0008

Savage

Savage Coal Terminal
2025 E. 5000 S.
Price, Utah 84501
(801) 637-5664

July 31, 1996

Ms. Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RECEIVED
AUG 0 2 1996
DIV. OF OIL, GAS & MINING

Ken, Dan file
ACT/007/022 #7

Dear Ms. Littig:

Enclosed are the results of the Savage Coal Terminal Water Monitoring for the Second Quarter of 1996.

If you have any questions or need any additional information, please contact me.

Respectfully,

Boyd Rhodes

DWG/db2

Enclosures

cc: Dan W. Guy
File
WTRMON

WATER MONITORING REPORT

Property: CV Spur
Station: CV-O-W
Location: NW Corner of Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
DFS [ft]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]		
TDS		
TSS		
O & G		
Al CaCO3		
Total Hardness		
Ac CaCO3		
HCO3		
CO3		
Cl		
SO4		
Ca		
Mg		
K		
Na		
Cat/An		
Fe		
Mn		

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-O-W

Company SAVAGE CV-SPUR

Time 12:15

Flow/Depth –

pH –

Specific Conductivity –

Water Temperature –

Air Temperature –

Dissolved Oxygen –

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No___

Pump Reading

Comments

Field Monitor Mike Hubbard / David Steed

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-1-W
Location: NE Corner of Property
Type: French Drain
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96
DFS [ft]	18.00
PH	6.61
Sp. Cond. [ohms]	18,860.00
Temp. [C]	12.00

Lab. Meas. [mg/l]	
TDS	18,500.00
TSS	1,380.00
Al CaCO3	404.00
Total Hardness	3,130.00
Ac CaCO3	0.00
HCO3	493.00
CO3	<1
Cl	266.00
SO4	12.00
Ca	467.00
Mg	478.00
K	29.70
Na	4,680.00
Cat/An	0.12
Fe	4.72
Mn	0.19

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur		
Sample ID:	CV 1-W	Date Reported:	06/21/96
Laboratory ID:	0396W00771	Date Sampled:	05/07/96
Sample Matrix:	Water	Time Sampled:	11:20
Condition:	Cool/Intact	Date Received:	05/13/96

Parameter	Analytical Result	Units		Units
Lab pH	7.3	s.u.		
Lab Conductivity @ 25° C	18,500	umhos/cm		
Total Dissolved Solids @ 180°C	18,500	mg/L		
Total Suspended Solids	1380	mg/L		
Total Alkalinity as CaCO3	404	mg/L		
Total Hardness	3,130	mg/L		
Sulfide	1.50	mg/L		
Nitrate	0.66	mg/L		
Nitrite	0.05	mg/L		
Ammonia	0.39	mg/L		
SAR	36.4	ratio		
Bicarbonate as HCO3	493	mg/L	8.08	meq/L
Carbonate as CO3	<1.00	mg/L	<1.00	meq/L
Hydroxide as OH	<1.00	mg/L	<1.00	meq/L
Fluoride	0.44	mg/L	0.02	meq/L
Chloride	266	mg/L	7.51	meq/L
Sulfate	12,100	mg/L	252	meq/L
Calcium	467	mg/L	23.3	meq/L
Magnesium	478	mg/L	39.4	meq/L
Potassium	29.7	mg/L	0.76	meq/L
Sodium	4,680	mg/L	204	meq/L
Cations			267	meq/L
Anions			268	meq/L
Cation/Anion Difference			0.12	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments: Nitrites analyzed out of holding time.

Reported by WM

Reviewed by JB

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur	Date Reported:	05/30/96
Sample ID:	CV 1-W	Date Sampled:	05/07/96
Laboratory ID:	0396W00771	Time Sampled:	11:20
Sample Matrix:	Water	Date Received:	05/13/96
Condition:	Cool/Intact		

Parameter	Analytical Results	Units
Trace Metals (Total)		
Aluminum.....	3.50	mg/L
Arsenic.....	0.016	mg/L
Barium.....	0.12	mg/L
Boron.....	1.00	mg/L
Cadmium.....	<0.001	mg/L
Chromium.....	<0.01	mg/L
Copper.....	<0.01	mg/L
Iron.....	4.72	mg/L
Lead.....	<0.005	mg/L
Manganese.....	0.19	mg/L
Mercury.....	<0.001	mg/L
Molybdenum.....	0.01	mg/L
Nickel.....	0.01	mg/L
Phosphorus.....	0.28	mg/L
Selenium.....	0.013	mg/L
Zinc.....	<0.075	mg/L

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments:

Reported by WM

Reviewed by JB

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-1-W

Company Savage - CV Spur

Time 11:20

Flow/Depth 18'

pH 6.61

Specific Conductivity 18.86 x 1000

Water Temperature 12°C

Air Temperature ~~[illegible]~~ 19°C

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque ✓

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments Drain very low

Field Monitor Mike Hulbard / David Steed

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-3-W
Location: South Truckyard
Type: Well
Frequency: Bi-Annual

Field Measurements	Date Sampled 05/07/96
DFS [ft]	3.00
PH	6.67
Sp. Cond. [ohms]	3,890.00
Temp. [C]	10.00

Lab. Meas. [mg/l]	
TDS	3,500.00
TSS	38.00
Al CaCO3	256.00
Total Hardness	1,870.00
HCO3	312.00
CO3	<1
Cl	40.70
SO4	2,140.00
Ca	487.00
Mg	160.00
K	8.60
Na	317.00
Cat/An	0.61
Fe	0.80
Mn	0.34

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur		
Sample ID:	CV 3-W	Date Reported:	06/21/96
Laboratory ID:	0396W00772	Date Sampled:	05/07/96
Sample Matrix:	Water	Time Sampled:	12:00
Condition:	Cool/Intact	Date Received:	05/13/96

Parameter	Analytical Result	Units		Units
Lab pH	7.3	s.u.		
Lab Conductivity @ 25° C	3,600	umhos/cm		
Total Dissolved Solids @ 180°C	3,500	mg/L		
Total Suspended Solids	38	mg/L		
Total Alkalinity as CaCO3	256	mg/L		
Total Hardness	1,870	mg/L		
Sulfide	1.86	mg/L		
Nitrate	<0.05	mg/L		
Nitrite	<0.05	mg/L		
Ammonia	<0.05	mg/L		
SAR	3.19	ratio		
Bicarbonate as HCO3	312	mg/L	5.12	meq/L
Carbonate as CO3	<1.00	mg/L	<1.00	meq/L
Hydroxide as OH	<1.00	mg/L	<1.00	meq/L
Fluoride	0.23	mg/L	0.01	meq/L
Chloride	40.7	mg/L	1.15	meq/L
Sulfate	2,140	mg/L	44.6	meq/L
Calcium	487	mg/L	24.3	meq/L
Magnesium	160	mg/L	13.2	meq/L
Potassium	8.60	mg/L	0.22	meq/L
Sodium	317	mg/L	13.8	meq/L
Cations			51.5	meq/L
Anions			50.9	meq/L
Cation/Anion Difference			0.61	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments: Nitrites analyzed out of holding time.

Reported by WM

Reviewed by LB

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur	Date Reported:	05/30/96
Sample ID:	CV 3-W	Date Sampled:	05/07/96
Laboratory ID:	0396W00772	Time Sampled:	12:00
Sample Matrix:	Water	Date Received:	05/13/96
Condition:	Cool/Intact		

Parameter	Analytical Results	Units
Trace Metals (Total)		
Aluminum	0.50	mg/L
Arsenic	<0.005	mg/L
Barium	0.02	mg/L
Boron	<0.05	mg/L
Cadmium	<0.001	mg/L
Chromium	<0.01	mg/L
Copper	<0.01	mg/L
Iron	0.80	mg/L
Lead	<0.005	mg/L
Manganese	0.34	mg/L
Mercury	<0.001	mg/L
Molybdenum	<0.01	mg/L
Nickel	<0.01	mg/L
Phosphorus	<0.05	mg/L
Selenium	<0.005	mg/L
Zinc	<0.075	mg/L

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments:

Reported by WM

Reviewed by DB

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-3-W

Company SAVAGE CV - SPUR

Time 12:00

Flow/Depth 3'

pH 6.67

Specific Conductivity 3.89 x1000

Water Temperature 10°

Air Temperature ≈ 70°f

Dissolved Oxygen –

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear ✓ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments

Field Monitor Mike Hubbard / David Steed

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-4-W
Location: NE Corner of Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
DFS [ft]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]		
TDS		
TSS		
O & G		
Al CaCO3		
Total Hardness		
Ac CaCO3		
HCO3		
CO3		
Cl		
SO4		
Ca		
Mg		
K		
Na		
Cat/An		
Fe		
Mn		

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV4-W

Company Savage - CV Spur

Time 11:05

Flow/Depth -

pH -

Specific Conductivity -

Water Temperature -

Air Temperature -

Dissolved Oxygen -

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Mike Hubbard / David Steed

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-5-W
Location: N Central Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
DFS [ft]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]	
TDS	
TSS	
O & G	
Al CaCO3	
Total Hardness	
Ac CaCO3	
HCO3	
CO3	
Cl	
SO4	
Ca	
Mg	
K	
Na	
Cat/An	
Fe	
Mn	

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-5-W

Company Savage - CV Spur

Time 11:40

Flow/Depth -

pH -

Specific Conductivity -

Water Temperature -

Air Temperature -

Dissolved Oxygen -

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Mike Hellard / David Steed

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-6-W
Location: East Central Property
Type: Well
Frequency: Bi-Annual

Field Measurements	Date Sampled 05/07/96
DFS [ft]	3.00
PH	6.59
Sp. Cond. [ohms]	2,810.00
Temp. [C]	12.00

Lab. Meas. [mg/l]	
TDS	2,000.00
TSS	51.00
Al CaCO3	228.00
Total Hardness	1,260.00
Ac CaCO3	0.00
HCO3	278.00
CO3	<1
Cl	46.30
SO4	1,110.00
Ca	371.00
Mg	81.80
K	6.65
Na	108.00
Cat/An	1.64
Fe	1.11
Mn	0.06

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur		
Sample ID:	CV 6-W	Date Reported:	06/21/96
Laboratory ID:	0396W00773	Date Sampled:	05/07/96
Sample Matrix:	Water	Time Sampled:	11:47
Condition:	Cool/Intact	Date Received:	05/13/96

Parameter	Analytical Result	Units		Units
Lab pH	7.8	s.u.		
Lab Conductivity @ 25° C	2,240	umhos/cm		
Total Dissolved Solids @ 180°C	2,000	mg/L		
Total Suspended Solids	51	mg/L		
Total Alkalinity as CaCO3	228	mg/L		
Total Hardness	1,260	mg/L		
Sulfide	1.56	mg/L		
Nitrate	0.39	mg/L		
Nitrite	<0.05	mg/L		
Ammonia	<0.05	mg/L		
SAR	1.33	ratio		
Bicarbonate as HCO3	278	mg/L	4.56	meq/L
Carbonate as CO3	<1.00	mg/L	<1.00	meq/L
Hydroxide as OH	<1.00	mg/L	<1.00	meq/L
Fluoride	2.06	mg/L	0.11	meq/L
Chloride	46.3	mg/L	1.31	meq/L
Sulfate	1,110	mg/L	23.1	meq/L
Calcium	371	mg/L	18.5	meq/L
Magnesium	81.8	mg/L	6.73	meq/L
Potassium	6.65	mg/L	0.17	meq/L
Sodium	108	mg/L	4.71	meq/L
Cations			30.1	meq/L
Anions			29.2	meq/L
Cation/Anion Difference			1.64	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments: Nitrites analyzed out of holding time.

Reported by WM

Reviewed by LB

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	Savage Industries		
Project:	CV Spur	Date Reported:	05/30/96
Sample ID:	CV 6-W	Date Sampled:	05/07/96
Laboratory ID:	0396W00773	Time Sampled:	11:47
Sample Matrix:	Water	Date Received:	05/13/96
Condition:	Cool/Intact		

Parameter	Analytical Results	Units
Trace Metals (Total)		
Aluminum	0.90	mg/L
Arsenic	<0.005	mg/L
Barium	0.05	mg/L
Boron	1.10	mg/L
Cadmium	0.013	mg/L
Chromium	<0.01	mg/L
Copper	<0.01	mg/L
Iron	1.11	mg/L
Lead	<0.005	mg/L
Manganese	0.06	mg/L
Mercury	<0.001	mg/L
Molybdenum	<0.01	mg/L
Nickel	<0.01	mg/L
Phosphorus	<0.05	mg/L
Selenium	<0.005	mg/L
Zinc	<0.075	mg/L

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments:

Reported by WM

Reviewed by SB

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-6-W

Company Savage - CVR spur

Time 11:47

Flow/Depth 3' Depth to water

pH 6.59

Specific Conductivity 2.81 x 1000

Water Temperature ~~6.39~~ 12°C

Air Temperature ~~8~~ 19°C

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky ✓ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments

Field Monitor Mike Hulbard / David Steed

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-10-W
Location: SE Adj. to Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
DFS [ft]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]		
TDS		
TSS		
O & G		
Al CaCO3		
Total Hardness		
Ac CaCO3		
HCO3		
CO3		
Cl		
SO4		
Ca		
Mg		
K		
Na		
Cat/An		
Fe		
Mn		

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CV-10-W

Company SAVAGE CV-SPUR

Time 12:25

Flow/Depth -

pH -

Specific Conductivity -

Water Temperature -

Air Temperature -

Dissolved Oxygen -

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No___

Pump Reading

Comments

Field Monitor Nate Holland / David Steed

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-11-W
Location: NE Adj to Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96
DFS [ft]	6.00
PH	6.81
Sp. Cond. [ohms]	15,660.00
Temp. [C]	11.00

Lab. Meas. [mg/l]	
TDS	16,200.00
TSS	60.00
Al CaCO3	912.00
Total Hardness	3,970.00
Ac CaCO3	0.00
HCO3	1,110.00
CO3	<1
Cl	93.30
SO4	10,700.00
Ca	402.00
Mg	720.00
K	10.20
Na	3,700.00
Cat/An	0.52
Fe	1.15
Mn	0.20

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur		
Sample ID:	CV 11-W	Date Reported:	06/21/96
Laboratory ID:	0396W00774	Date Sampled:	05/07/96
Sample Matrix:	Water	Time Sampled:	12:30
Condition:	Cool/Intact	Date Received:	05/13/96

Parameter	Analytical Result	Units		Units
Lab pH	7.8	s.u.		
Lab Conductivity @ 25° C	15,900	umhos/cm		
Total Dissolved Solids @ 180°C	16,200	mg/L		
Total Suspended Solids	60	mg/L		
Total Alkalinity as CaCO3	912	mg/L		
Total Hardness	3,970	mg/L		
Sulfide	2.64	mg/L		
Nitrate	<0.05	mg/L		
Nitrite	<0.05	mg/L		
Ammonia	4.94	mg/L		
SAR	25.5	ratio		
Bicarbonate as HCO3	1,110	mg/L	18.2	meq/L
Carbonate as CO3	<1.00	mg/L	<1.00	meq/L
Hydroxide as OH	<1.00	mg/L	<1.00	meq/L
Fluoride	0.81	mg/L	0.04	meq/L
Chloride	93.3	mg/L	2.63	meq/L
Sulfate	10,700	mg/L	222	meq/L
Calcium	402	mg/L	20.1	meq/L
Magnesium	720	mg/L	59.3	meq/L
Potassium	10.2	mg/L	0.26	meq/L
Sodium	3,700	mg/L	161	meq/L
Cations			240	meq/L
Anions			243	meq/L
Cation/Anion Difference			0.52	%

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments: Nitrites analyzed out of holding time.

Reported by WM

Reviewed by

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Client:	**Savage Industries**		
Project:	CV Spur	Date Reported:	05/30/96
Sample ID:	CV 11-W	Date Sampled:	05/07/96
Laboratory ID:	0396W00774	Time Sampled:	12:30
Sample Matrix:	Water	Date Received:	05/13/96
Condition:	Cool/Intact		

Parameter	Analytical Results	Units
Trace Metals (Total)		
Aluminum	0.50	mg/L
Arsenic	<0.005	mg/L
Barium	0.03	mg/L
Boron	1.40	mg/L
Cadmium	<0.001	mg/L
Chromium	<0.01	mg/L
Copper	<0.01	mg/L
Iron	1.15	mg/L
Lead	<0.005	mg/L
Manganese	0.20	mg/L
Mercury	<0.001	mg/L
Molybdenum	0.08	mg/L
Nickel	<0.01	mg/L
Phosphorus	0.96	mg/L
Selenium	0.005	mg/L
Zinc	<0.075	mg/L

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Comments:

Reported by WM

Reviewed by GB

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # CU 11 W

Company SAVAGE CV SPUR

Time 12:30

Flow/Depth 6'

pH 6.81

Specific Conductivity 15.66x1000

Water Temperature 11°C

Air Temperature ≈ 70°

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky ✓ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments EXTREME ODOR

Field Monitor [illegible]

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-12-W
Location: North Adj. To Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
DFS [ft]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]		
TDS		
TSS		
O & G		
Al CaCO3		
Total Hardness		
Ac CaCO3		
HCO3		
CO3		
Cl		
SO4		
Ca		
Mg		
K		
Na		
Cat/An		
Fe		
Mn		

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96 Station # OU-12-W

Company Savage - OU Spring

Time 11:15

Flow/Depth -

pH -

Specific Conductivity -

Water Temperature -

Air Temperature -

Dissolved Oxygen -

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-14-W
Location: NE Property
Type: Ditch
Frequency: Bi-Annually

Field Measurements	Date Sampled 05/07/96	Mean
Flow [gpm]	DRY	
PH		
Sp. Cond. [ohms]		
Temp. [C]		
Diss. O [ppm]		

Lab. Meas. [mg/l]		
TDS		
TSS		
O & G		
Al CaCO3		
Total Hardness		
Ac CaCO3		
HCO3		
CO3		
Cl		
SO4		
Ca		
Mg		
K		
Na		
Cat/An		
Fe		
Mn		

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96

Station # CV-14-W

Company Savage - CV spur

Time ~~11:14~~ 11:05

Flow/Depth –

pH –

Specific Conductivity –

Water Temperature –

Air Temperature –

Dissolved Oxygen –

Type: Spring___ Stream___ Well___ Discharge ✓ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Mike Hubbard / David Steed

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: Castle Valley Spur
Station: CV-15-W
Location: Sed. Pond Discharge
Type: Pond Outlet
Frequency: Monthly

Field Measurements	Date Sampled 01/17/96	02/20/96	03/14/96	04/22/96	05/07/96
Flow [gpm]	DRY	DRY	DRY	DRY	DRY
PH					
Sp.Con. [ohms]					
Temp [C]					
Diss. O. [ppm]					
Lab. Meas. [mg/l]					
TDS					
TSS					
O & G					
aCO3					
Total Hardness					
Ac CaCO3					
HCO3					
CO3					
Cl					
SO4					
Ca					
Mg					
K					
Na					
Cat/An					
Fe					

E.I.S. Hydrology
Field Measurements Form

Date 5/7/96

Station # CV 15-W

Company Savage - CV Spur

Time 11:02

Flow/Depth -

pH -

Specific Conductivity -

Water Temperature -

Air Temperature -

Dissolved Oxygen -

Type: Spring___ Stream___ Well___ Discharge ✓ NPDES ✓

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor David Greer / Mike Hubbard

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Quality Control / Quality Assurance

Known Analysis / Spike Analysis

TOTAL METALS

Client: Savage Industries
Project: CV Spur
Lab ID: 0396W00771-774
Matrix: Water

Date Reported: 05/30/96
Date Sampled: 05/07/96
Date Received: 05/13/96

Known Analysis

Parameter	Found Concentration	Known Concentration	Units	Percent Recovery
Aluminum	1.01	1.00	mg/L	101%
Arsenic	0.010	0.010	mg/L	100%
Barium	1.01	1.00	mg/L	101%
Boron	1.00	1.00	mg/L	100%
Cadmium	0.004	0.004	mg/L	95%
Chromium	1.00	1.00	mg/L	100%
Copper	0.98	1.00	mg/L	98%
Iron	1.00	1.00	mg/L	100%
Lead	0.038	0.040	mg/L	95%
Manganese	0.99	1.00	mg/L	99%
Mercury	0.004	0.004	mg/L	100%
Molybdenum	1.00	1.00	mg/L	100%
Nickel	0.97	1.00	mg/L	97%
Phosphorus	0.94	1.00	mg/L	94%
Selenium	0.010	0.010	mg/L	100%
Zinc	0.97	1.00	mg/L	97%

Spike Analysis

Parameter	Spiked Sample Result	Sample Result	Spike Added	Percent Recovery
Aluminum	0.52	<0.05	0.78	104%
Arsenic	0.029	<0.005	0.030	97%
Barium	0.52	<0.01	0.54	104%
Boron	0.46	<0.6	0.66	92%
Cadmium	0.002	<0.001	0.002	96%
Chromium	0.48	<0.02	0.48	96%
Copper	0.53	<0.01	0.55	106%
Iron	0.60	<0.025	3.38	120%
Lead	0.025	<0.005	0.024	97%
Manganese	0.57	<0.01	4.21	114%
Mercury	0.004	<0.001	0.004	99%
Molybdenum	0.50	<0.01	0.50	100%
Nickel	0.49	<0.01	0.51	98%
Phosphorus	0.56	<0.05	0.63	112%
Selenium	0.022	<0.005	0.025	88%
Zinc	0.59	<0.075	0.61	118%

Reference U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Reported by: WM

Reviewed by: JB

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

Quality Control / Quality Assurance

Blank Analysis

TOTAL METALS

Client: **Savage Industries**
Project: CV Spur
Lab ID: 0396W00771-774
Matrix: Water

Date Reported: 05/30/96
Date Sampled: 05/07/96
Date Received: 05/13/96

Blank Analysis

Parameter	Result mg/L	Detection Level
Aluminum	ND	0.05
Arsenic	ND	0.001
Barium	ND	0.01
Boron	ND	0.06
Cadmium	ND	0.001
Chromium	ND	0.02
Copper	ND	0.01
Iron	ND	0.025
Lead	ND	0.005
Manganese	ND	0.01
Mercury	ND	0.001
Molybdenum	ND	0.01
Nickel	ND	0.01
Phosphorus	ND	0.05
Selenium	ND	0.005
Zinc	ND	0.075

Reference U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
"Standard Methods For The Examination Of Water And Waste Water", 19th ed., 1995.

Reported by: WM

Reviewed by: JB

E.I.S Hydrology
Pond Inspection Report

POND: 1

LOCATION: CV Spencer

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	[illegible]
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	No Discharge
(5) Recommendations/Comments	[illegible]

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[illegible]
Inspector

5/22/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: 2

LOCATION: [illegible]

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	Marker [illegible] Stabled Numbered to 3

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

5/22/96
Date

E.I.S Hydrology
Pond Inspection Report

POND: 3

LOCATION: [illegible]

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	[illegible]
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	[illegible]

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[illegible]
Inspector

5/27/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: Pix 4

LOCATION: W Spare

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good - Water 4' from T.
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

Inspector

Date 6/2/94

E.I.S Hydrology
Pond Inspection Report

POND: 5

LOCATION: W Spur

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	Minor on West Inlet
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	2/3rd Dry No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

5/23/96
Date

E.I.S Hydrology
Pond Inspection Report

POND: 6

LOCATION: CV Span

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	Needs Marked - (Installed)

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

5/22/96
Date