<0.5	<0.5	0.7
ALKALINITY	Mg/L	307	270	298	275	271	252

Date: 2nd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-4A			ST-4B		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.						
PH	Units	7.6	7.9	7.7	7.6	7.9	7.95
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	850	516	610	900	516	650
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	25.5	74	22	24.5	82.5	33
Total Dissolved Solids	Mg/L	524	261	353	569	271	372
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Total Iron	Mg/L	0.06	0.19	<0.05	0.13	0.23	0.09
Dissolved Iron	Mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	8	3	4	13	4	5
Sulfate	Mg/L	180	50	50	200	50	70
Nitrate NO_3-N	Mg/L	0.02	0.09	0.01	0.05	0.09	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	275	256	235	283	262	243

Date: 2nd QUARTER-1984 STREAM MONITORING REPORT

EFFLUENT CHARACTERISTIC		ST-5			ST-6		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.	467	1988	1351	265	1849	889
PH	Units	7.6	8.1	7.9	7.8	8.2	7.9
Air Temp.	°F	52	90	68	57	62	63
Water Temp.	°F	49	57	59	50	43	53
Conductivity	umhos/cm	1300	602	800	900	470	650
Acidity	Mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Suspended Solids	Mg/L	21.5	196	30	39.5	377	18
Total Dissolved Solids	Mg/L	924	331	496	580	257	358
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.03	0.06	0.04	0.01	0.19	<0.01
Total Iron	Mg/L	0.33	0.75	0.35	0.11	1.02	0.11
Dissolved Iron	Mg/L	<0.05	0.08	<0.05	<0.05	0.05	<0.05
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	42	12	18	9	4	6
Sulfate	Mg/L	385	95	150	220	30	120
Nitrate NO_3-N	Mg/L	<0.01	0.14	<0.01	0.01	<0.01	<0.01
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ALKALINITY	Mg/L	283	250	219	253	246	217

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EFFLUENT CHARACTERISTIC		ST-6A			ST-7		
		APRIL	MAY	JUNE	APRIL	MAY	JUNE
Flow Rate	G.P.M.						
PH	Units	7.6	8.05	7.8			
Air Temp.	°F						
Water Temp.	°F						
Conductivity	umhos/cm	700	445	590			
Acidity	Mg/L	<1.0	<1.0	<0.1			
Total Suspended Solids	Mg/L	18.5	368.0	53			
Total Dissolved Solids	Mg/L	451	248	289			
Total Organic Carbon	Mg/L						
Total Manganese	Mg/L	0.01	0.18	0.10			
Total Iron	Mg/L	0.22	0.88	0.28			
Dissolved Iron	Mg/L	<0.05	0.07	0.06			
Calcium	Mg/L						
Magnesium	Mg/L						
Sodium	Mg/L						
Potassium	Mg/L						
Carbonate	Mg/L						
Fluoride	Mg/L						
Bicarbonate	Mg/L						
Chloride	Mg/L	5	2	4			
Sulfate	Mg/L	140	22	65			
Nitrate NO_3-N	Mg/L	<0.01	0.01	<0.01			
Nitrate NO_2-N	Mg/L						
Kjeldahl N	Mg/L						
Dissolved Phosphorus	Mg/L						
Silica	Mg/L						
Trace Elements:							
Arsenic	Mg/L						
Cadmium	Mg/L						
Zinc	Mg/L						
Selenium	Mg/L						
Radioactivity:							
Gross Alpha	Pci/L						
Gross Beta	Pci/L						
Oil and Grease	Mg/L	<0.5	<0.5	<0.5			
ALKALINITY	MG/L	265	268	217			

INACCESSIBLE

D-001

MOHRLAND WATER DISCHARGE

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD_5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April				NO		WATER								
May				NO		WATER								
June	10	<0.5	758	0.04	<0.05	<0.05	343	<1.0	7.15	<0.5	<1.0	4	<2	1100
July														
August														
September														
October														
November														
December														

D-002

TOWN WATER OVERFLOW

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER - 1986

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April	97	<0.5	653	<0.01	<0.05	<0.05	285	<1.0	7.4	<0.5				990
May	121	7.0	546	<0.01	0.16	<0.05	295	<1.0	7.6	<0.5				946
June	164	<0.5	703	0.03	0.15	<0.05	350	<1.0	7.4	<0.5	<1.0	4	<2	1100
July														
August														
September														
October														
November														
December														

D-010

KING #4 VENT TUNNEL

MINE WATER DISCHARGE MONITORING REPORT

DATE 2nd QUARTER - 1984

Effluent Characteristic	Flow Rate G.P.M.	Total Suspended Solids Mg/L	Total Dissolved Solids Mg/L	Total Manganese Mg/L	Total Iron Mg/L	Dissolved Iron Mg/L	Alkalinity Mg/L	Acidity Mg/L	PH Units	Oil & Grease Mg/L	BOD5 Mg/L	Total Coloforms MPN/100ML	Fecal Coloforms MPN/100ML	CONDUCTIVITY umhos/cm
January														
February														
March														
April					inaccessible									
May	14	63.0	295	0.03	0.20	<0.05	230	<1.0	7.9	0.6				602
June	10.5	1.0	344	0.01	<0.05	<0.05	252	<1.0	8.05	<0.5	<1.0	7	<2	610
July														
August														
September														
October														
November														
December														