

# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/14/81

CERTIFICATE OF ANALYSIS

81-006040-02

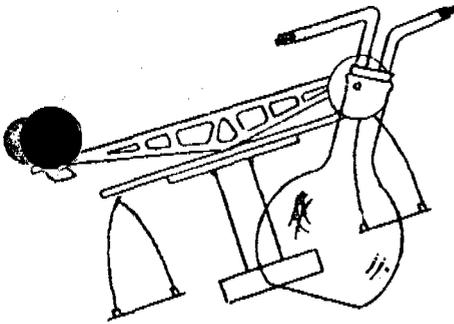
### FORD CHEMICAL LABORATORIES

BALANCE SHEET FOR SAMPLE: (2) LWR

CATIONS	mg/l	meq/l
Calcium as Ca mg/l	16.800	.838
Magnesium as Mg mg/l	63.360	5.211
Iron as Fe (Dissolved) mg/l	.150	.005
Sodium as Na mg/l	245.000	10.658
Potassium as K mg/l	2.550	.065
ANIONS		
	mg/l	meq/l
Carbonate as CO <sub>3</sub> mg/l	12.000	.400
Bicarbonate as HCO <sub>3</sub> mg/l	451.400	7.403
Sulfate as SO <sub>4</sub> mg/l	400.000	8.328
Chloride as Cl mg/l	26.000	.733
Nitrate as NO <sub>3</sub> -N mg/l	.020	.000

### BALANCE INFORMATION

CATIONS:	16.777
ANIONS:	16.864
TOTAL:	33.641
DIFFERENCE:	.087
SIGMA:	.002

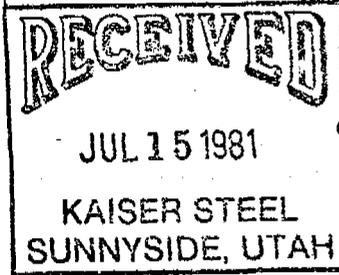


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DATE: 07/14/81

CERTIFICATE OF ANALYSIS

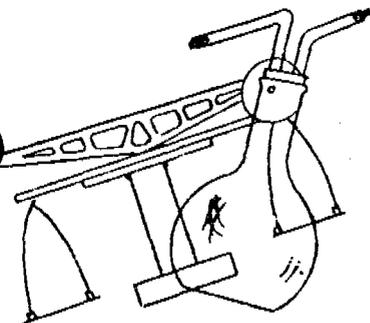
KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

81-005724 <sup>INV</sup> \*192e

SAMPLE: WATER SAMPLES DATED 6-16-81 RECEIVED 6-18-81 FOR SCHEDULE "C" ANALYSIS UNDER P.O. 280-60998.

002                      004

	002	004
Acidity as CaCO <sub>3</sub> mg/l	11.40	<.01
Alkalinity as CaCO <sub>3</sub> mg/l	588.00	370.00
Ammonia as NH <sub>3</sub> -N mg/l	.30	.70
Arsenic as As mg/l	.001	.001
Barium as Ba mg/l	.040	.145
Bicarbonate as HCO <sub>3</sub> mg/l	717.36	427.00
Boron as B mg/l	.065	.185
Cadmium as Cd mg/l	<.001	<.001
Calcium as Ca mg/l	52.00	33.60
Carbonate as CO <sub>3</sub> mg/l	<.01	12.00
Chloride as Cl mg/l	36.00	52.00
Chromium as Cr (Hex.) mg/l	.008	.004
Chromium as Cr (Tot) mg/l	.003	.003



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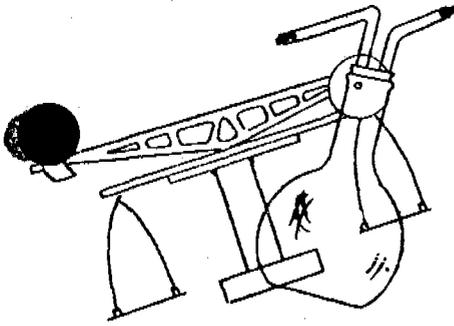
PAGE: 2

CERTIFICATE OF ANALYSIS  
81-005724

002

004

	002	004
Conductivity umhos/cm	2,420	2,100
Copper as Cu mg/l	.010	<.001
Fluoride as F mg/l	.86	.89
Hardness as CaCO3 mg/l	336	318
Hydroxide as OH mg/l	<.01	<.01
Iron as Fe (Dissolved) mg/l	.670	.440
Iron as Fe (Total) mg/l	.680	.610
Lead as Pb mg/l	<.001	<.001
Magnesium as Mg mg/l	49.44	56.16
Manganese as Mn mg/l	.120	.030
Mercury as Hg mg/l	<.00020	<.00020
Nickel as Ni mg/l	<.001	<.001
Nitrate as NO3-N mg/l	.03	.12
Nitrite as NO2-N mg/l	.05	.08
Oil and Grease mg/l	<.01	<.01
Phosphate PO4-P Ortho mg/l	.060	.070
Potassium as K mg/l	12.65	15.50



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PAGE: 3

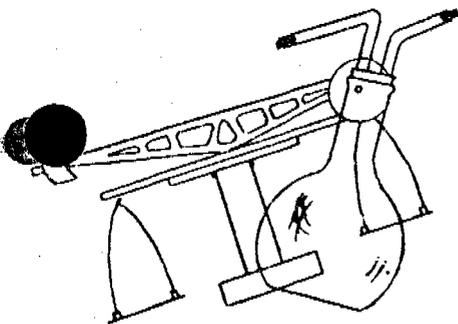
CERTIFICATE OF ANALYSIS  
81-005724

002                      004

	002	004
Selenium as Se mg/l	.002	.003
Silica as SiO <sub>2</sub> Diss. Mg/l	25.00	8.10
Silver as Ag mg/l	<.001	<.001
Sodium as Na mg/l	440.00	355.00
Sulfate as SO <sub>4</sub> mg/l	630	634
Suspended Solids mg/l	<u>115</u>	<u>160</u>
Total Diss. Solids Mg/l	1,575	1,365
Turbidity NTU	2.20	2.40
Zinc as Zn mg/l	.027	.033
pH Units	7.60	8.10

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FORD CHEMICAL LABORATORY, INC.



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*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/14/81

CERTIFICATE OF ANALYSIS

81-005724-01

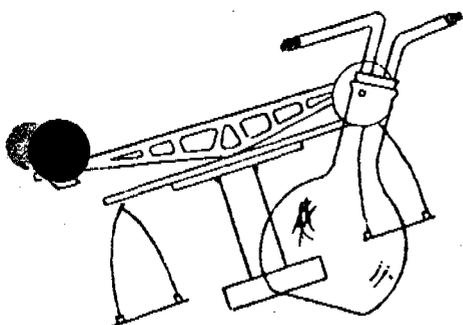
FORD CHEMICAL LABORATORIES

BALANCE SHEET FOR SAMPLE: (1) 002

CATIONS	mg/l	meq/l
Calcium as Ca mg/l	52.000	2.595
Magnesium as Mg mg/l	49.440	4.066
Iron as Fe (Dissolved) mg/l	.670	.024
Sodium as Na mg/l	440.000	19.140
Potassium as K mg/l	12.650	.323
ANIONS		
	mg/l	meq/l
Carbonate as CO <sub>3</sub> mg/l	.000	.000
Bicarbonate as HCO <sub>3</sub> mg/l	717.360	11.765
Sulfate as SO <sub>4</sub> mg/l	630.000	13.117
Chloride as Cl mg/l	36.000	1.016
Nitrate as NO <sub>3</sub> -N mg/l	.030	.000

## BALANCE INFORMATION

CATIONS: 26.148  
ANIONS: 25.898  
TOTAL: 52.046  
DIFFERENCE: .250  
SIGMA: .004



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DATE: 07/14/81

CERTIFICATE OF ANALYSIS

81-005724-02

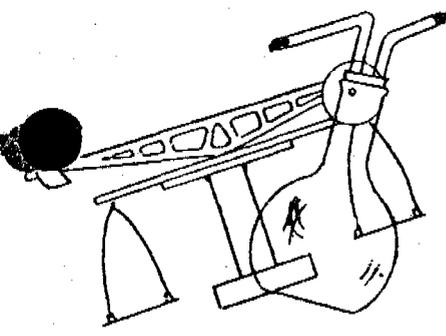
FORD CHEMICAL LABORATORIES

BALANCE SHEET FOR SAMPLE: (2) 004

CATIONS	mg/l	meq/l
Calcium as Ca mg/l	33.600	1.677
Magnesium as Mg mg/l	56.160	4.619
Iron as Fe (Dissolved) mg/l	.440	.016
Sodium as Na mg/l	355.000	15.443
Potassium as K mg/l	15.500	.396
ANIONS	mg/l	meq/l
Carbonate as CO <sub>3</sub> mg/l	12.000	.400
Bicarbonate as HCO <sub>3</sub> mg/l	427.000	7.003
Sulfate as SO <sub>4</sub> mg/l	634.000	13.200
Chloride as Cl mg/l	52.000	1.467
Nitrate as NO <sub>3</sub> -N mg/l	.120	.002

### BALANCE INFORMATION

CATIONS:	22.151
ANIONS:	22.072
TOTAL:	44.223
DIFFERENCE:	.079
SIGMA:	.001



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40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 06/09/81

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

81-005203 *JNY*  
*#86*

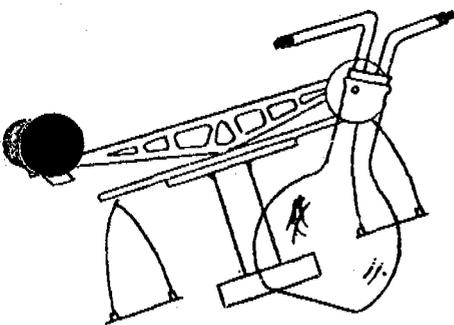
SAMPLE: SAMPLES RECEIVED 5-15-81 FOR SEMI-MONTHLY ANALYSIS  
UNDER P.O. 280-60999.

A 002      A 004  
5-14-81    5-14-81

	A 002	A 004
Hardness as CaCO3 mg/l	54.00	58.00
Alkalinity as CaCO3 mg/l	658.00	532.00
Arsenic as As mg/l	.001	<.001
Iron as Fe mg/l	.080	.310
Manganese as Mn mg/l	.140	.030
Oil and Grease mg/l	<.1	<.1
Selenium as Se mg/l	.001	.002
Silver as Ag mg/l	.003	.003
Suspended Solids mg/l	10.0	16.0
Total Diss. Solids Mg/l	1,298	1,302
pH Units	7.80	8.10

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

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# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 05/18/81

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

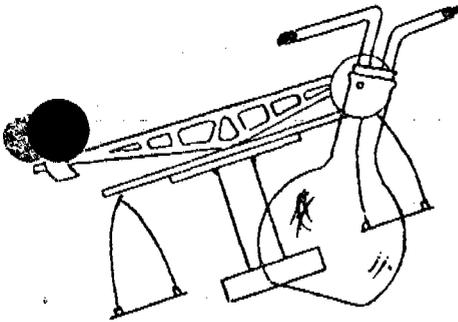
81-005014 <sup>INV</sup> #1290

SAMPLE: WATERS DATED 4-30-81 RECEIVED 5-4-81 FOR SCHEDULE "A"  
ANALYSIS UNDER P.O. 280-60999.

	002	002-P	004
Acidity as CaCO3 mg/l	19.40	2.42	9.70
Alkalinity as CaCO3 mg/l	732.00	636.00	500.00
Arsenic as As mg/l	<.001	.001	<.001
Iron as Fe mg/l	.150	.088	.020
Manganese as Mn mg/l	.187	.165	.018
Oil and Grease mg/l	<.01	<.01	<.01
Selenium as Se mg/l	.003	.002	.002
Silver as Ag mg/l	.001	.003	.002
Suspended Solids mg/l	12.0	21.0	7.0
Total Dissolved Solids mg/l	1,600	1,625	1,425
pH Units	7.60	8.10	8.00

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

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Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 04/15/81

CERTIFICATE OF ANALYSIS

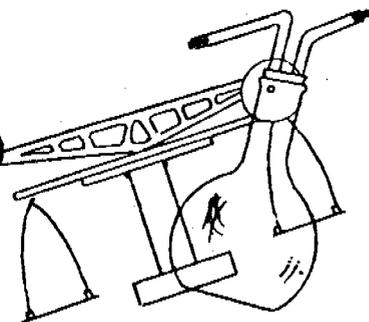
KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

81-004413 <sup>INV</sup> 129<sup>02</sup>

SAMPLE: WATERS RECEIVED 3-26-81 FOR SCHEDULE A ANALYSIS UNDER  
P.O. 280-60999.

	002 3-23-81	002 P 3-23-81	004 3-23-84
Hardness as CaCO <sub>3</sub> mg/l	28.0	10.0	28.0
Alkalinity as CaCO <sub>3</sub> mg/l	680.00	672.00	462.00
Arsenic as As mg/l	.001	.001	.001
Iron as Fe mg/l	.140	.070	.010
Manganese as Mn mg/l	.190	.170	.010
Oil and Grease mg/l	<.01	<.01	.20
Selenium as Se mg/l	.004	.005	.004
Silver as Ag mg/l	.004	.004	.005
Suspended Solids mg/l	13.0	11.0	14.0
Total Dissolved Solids mg/l	1.600	1.610	1.400
pH Units	7.60	7.60	7.70

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# Ford Chemical

## LABORATORY, INC.

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40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 03/20/81

### CERTIFICATE OF ANALYSIS

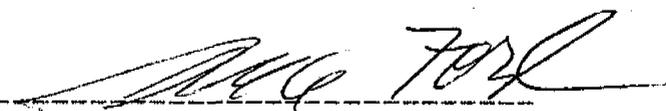
KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

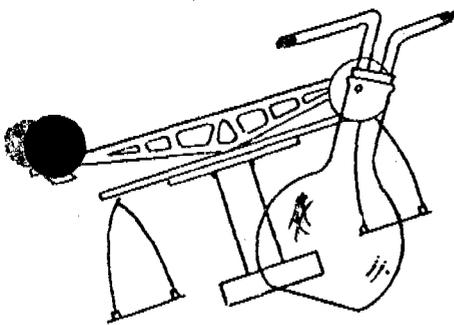
91-004208

SAMPLE: WATERS RECEIVED 3-16-81 FOR ANALYSIS.

OIL AND  
GREASE MG/L

1	UPR GTC 3-10-81	6.00
	UPR GTC 3-11-81	1.20
3	LWR GTC 3-10-81	1.60
4	LWR GTC 3-11-81	1.80

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 04/08/81

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

80-004209

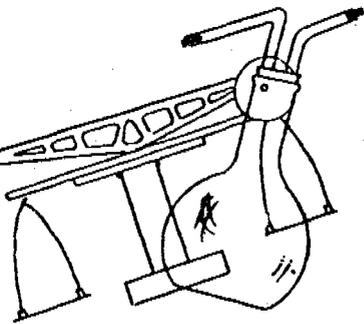
INV.  
#268

SAMPLE: WATERS RECEIVED 3-13-81 FOR SCHEDULE "A" ANALYSIS UNDER  
P.O. 280-60999.

002                      004  
3-11-81                3-11-81

	002 3-11-81	004 3-11-81
Hardness as CaCO3 mg/l	<.1	<.1
Alkalinity as CaCO3 mg/l	622.00	482.00
Arsenic as As mg/l	<.001	.001
Iron as Fe mg/l	.440	.300
Manganese as Mn mg/l	.160	.020
Oil and Grease mg/l	<1.00	1.20
Selenium as Se mg/l	<.001	.001
Silver as Ag mg/l	.005	.005
Suspended Solids mg/l	27.0	19.0
Total Dissolved Solids mg/l	1,600	1,400
pH Units	7.90	8.00

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# Ford Chemical

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*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 03/10/81

**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
JOHN HUEFNER 84539

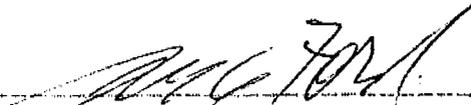
81-003824

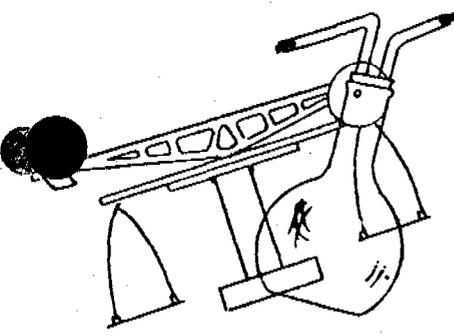
INV.  
4300

SAMPLE: SAMPLE RECEIVED 2-18-81 FOR ANALYSIS.  
LABELED (A) 004, 2-17-81. UNDER P.O. #280-60999.

A  
004

Hardness as CaCO <sub>3</sub> me/l	22.0
Alkalinity as CaCO <sub>3</sub> me/l	492.00
Arsenic as As me/l	<.001
Iron as Fe me/l	.090
Manganese as Mn me/l	.030
Oil and Grease me/l	1.20
Selenium as Se me/l	<.001
Silver as Ag me/l	.002
Suspended Solids me/l	11.0
Total Dissolved Solids me/l	1,400
pH Units	7.70

  
FORD CHEMICAL LABORATORY, INC.



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LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 02/07/81

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

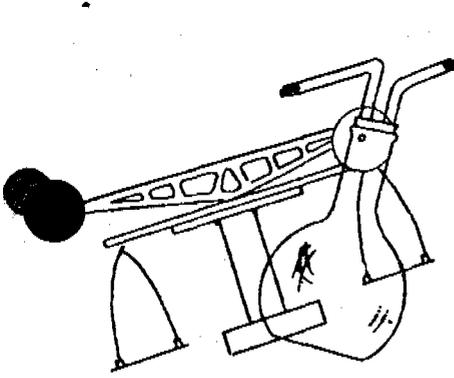
81-003461

SAMPLE: WATERS RECEIVED 1-16-81 FOR SCHEDULE "B" ANALYSIS UNER  
P.O. 280-60999.

ENV.  
#142e

UFR                      LWR  
1-13-81                1-13-81

	UFR 1-13-81	LWR 1-13-81
Hardness as CaCO3 mg/l	<.1	<.1
Alkalinity as CaCO3 mg/l	330.00	584.00
Arsenic as As mg/l	<.001	<.001
Chloride as Cl mg/l	4.42	4.89
Conductivity umhos/cm	700	1,750
Iron as Fe (Dissolved) mg/l	.035	.085
Iron as Fe (Total) mg/l	.155	.455
Lead as Pb mg/l	<.001	<.001
Manganese as Mn mg/l	.014	.021
Nitrate as NO3-N mg/l	<.01	.34
Oil and Grease mg/l	8.00	1.80
Phosphate P04-P Ortho mg/l	<.010	<.010
Potassium as K mg/l	1.10	1.35



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PAGE: 2

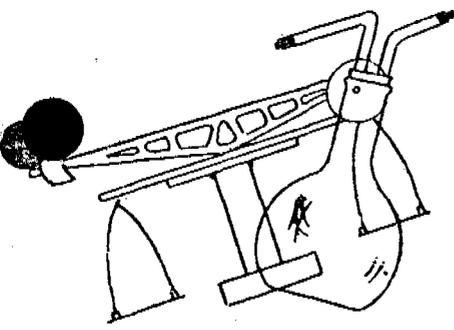
CERTIFICATE OF ANALYSIS

81-003461

UPR                      LWR  
1-13-81                1-13-81

	UPR	LWR
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Sulfate as SO4 mg/l	67.5	360
Suspended Solids mg/l	25.0	15.0
Total Dissolved Solids mg/l	462	1,155
PH Units	8.20	8.20

FORD CHEMICAL LABORATORY, INC.



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PHONE 485-5761

DATE: 02/07/81

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

81-003460

SAMPLE: WATERS RECEIVED 1-16-81 FOR SCHEDULE "A" ANALYSIS UNDER  
P.O. 280-60999.

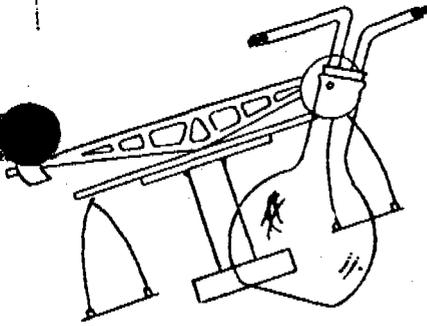
INV  
86<sup>00</sup>

002                      004  
1-13-81                1-13-81

	002 1-13-81	004 1-13-81
Hardness as CaCO <sub>3</sub> mg/l	20.0	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	822.00	570.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.195	.250
Manganese as Mn mg/l	.030	.044
Oil and Grease mg/l	1.80	3.40
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.003	.005
Suspended Solids mg/l	29.0	16.0
Total Dissolved Solids mg/l	1,650	1,575
pH Units	7.60	8.00

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

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40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 01/20/81

### CERTIFICATE OF ANALYSIS

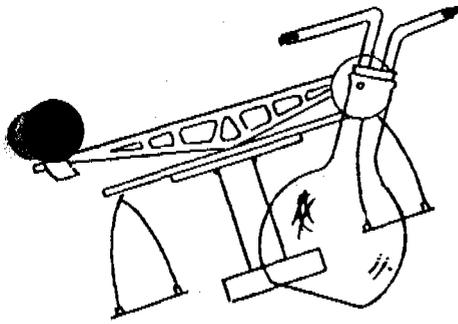
KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

81-003180

*INV 288*

SAMPLE: WATERS RECEIVED 12-29-80 FOR SCHEDULE "C" ANALYSIS.  
UNDER P.O. #280-60998.

	UPR 12-22-80	LWR 12-22-80	ICELANDER 12-22-80
Hardness as CaCO <sub>3</sub> mg/l	<.1	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	314.00	426.00	382.00
Ammonia as NH <sub>3</sub> -N mg/l	<.01	<.01	<.01
Arsenic as As mg/l	<.001	<.001	<.001
Barium as Ba mg/l	.250	.410	.330
Bicarbonate as HCO <sub>3</sub> mg/l	358.68	475.80	422.12
Boron as B mg/l	.004	.010	.013
Cadmium as Cd mg/l	<.001	<.001	<.001
Calcium as Ca mg/l	56.00	43.20	119.20
Carbon Dioxide as CO <sub>2</sub> mg/l	<.01	<.01	<.01
Carbonate as CO <sub>3</sub> mg/l	12.00	21.60	21.60
Chloride as Cl mg/l	2.00	22.00	36.00
Chromium as Cr (Hex.) mg/l	<.001	<.001	.002



# Ford Chemical

## LABORATORY, INC.

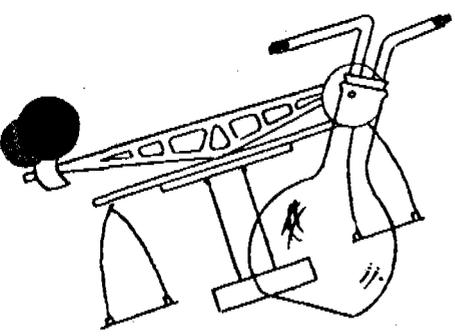
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2

### CERTIFICATE OF ANALYSIS 81-003180

	UPR 12-22-80	LWR 12-22-80	ICELANDER 12-22-80
Chromium as Cr (Tot) mg/l	<.001	<.001	<.001
Conductivity umhos/cm	580	1,500	2,290
Copper as Cu mg/l	.010	.003	.002
Fluoride as F mg/l	.10	1.54	.20
Hardness as CaCO3 mg/l	310	320	928
Hydroxide as OH mg/l	<.01	<.01	<.01
Iron as Fe (Dissolved) mg/l	.050	.110	.165
Iron as Fe (Total) mg/l	.165	.410	.330
Lead as Pb mg/l	<.001	<.001	<.001
Magnesium as Mg mg/l	40.80	50.88	151.20
Manganese as Mn mg/l	.018	.026	.030
Mercury as Hg mg/l	<.00020	<.00020	<.00020
Nickel as Ni mg/l	<.001	<.001	<.001
Nitrate as NO3-N mg/l	<.01	.26	.12
Nitrite as NO2-N mg/l	<.01	.06	<.01
Oil and Grease mg/l	.20	.20	.40
Phosphate PO4-P Ortho mg/l	.030	.070	.080



# Ford Chemical

LABORATORY, INC.

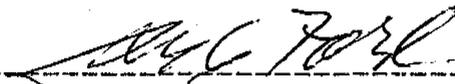
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 3

CERTIFICATE OF ANALYSIS  
81-003180

	UPR 12-22-80	LWR 12-22-80	ICELANDER 12-22-80
Potassium as K mg/l	1.25	1.50	4.66
Selenium as Se mg/l	<.001	<.001	<.001
Silica as SiO <sub>2</sub> Dissolved mg/l	13.50	9.10	12.50
Silver as Ag mg/l	<.001	<.001	<.001
Sodium as Na mg/l	33.40	238.00	160.20
Sulfate as SO <sub>4</sub> mg/l	66.0	375	800
Suspended Solids mg/l	9.0	8.0	42.0
Total Dissolved Solids mg/l	380	980	1,400
Turbidity NTU	.38	2.80	1.60
Zinc as Zn mg/l	.027	.038	.055
pH Units	8.00	8.10	8.00

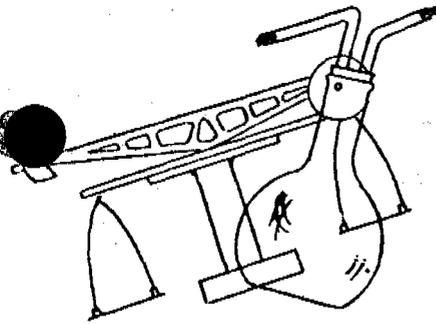
  
FORD CHEMICAL LABORATORY, INC.

# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761



DATE: 01/20/81

CERTIFICATE OF ANALYSIS

KATSER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

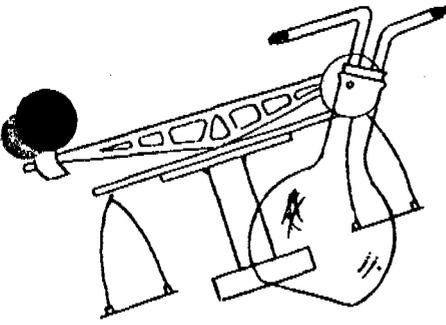
81-003447

SAMPLE: WATERS RECEIVED 12-29-80 FOR SCHEDULE "C" ANALYSIS.  
UNDER P.O. #280-60998.

INV.  
192<sup>00</sup>

	002	004
	12-22-80	12-22-80

	002	004
	12-22-80	12-22-80
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	558.00	540.00
Ammonia as NH <sub>3</sub> -N mg/l	.20	<.01
Arsenic as As mg/l	<.001	<.001
Barium as Ba mg/l	.150	.226
Bicarbonate as HCO <sub>3</sub> mg/l	680.00	634.40
Boron as B mg/l	.016	.011
Cadmium as Cd mg/l	<.001	<.001
Calcium as Ca mg/l	65.60	81.60
Carbon Dioxide as CO <sub>2</sub> mg/l	<.01	<.01
Carbonate as CO <sub>3</sub> mg/l	<.01	12.00
Chloride as Cl mg/l	36.00	26.00
Chromium as Cr (Hex.) mg/l	.004	.002



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

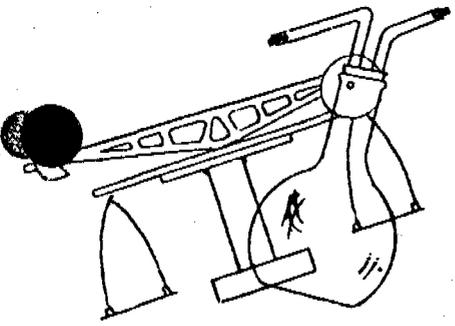
PAGE: 2

CERTIFICATE OF ANALYSIS  
81-003447

002                      004  
12-22-80                12-22-80

	002	004
Chromium as Cr (Tot) mg/l	<.001	<.001
Conductivity umhos/cm	1.950	2.000
Copper as Cu mg/l	<.001	.004
Fluoride as F mg/l	.82	.80
Hardness as CaCO3 mg/l	666	424
Hydroxide as OH mg/l	<.01	<.01
Iron as Fe (Dissolved) mg/l	.420	.610
Iron as Fe (Total) mg/l	1.530	2.880
Lead as Pb mg/l	<.001	<.001
Magnesium as Mg mg/l	120.48	52.80
Manganese as Mn mg/l	.180	.065
Mercury as Hg mg/l	<.00020	<.00020
Nickel as Ni mg/l	<.001	<.001
Nitrate as NO3-N mg/l	.10	.20
Nitrite as NO2-N mg/l	.22	.02
Oil and Grease mg/l	.20	5.20
Phosphate PO4-P Ortho mg/l	.040	.060

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# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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PHONE 485-5761

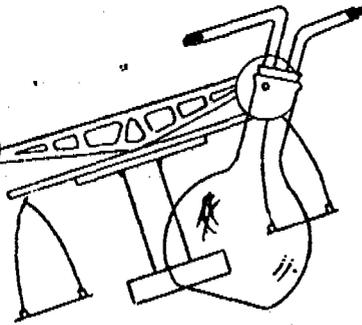
PAGE: 3

CERTIFICATE OF ANALYSIS  
81-003447

002                      004  
12-22-80              12-22-80

	002	004
Potassium as K mg/l	3.60	2.45
Selenium as Se mg/l	<.001	<.001
Silica as SiO2 Dissolved mg/l	8.75	8.65
Silver as Ag mg/l	<.001	<.001
Sodium as Na mg/l	200.00	310.00
Sulfate as SO4 mg/l	480	510
Suspended Solids mg/l	12.0	39.0
Total Dissolved Solids mg/l	1,240	1,490
Turbidity NTU	4.20	3.40
Zinc as Zn mg/l	.020	.017
pH Units	7.40	7.90

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/11/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

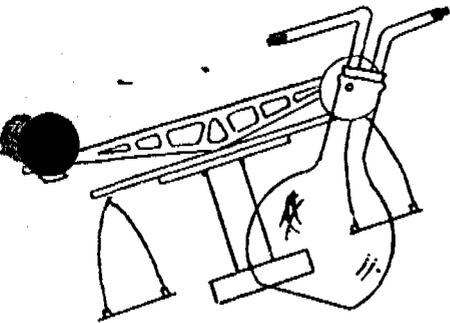
80-001904

INV.  
2962

SAMPLE: WATER RECEIVED 12-4-80 FOR SCHEDULE C ANALYSIS. LABELED  
1005 12-3-80. UNDER P.O. #280-60998.

005

Acidity as CaCO <sub>3</sub> mg/l	36.0	Alkalinity as CaCO <sub>3</sub> mg/l	414.00
Ammonia as NH <sub>3</sub> -N mg/l	<.01	Arsenic as As mg/l	<.001
Barium as Ba mg/l	.050	Bicarbonate as HCO <sub>3</sub> mg/l	505.08
Boron as B mg/l	.028	Cadmium as Cd mg/l	<.001
Calcium as Ca mg/l	105.60	Carbon Dioxide as CO <sub>2</sub> mg/l	<.01
Carbonate as CO <sub>3</sub> mg/l	<.01	Chloride as Cl mg/l	24.00
Chromium as Cr (Hex.) mg/l	<.001	Chromium as Cr (Tot) mg/l	.003
Conductivity umhos/cm	2,230	Copper as Cu mg/l	.005
Fluoride as F mg/l	.60	Hardness as CaCO <sub>3</sub> mg/l	620
Hydroxide as OH mg/l	<.01	Iron as Fe (Dissolved) mg/l	.560
Iron as Fe (Total) mg/l	.850	Lead as Pb mg/l	<.001
Magnesium as Mg mg/l	85.44	Manganese as Mn mg/l	.170
Mercury as Hg mg/l	<.00020	Nickel as Ni mg/l	.009
Nitrate as NO <sub>3</sub> -N mg/l	.65	Nitrite as NO <sub>2</sub> -N mg/l	<.01
Oil and Grease mg/l	.40	Phosphate PO <sub>4</sub> -P Ortho mg/l	.200



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

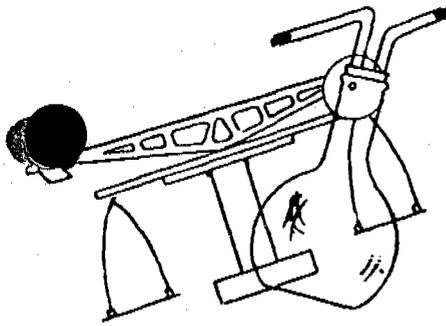
PAGE: 2

CERTIFICATE OF ANALYSIS

005

Potassium as K mg/l	8.50	Selenium as Se mg/l	<.001
Silica as SiO <sub>2</sub> Dissolved mg	12.50	Silver as Ag mg/l	<.001
Sodium as Na mg/l	265.00	Sulfate as SO <sub>4</sub> mg/l	710
Suspended Solids mg/l	2.0	Total Dissolved Solids mg/l	1,450
Turbidity NTU	1.20	Zinc as Zn mg/l	.052
pH Units	7.20		

FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/10/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

80-001903

INV  
#265

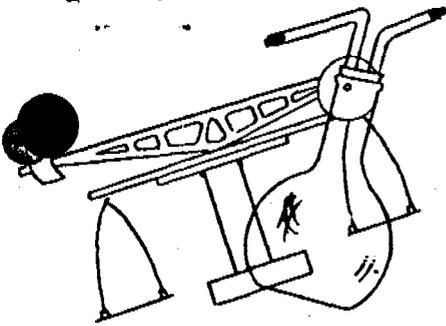
SAMPLE: SAMPLES RECEIVED 12-4-80 FOR SCHEDULE A ANALYSIS UNDER  
P.O. 280-60999.

002                      004  
12-3-80                12-3-80

	002	004
	12-3-80	12-3-80
Hardness as CaCO <sub>3</sub> mg/l	44.0	24.0
Alkalinity as CaCO <sub>3</sub> mg/l	648.00	510.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.560	.610
Manganese as Mn mg/l	.186	.085
Oil and Grease mg/l	.20	<.01
Selenium as Se mg/l	<.001	.005
Silver as Ag mg/l	.001	.002
Suspended Solids mg/l	8.0	4.0
Total Dissolved Solids mg/l	1,500	1,400
pH Units	7.20	7.40

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

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# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/10/80

## CERTIFICATE OF ANALYSIS

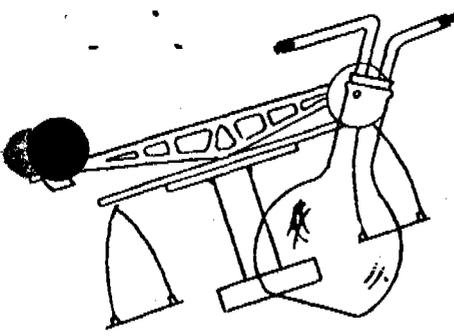
KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

80-001801

*INV. #28800*

SAMPLE: WATERS RECEIVED 11-26-80 FOR SCHEDULE C ANALYSIS UNDER  
P.O. #280-60998.

	UPR 11-24-80	LWR 11-24-80	ICELANDER 11-24-80
Hardness as CaCO <sub>3</sub> mg/l	16.0	22.0	30.0
Alkalinity as CaCO <sub>3</sub> mg/l	330.00	442.00	395.00
Ammonia as NH <sub>3</sub> -N mg/l	.10	<.01	<.01
Arsenic as As mg/l	<.001	<.001	<.001
Barium as Ba mg/l	.410	.551	.610
Bicarbonate as HCO <sub>3</sub> mg/l	402.60	539.24	481.90
Boron as B mg/l	.025	.030	.193
Cadmium as Cd mg/l	<.001	<.001	<.001
Calcium as Ca mg/l	56.00	40.00	112.00
Carbon Dioxide as CO <sub>2</sub> mg/l	<.01	<.01	<.01
Carbonate as CO <sub>3</sub> mg/l	<.01	<.01	<.01
Chloride as Cl mg/l	4.00	24.00	44.00
Chromium as Cr (Hex.) mg/l	.002	.001	.002



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

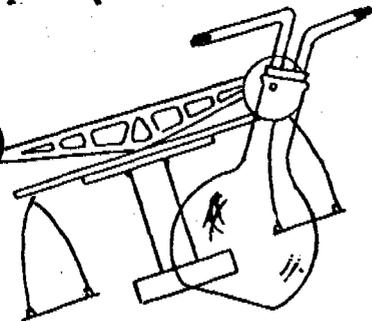
PAGE: 2

### CERTIFICATE OF ANALYSIS

80-001801

UPR	LWR	ICELANDER
11-24-80	11-24-80	11-24-80

	UPR 11-24-80	LWR 11-24-80	ICELANDER 11-24-80
Chromium as Cr (Tot) mg/l	.003	.004	.003
Conductivity umhos/cm	670	1,580	2,500
Copper as Cu mg/l	.003	.009	.010
Fluoride as F mg/l	.20	.68	.30
Hardness as CaCO3 mg/l	360	330	920
Hydroxide as OH mg/l	<.01	<.01	<.01
Iron as Fe (Dissolved) mg/l	.039	.112	.278
Iron as Fe (Total) mg/l	.144	.446	.299
Lead as Pb mg/l	<.001	<.001	<.001
Magnesium as Mg mg/l	52.60	55.20	153.60
Manganese as Mn mg/l	.016	.030	.036
Mercury as Hg mg/l	<.00020	<.00020	<.00020
Nickel as Ni mg/l	<.001	<.001	<.001
Nitrate as NO3-N mg/l	<.01	.24	1.12
Nitrite as NO2-N mg/l	<.01	.01	<.01
Oil and Grease mg/l	.40	<1.00	.80
Phosphate PO4-P Ortho mg/l	.020	<.001	.020



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 3

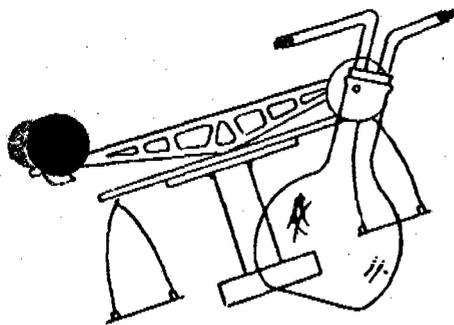
### CERTIFICATE OF ANALYSIS

80-001801

	UPR	LWR	ICELANDER
	11-24-80	11-24-80	11-24-80

Potassium as K mg/l	1.20	1.50	4.20
Selenium as Se mg/l	<.001	<.001	<.001
Silica as SiO2 Dissolved mg/l	13.00	9.10	17.00
Silver as Ag mg/l	<.001	<.001	<.001
Sodium as Na mg/l	32.50	250.00	200.00
Sulfate as SO4 mg/l	85.0	390	870
Suspended Solids mg/l	1.0	1.0	23.0
Total Dissolved Solids mg/l	435	1,030	1,630
Turbidity NTU	.30	.60	1.00
Zinc as Zn mg/l	.028	.033	.047
pH Units	7.90	7.80	7.60

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/10/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

80-001800

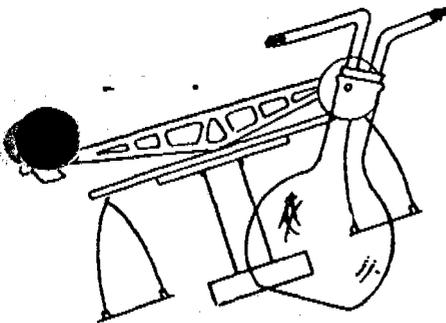
JNY  
86<sup>th</sup>

SAMPLE: WATERS RECEIVED 11-26-80 FOR SCHEDULE A ANALYSIS UNDER  
P.O. 280-60999.

002	004
11-24-80	11-24-80

	002	004
Hardness as CaCO <sub>3</sub> mg/l	32.0	26.0
Alkalinity as CaCO <sub>3</sub> mg/l	664.00	498.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.190	.230
Manganese as Mn mg/l	.025	.050
Oil and Grease mg/l	3.60	<1.00
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.003	.008
Suspended Solids mg/l	9.0	8.0
Total Dissolved Solids mg/l	1,160	1,151
pH Units	7.60	7.60

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/19/80

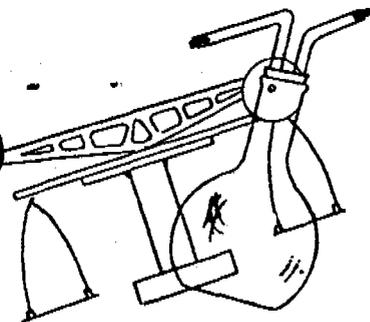
## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

80-002000 <sup>ENV</sup>  
\*2130  
+ corr #1386.

SAMPLE: WATERS RECEIVED 10-31-80 FOR SCHEDULE "B" ANALYSIS,  
UNDER P.O. #280-60999.

	UPR	LWR	ICELANDER
	GRASSY	GRASSY	10-28-80
	TRAIL	TRAIL	
	CREEK	CREEK	
=====			
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	304.00	470.00	400.00
Arsenic as As mg/l	<.001	<.001	<.001
Chloride as Cl mg/l	2.20	15.10	20.20
Conductivity umhos/cm	600	1,400	1,400
Iron as Fe (Dissolved) mg/l	.080	.156	.144
Iron as Fe (Total) mg/l	.156	.380	.320
Lead as Pb mg/l	<.001	<.001	<.001
Manganese as Mn mg/l	.011	.015	.010
Nitrate as NO <sub>3</sub> -N mg/l	<.01	.06	.86
Oil and Grease mg/l	3.20	<.01	54.80
Phosphate PO <sub>4</sub> -P Ortho mg/l	.060	.060	.060
Potassium as K mg/l	3.54	1.24	1.50



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

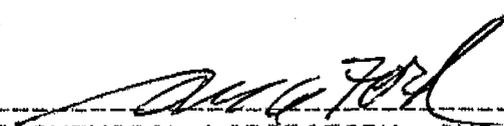
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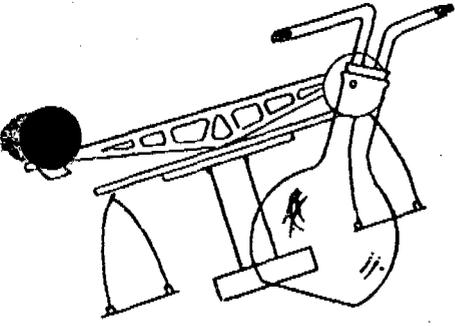
## CERTIFICATE OF ANALYSIS

80-002000

	UPR	LWR	ICELANDER
	GRASSY	GRASSY	10-28-80
	TRAIL	TRAIL	
	CREEK	CREEK	

Selenium as Se mg/l	<.001	<.001	<.001
Silver as Ag mg/l	<.001	.002	<.001
Sulfate as SO <sub>4</sub> mg/l	76.5	330	435
Suspended Solids mg/l	4.0	2.0	9.0
Total Dissolved Solids mg/l	420	980	980
pH Units	7.80	7.80	7.90

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/10/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
P.O. BOX D  
SUNNYSIDE, UTAH  
84539

80-001385

INV  
#438

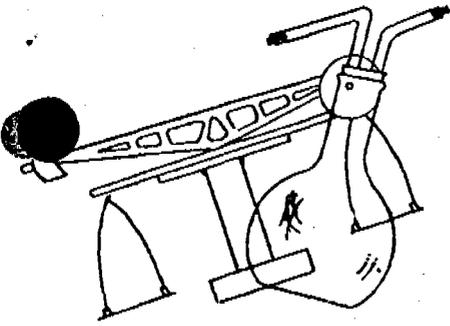
SAMPLE: WATER RECEIVED 10-31-80 LABELED 002 MINE WATER FOR  
SCHEDULE "A" ANALYSIS UNDER P.O. 280-60999.

RESULTS

002

Acidity as CaCO3 mg/l	8.0
Alkalinity as CaCO3 mg/l	728.00
Arsenic as As mg/l	<.001
Iron as Fe mg/l	.192
Manganese as Mn mg/l	.029
Oil and Grease mg/l	4.20
Selenium as Se mg/l	<.001
Silver as Ag mg/l	.004
Suspended Solids mg/l	24.0
Total Dissolved Solids mg/l	1,260
pH Units	7.60

FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 10/11/80  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-002785

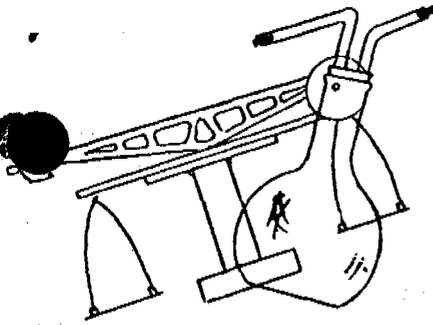
INV  
142R

84539

SAMPLE: CREEK WATERS RECEIVED 9-26-80 UNDER P.O. 280-60999.

UFR                      LWR  
9-24                      9-24

	UFR 9-24	LWR 9-24
Hardness as CaCO <sub>3</sub> mg/l	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	245.00	280.00
Arsenic as As mg/l	<.001	<.001
Chloride as Cl mg/l	2.5	10.6
Conductivity umhos/cm	550	750
Iron as Fe (Dissolved) mg/l	.086	.210
Iron as Fe (Total) mg/l	.200	.350
Lead as Pb mg/l	<.001	<.001
Manganese as Mn mg/l	.022	.038
Nitrate as NO <sub>3</sub> -N mg/l	<.01	.11
Oil and Grease mg/l	2.00	5.40
Phosphate PO <sub>4</sub> -P Ortho mg/l	.13	.35
Potassium as K mg/l	1.10	2.15



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

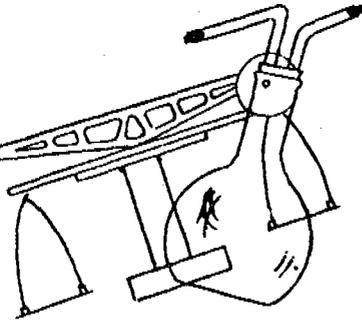
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2  
CERTIFICATE OF ANALYSIS

80-002785

	UFR 9-24	LWR 9-24
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Sulfate as SO4 mg/l	35.0	188
Suspended Solids mg/l	4.0	1.0
Total Dissolved Solids mg/l	359	490
pH Units	8.30	8.10

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 10/11/80  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-002784

ILV  
#868

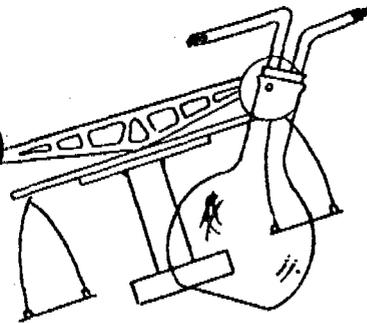
84539

SAMPLE: MINE WATERS RECEIVED 9-26-80 UNDER P.O. 280-60999.

002                      004

	002	004
Acidity as CaCO3 mg/l	<.1	<.1
Alkalinity as CaCO3 mg/l	513.00	430.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.185	.220
Manganese as Mn mg/l	.033	.065
Oil and Grease mg/l	<.01	19.80
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.002	.005
Suspended Solids mg/l	11.0	109
Total Dissolved Solids mg/l	1,645	1,677
pH Units	7.35	7.20

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 09/22/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

80-002107

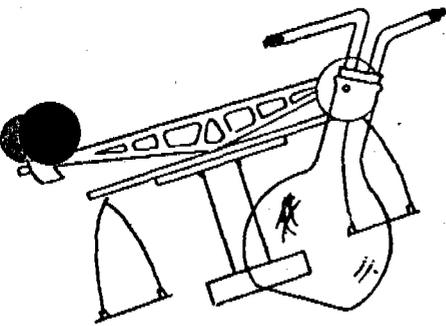
INV  
#26<sup>00</sup>

SAMPLE: WATERS RECEIVED 8-13-80 FOR SCHEDULE A ANALYSIS UNDER  
P.O. 280-60999.

002	004
MINE	MINE
WATER	WATER

	002	004
	MINE	MINE
	WATER	WATER
Hardness as CaCO <sub>3</sub> mg/l	42.0	30.0
Alkalinity as CaCO <sub>3</sub> mg/l	668.00	426.00
Arsenic as As mg/l	.001	.002
Iron as Fe mg/l	1.220	2.620
Manganese as Mn mg/l	.200	.030
Oil and Grease mg/l	1.00	1.20
Selenium as Se mg/l	.003	.004
Silver as Ag mg/l	.002	.004
Suspended Solids mg/l	2.0	43.0
Total Dissolved Solids mg/l	1,600	1,500
pH Units	7.30	7.50

*Rud Ford*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 09/22/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-002033

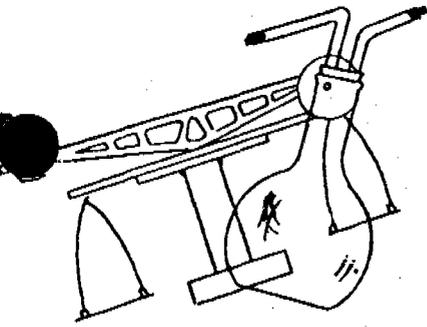
INV.  
#213

84539

SAMPLE: WATERS DATED 8-5-80 RECEIVED 8-7-80 FOR SERIES "B" ANALYSIS  
UNDER P.O. 280-60999.

	UPPER GRASSY TRAIL CREEK	LOWER GRASSY TRAIL CREEK	ICELANDER CREEK
Acidity as CaCO3 mg/l	<.1	<.1	<.1
Alkalinity as CaCO3 mg/l	264.00	336.00	368.00
Arsenic as As mg/l	<.001	<.001	<.001
Chloride as Cl mg/l	14.0	26.0	48.0
Conductivity umhos/cm	590	1,240	1,700
Iron as Fe (Dissolved) mg/l	.040	.095	.130
Iron as Fe (Total) mg/l	.080	.110	.210
Lead as Pb mg/l	<.002	<.002	<.002
Manganese as Mn mg/l	.010	.002	.011
Nitrate as NO3-N mg/l	.03	.03	1.29
Oil and Grease mg/l	3.40	3.20	4.40
Phosphate PO4-P Ortho mg/l	.260	.160	.020
Potassium as K mg/l	1.25	3.36	4.04

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or, extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

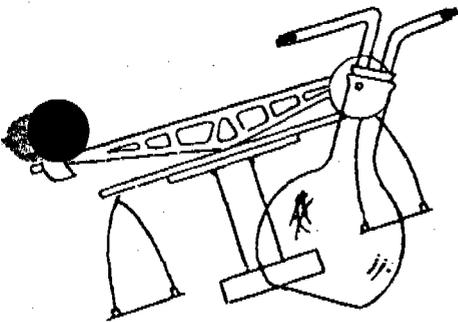
PAGE: 2

**CERTIFICATE OF ANALYSIS**  
80-002033

UPPER GRASSY TRAIL CREEK	LOWER GRASSY TRAIL CREEK	ICELANDER CREEK
-----------------------------------	-----------------------------------	--------------------

=====	=====	=====	=====
Selenium as Se mg/l	<.001	<.001	.003
Silver as Ag mg/l	<.001	<.001	<.001
Sulfate as SO4 mg/l	64.5	433	677
Suspended Solids mg/l	8.0	5.0	18.0
Total Dissolved Solids mg/l	401	830	1,105
pH Units	8.20	8.20	8.00

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 08/16/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-000928

84539

SAMPLE:

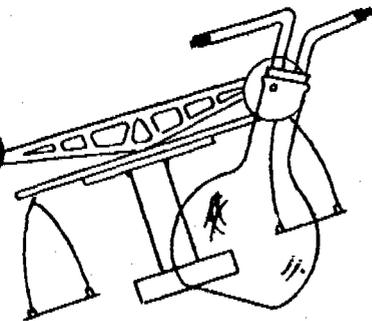
MINE WATERS DATED 7-28-80 RECEIVED 7-31-80 UNDER  
PO 280-60999

INV  
26

	SAMPLE 002	SAMPLE 004
Acidity as CaCO <sub>3</sub> mg/l	10.0	12.0
Alkalinity as CaCO <sub>3</sub> mg/l	638.00	488.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.168	.200
Manganese as Mn mg/l	.033	.050
Oil and Grease mg/l	6.20	6.60
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.004	.002
Suspended Solids mg/l	13.0	310
Total Dissolved Solids mg/l	1,400	1,450
pH Units	7.80	7.60

*Blank used*

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# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 08/14/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-000705

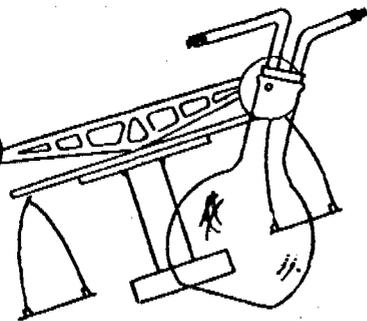
11V  
1213

94539

SAMPLE: WATERS DATED 7-7-80 RECEIVED 7-14-80 FOR SCHEDULE B ANALYSIS  
UNDER P.C. 290-60999.

ICELANDER UFR LWR

	ICELANDER UFR	LWR	
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	380.00	240.00	266.00
Arsenic as As mg/l	<.001	<.001	<.001
Chloride as Cl mg/l	40.0	2.0	8.0
Conductivity umhos/cm	1,700	550	700
Iron as Fe (Dissolved) mg/l	.020	.020	.240
Iron as Fe (Total) mg/l	.490	.210	.370
Lead as Pb mg/l	.002	<.001	<.001
Manganese as Mn mg/l	.040	.020	.035
Nitrate as NO <sub>3</sub> -N mg/l	1.36	<.01	<.01
Oil and Grease mg/l	<.10	5.00	<.10
Phosphate PO <sub>4</sub> -P (Ortho) mg/l	.040	.170	.170
Potassium as K mg/l	4.45	1.09	1.96



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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PHONE 485-5761

PAGE: 2

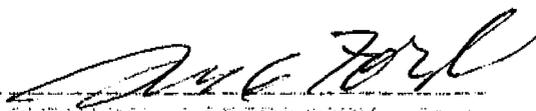
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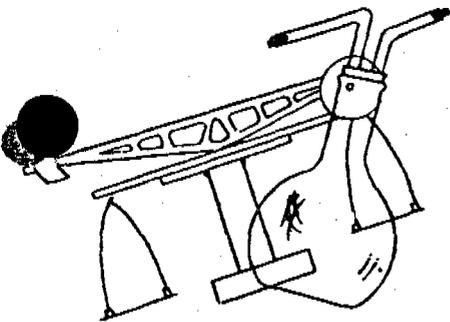
80-000705

ICELANDER UPR

LWR

Selenium as Se mg/l	.003	<.001	<.001
Silver as Ag mg/l	.002	<.001	<.001
Sulfate as SO <sub>4</sub> mg/l	465	33.0	125
Suspended Solids mg/l	12.0	30.0	10.0
Total Dissolved Solids mg/l	1,300	330	450
Units	7.50	8.20	8.00

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/10/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

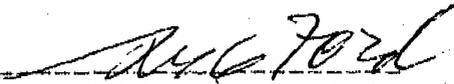
84539

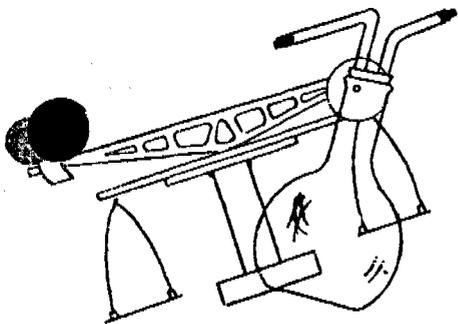
80-000516

INV  
8/80

SAMPLE: WATER SAMPLES FOR SCHEDULE A ANALYSIS DATED 6-26-80 RECEIVED  
6-30-80 UNDER P.O. 280-60999.

	SAMPLE 002	SAMPLE 004
Hardness as CaCO <sub>3</sub> mg/l	12.0	10.0
Alkalinity as CaCO <sub>3</sub> mg/l	592.00	630.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.185	.420
Manganese as Mn mg/l	.046	.059
Oil and Grease mg/l	3.00	2.20
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	.002
Suspended Solids mg/l	15.0	12.0
Total Dissolved Solids mg/l	1.720	1.788
pH Units	7.80	7.85

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/14/80

**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-000351

*SINY  
E60*

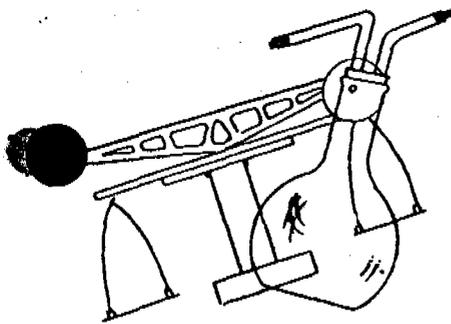
84539

SAMPLE: WATERS DATED 6-16-80 RECEIVED 6-19-80 FOR SCHEDULE "A"  
ANALYSIS UNDER P.O. 280-60999.

002                      004

Acidity as CaCO <sub>3</sub> mg/l	4.0	8.0
Alkalinity as CaCO <sub>3</sub> mg/l	520.00	428.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.162	.210
Manganese as Mn mg/l	.040	.055
Oil and Grease mg/l	7.80	3.00
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.003	.003
Suspended Solids mg/l	7.0	6.0
Total Dissolved Solids mg/l	1,625	1,689
pH Units	7.40	7.65

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/10/80

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

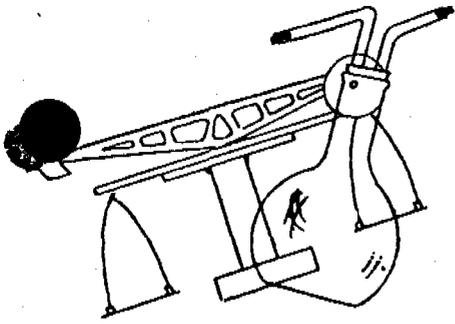
84539

EO-000155

INV.  
#288<sup>10</sup>

SAMPLE: WATERS DATED 6-2-80 RECEIVED 6-4-80 FOR SCHEDULE "C"  
ANALYSIS UNDER P.O. 280-60998.

	UFR	LWR	ICELANDER
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	246.00	230.00	356.00
Ammonia as NH <sub>3</sub> -N mg/l	.10	<.01	<.01
Arsenic as As mg/l	<.001	<.001	<.001
Barium as Ba mg/l	.244	.295	.465
Bicarbonate as HCO <sub>3</sub> mg/l	251.32	246.44	414.80
Boron as B mg/l	.060	.080	.235
Cadmium as Cd mg/l	<.001	<.001	<.001
Calcium as Ca mg/l	49.60	53.60	148.80
Carbon Dioxide as CO <sub>2</sub> mg/l	<.01	<.01	<.01
Carbonate as CO <sub>3</sub> mg/l	24.00	16.80	9.60
Chloride as Cl mg/l	2.0	4.0	44.0
Chromium as Cr (Hex.) mg/l	.005	.004	.004



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE

SALT LAKE CITY, UTAH 84115

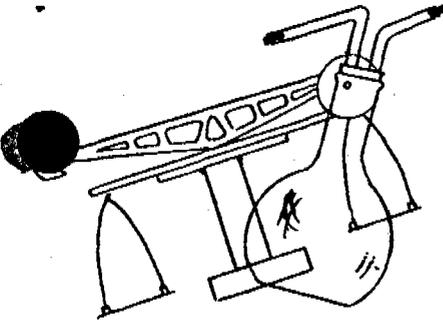
PHONE 485-5761

PAGE: 2

CERTIFICATE OF ANALYSIS

80-000155

	UPR	LWR	ICELANDER
Chromium as Cr (Tot) mg/l	<.001	<.001	<.001
Conductivity umhos/cm	550	530	1,950
Copper as Cu mg/l	.012	.005	.006
Fluoride as F mg/l	.18	.20	.25
Hardness as CaCO <sub>3</sub> mg/l	260	256	710
Hydroxide as OH mg/l	<.01	<.01	<.01
Iron as Fe (Dissolved) mg/l	.030	.065	.140
Iron as Fe (Total) mg/l	.140	.430	.550
Lead as Pb mg/l	<.001	<.001	<.001
Magnesium as Mg mg/l	32.64	29.28	81.12
Manganese as Mn mg/l	.015	.024	.026
Mercury as Hg mg/l	<.00020	<.00020	<.00020
Nickel as Ni mg/l	<.010	<.010	<.010
Nitrate as NO <sub>3</sub> -N mg/l	.11	.08	2.03
Nitrite as NO <sub>2</sub> -N mg/l	<.01	<.01	.12
Oil and Grease mg/l	3.40	1.60	2.20
Phosphate PO <sub>4</sub> -P Ortho mg/l	<.001	<.001	<.001



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

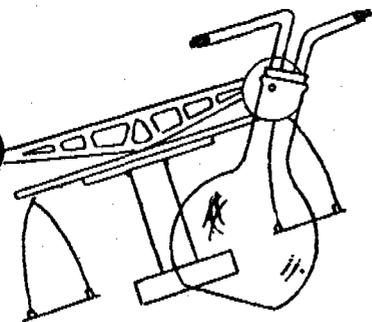
PAGE: 3

### CERTIFICATE OF ANALYSIS

80-000155

	UPR	LWR	ICELANDER
Potassium as K mg/l	1.11	1.23	4.00
Selenium as Se mg/l	<.001	<.001	.005
Silica as SiO <sub>2</sub> Dissolved mg/l	18.50	17.00	26.50
Silver as Ag mg/l	<.001	<.001	<.001
Sodium as Na mg/l	36.50	31.40	165.00
Sulfate as SO <sub>4</sub> mg/l	80.0	81.0	610
Suspended Solids mg/l	23.5	77.5	59.0
Total Dissolved Solids mg/l	355	342	1,270
Turbidity NTU	5.00	26.00	10.00
Zinc as Zn mg/l	.025	.035	.050
pH Units	8.00	8.00	7.80

*M. G. Ford*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/09/80

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-000156

*W. W.  
86/80*

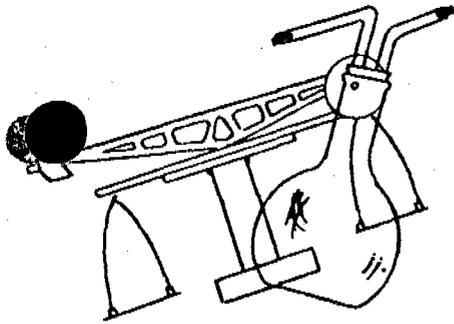
34539

SAMPLE: MINE WATERS DATED 6-2-80 RECEIVED 6-4-80 FOR SCHEDULE "A"  
ANALYSIS UNDER P.O. 280-60999.

002                      004

	002	004
Acidity as CaCO3 mg/l	10.0	12.0
Alkalinity as CaCO3 mg/l	626.00	450.00
Arsenic as As mg/l	.001	<.001
Iron as Fe mg/l	.166	.329
Manganese as Mn mg/l	.033	.042
Oil and Grease mg/l	5.80	1.60
Selenium as Se mg/l	.003	.001
Silver as Ag mg/l	.002	.002
Suspended Solids mg/l	19.5	17.0
Total Dissolved Solids mg/l	1,600	1,400
pH Units	7.80	7.50

*W. W. Ford*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/09/80

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

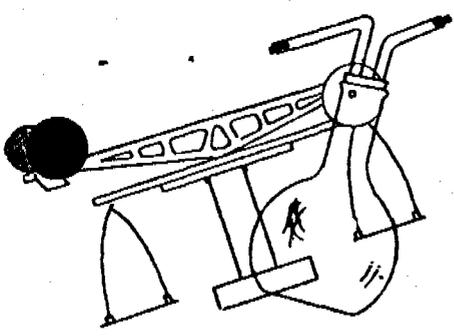
80-009997 <sup>INV</sup>  
4300

SAMPLE: WATER LABELED 004 DATED 5/20/80 RECEIVED 5/27/80 UNDER  
P.O. #280-60999 FOR SCHEDULE A ANALYSIS.

### 004 RESULTS

Hardness as CaCO <sub>3</sub> mg/l	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	618.00
Arsenic as As mg/l	<.001
Iron as Fe mg/l	.350
Manganese as Mn mg/l	.050
Oil and Grease mg/l	4.00
Selenium as Se mg/l	.002
Silver as Ag mg/l	.002
Suspended Solids mg/l	16.5
Total Dissolved Solids mg/l	1,600
pH Units	7.80

FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 05/19/80

**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

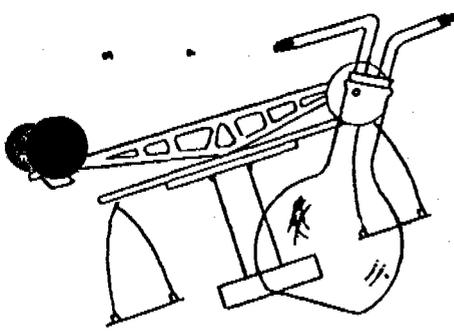
84539

80-009774

*INV  
# 1422*

SAMPLE: WATERS DATED 5-5-80 RECEIVED 5-6-80 FOR SCHEDULE B ANALYSIS  
UNDER P.O. 280-60999.

	UPR	LWR
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	242.00	270.00
Arsenic as As mg/l	<.001	<.001
Chloride as Cl mg/l	2.0	4.0
Conductivity umhos/cm	460	510
Iron as Fe (Dissolved) mg/l	.038	.065
Iron as Fe (Total) mg/l	.180	.446
Lead as Pb mg/l	<.001	<.001
Manganese as Mn mg/l	.012	.030
Nitrate as NO <sub>3</sub> -N mg/l	.04	.05
Oil and Grease mg/l	.20	4.80
Phosphate PO <sub>4</sub> -P Ortho mg/l	<.001	<.001
Potassium as K mg/l	2.36	8.95



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

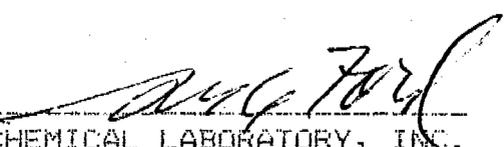
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

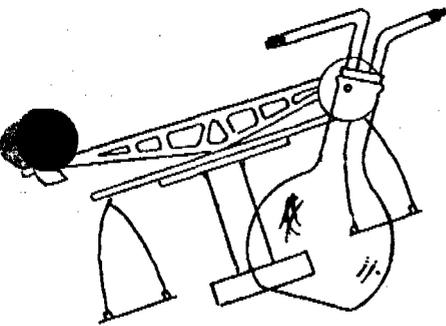
PAGE: 2

### CERTIFICATE OF ANALYSIS

80-009774

	LPR	LWR
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	.005	.009
Sulfate as SO4 mg/l	54.0	76.5
Suspended Solids mg/l	48.5	33.3
Total Dissolved Solids mg/l	320	360
Units	7.90	7.90

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 05/15/80

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

80-009770

INV.  
#26.0

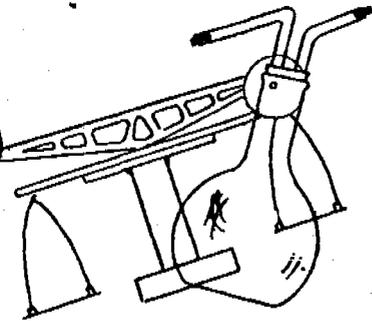
SAMPLE: MINE WATERS DATED 5-5-80 RECEIVED 5-6-80 FOR SCHEDULE A  
ANALYSIS UNDER P.O. 280-60999.

002                      004  
RESULTS                RESULTS

	002 RESULTS	004 RESULTS
Hardness as CaCO3 mg/l	12.0	14.0
Alkalinity as CaCO3 mg/l	656.00	620.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.150	.336
Manganese as Mn mg/l	.035	.044
Oil and Grease mg/l	3.00	2.60
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	19.5	17.5
Total Dissolved Solids mg/l	1,700	1,700
pH Units	7.80	7.80

*Aug Ford*  
FORD CHEMICAL LABORATORY, INC.

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# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 04/25/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

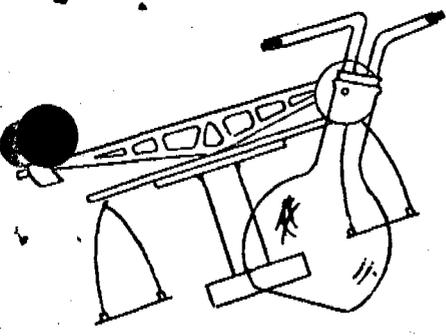
80-009421

INV.  
#2130

84539

SAMPLE: CREEK WATER SAMPLES DATED 4-2-80 RECEIVED 4-7-80 FOR  
SCHEDULE "B" ANALYSIS UNDER P.O. 280-60999.

	ICELANDER	UPPER	LOWER
		CREEK	CREEK
Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	382.00	298.00	286.00
Arsenic as As mg/l	<.001	<.001	<.001
Chloride as Cl mg/l	50.0	6.0	12.0
Conductivity umhos/cm	1,600	590	720
Iron as Fe (Dissolved) mg/l	.130	.026	.055
Iron as Fe (Total) mg/l	.330	.136	.450
Lead as Pb mg/l	<.001	<.001	<.001
Manganese as Mn mg/l	.030	.010	.028
Nitrate as NO <sub>3</sub> -N mg/l	2.00	.02	<.01
Oil and Grease mg/l	6.00	4.40	2.60
Phosphate PO <sub>4</sub> -P Ortho mg/l	.050	.040	.620
Potassium as K mg/l	7.85	2.25	8.57



# Ford Chemical

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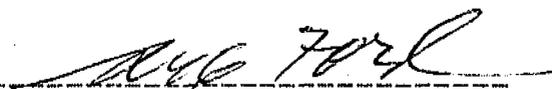
*Bacteriological and Chemical Analysis*

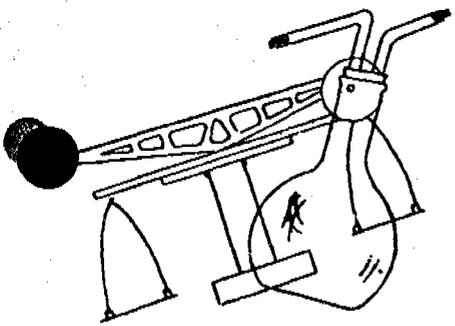
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2

CERTIFICATE OF ANALYSIS  
80-009421

	ICELANDER	UPPER CREEK	LOWER CREEK
Selenium as Se mg/l	<.001	<.001	<.001
Silver as Ag mg/l	.006	.002	.008
Sulfate as SO <sub>4</sub> mg/l	680	636	938
Suspended Solids mg/l	25.5	2.0	46.2
Total Dissolved Solids mg/l	1,120	410	495
PH Units	8.10	8.30	8.20

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 05/06/80

CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-009664

INV  
#868

84539

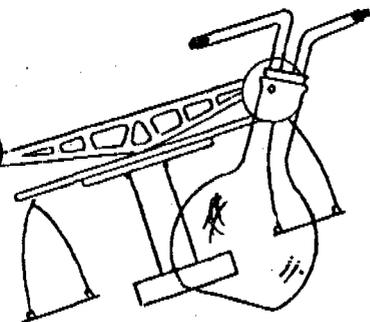
SAMPLE: WATER SAMPLES DATED 4-22-80 RECEIVED 4-25-80 FOR SEMI-MONTHLY "A" ANALYSIS UNDER P.O. 280-60999.

002                      004

	002	004
Acidity as CaCO3 mg/l	12.0	14.0
Alkalinity as CaCO3 mg/l	594.00	698.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.150	.430
Manganese as Mn mg/l	.040	.061
Oil and Grease mg/l	1.50	4.00
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	8.5	10.0
Total Dissolved Solids mg/l	1,585	1,639
pH Units	7.98	8.00

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 04/25/80

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

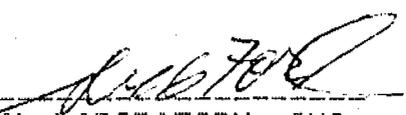
80-009420

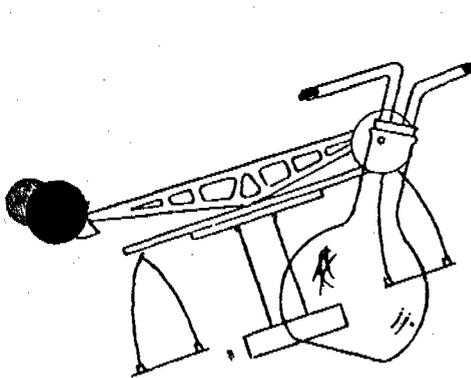
INN  
\*4300

SAMPLE: MINE WATER SAMPLE DATED 4-2-80 RECEIVED 4-7-80 FOR  
SCHEDULE "A" ANALYSIS.

MINE  
WATER  
4-2-80  
**002**

Hardness as CaCO <sub>3</sub> mg/l	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	670.00
Arsenic as As mg/l	<.001
Iron as Fe mg/l	.440
Manganese as Mn mg/l	.060
Oil and Grease mg/l	5.40
Selenium as Se mg/l	<.001
Silver as Ag mg/l	<.001
Suspended Solids mg/l	9.5
Total Dissolved Solids mg/l	1,450
pH Units	7.80

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

**RECEIVED**  
MAR 27 1980  
KAISER STEEL  
SUNNYSIDE, UTAH

DATE: 03/26/80  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH  
84539

80-009201 *Jur*  
*1860*

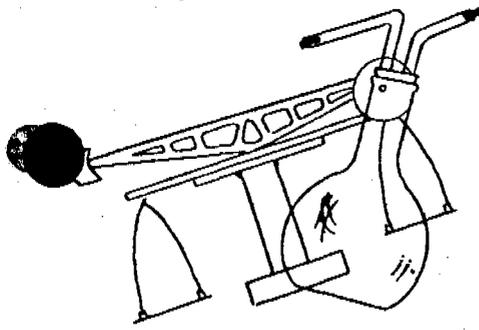
SAMPLE: MINING WATER SAMPLES DATED 3/18/80 RECEIVED 3/20/80 FOR  
SCHEDULE A ANALYSIS. P.O. # 280-60999

002                      004

	002	004
Acidity as CaCO3 mg/l	34.0	32.0
Alkalinity as CaCO3 mg/l	610.00	540.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.120	.480
Manganese as Mn mg/l	.036	.059
Oil and Grease mg/l	20.40	13.80
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	43.5	12.0
Total Dissolved Solids mg/l	1,380	1,210
pH Units	7.90	7.80

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE

**RECEIVED**  
MAR 27 1980  
KAISER STEEL  
SUNNYSIDE, UTAH

DATE: 03/26/80  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

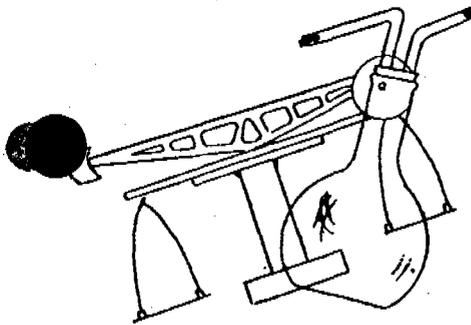
80-009115 *low*  
*\*2130*

84539

SAMPLE: WATER DATED 3/5/80 RECEIVED 3/12/80 FOR MONTHLY ANALYSIS  
UNDER P.O. #280-60999.

	ICELANDER UPR	LWR	
Acidity as CaCO3 mg/l	6.0	12.0	2.0
Alkalinity as CaCO3 mg/l	350.00	282.00	450.00
Arsenic as As mg/l	<.001	<.001	<.001
Chloride as Cl mg/l	46.0	4.0	34.0
Conductivity umhos/cm	1,920	560	1,620
Iron as Fe (Dissolved) mg/l	.150	.025	.065
Iron as Fe (Total) mg/l	.380	.180	.440
Lead as Pb mg/l	<.001	<.001	<.001
Manganese as Mn mg/l	.032	.003	.025
Nitrate as NO3-N mg/l	1.80	1.60	1.65
Oil and Grease mg/l	14.00	<1.00	3.00
Phosphate PO4-P Ortho mg/l	.220	.140	.100
Potassium as K mg/l	5.30	1.20	6.85

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# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

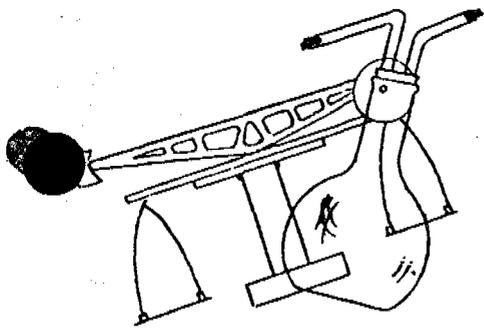
PAGE: 2  
CERTIFICATE OF ANALYSIS

79-009115

ICELANDER UPR LWR

	ICELANDER	UPR	LWR
Selenium as Se mg/l	<.001	<.001	<.001
Silver as Ag mg/l	.002	<.001	.003
Sulfate as SO4 mg/l	700	640	640
Suspended Solids mg/l	31.5	31.5	39.5
Total Dissolved Solids mg/l	1,250	380	1,058
Units	8.00	8.40	8.20

FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 03/20/80  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

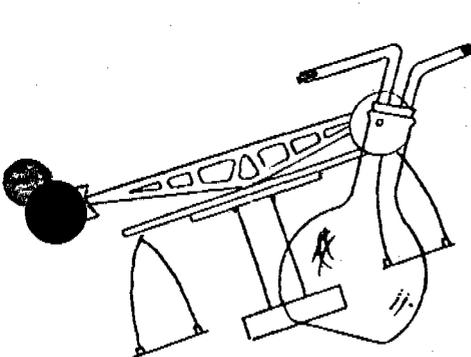
84539

80-008983 INV  
#266

SAMPLE: MINE WATER SAMPLES DATED 2/26/80 RECEIVED 2/28/80 FOR  
SCHEDULE A ANALYSIS. P.O. # 280-60999

	002	004
Acidity as CaCO <sub>3</sub> mg/l	36.0	32.0
Alkalinity as CaCO <sub>3</sub> mg/l	620.00	560.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.100	.530
Manganese as Mn mg/l	.040	.065
Oil and Grease mg/l	8.00	6.00
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	23.0	12.5
Total Dissolved Solids mg/l	1,377	1,285
pH Units	7.95	7.86

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 03/05/80  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-008860

84539

SAMPLE: MINE WATER DATED 2/12/80 RECEIVED 2/14/80 FOR SCHEDULE A ANALYSIS.

	STATION 002	STATION 004
Acidity as CaCO <sub>3</sub> mg/l	36.0	30.0
Alkalinity as CaCO <sub>3</sub> mg/l	620.00	550.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.112	.520
Manganese as Mn mg/l	.035	.088
Oil and Grease mg/l	5.60	3.40
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	13.0	2.0
Total Dissolved Solids mg/l	1,368	1,234
pH Units	7.88	7.65

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 03/05/80  
**CERTIFICATE OF ANALYSIS**

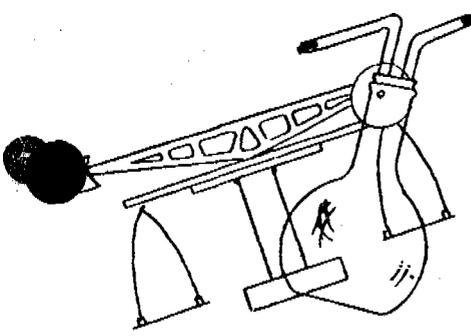
KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-008789

84539

SAMPLE: CREEK WATER SAMPLES DATED 2/04/80 RECEIVED 2/07/80 FOR  
MONTHLY ANALYSIS

	LOWER	UPPER
Acidity as CaCO <sub>3</sub> mg/l	16.0	18.0
Alkalinity as CaCO <sub>3</sub> mg/l	450.00	284.00
Arsenic as As mg/l	<.001	<.001
Chloride as Cl mg/l	42.0	40.0
Conductivity umhos/cm	1,600	650
Iron as Fe (Dissolved) mg/l	.070	.020
Iron as Fe (Total) mg/l	.680	.110
Lead as Pb mg/l	<.001	<.001
Manganese as Mn mg/l	.020	<.001
Nitrate as NO <sub>3</sub> -N mg/l	.08	<.01
Oil and Grease mg/l	6.80	<1.00
Potassium as K mg/l	5.22	1.22
Selenium as Se mg/l	<.001	<.001



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

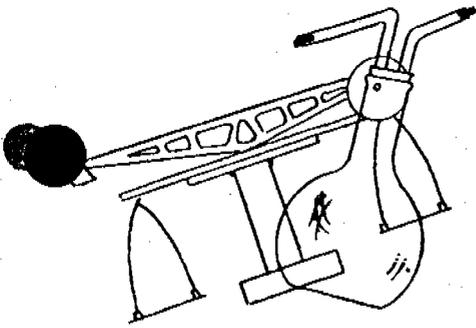
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2  
**CERTIFICATE OF ANALYSIS**

79-008789

	LOWER	UPPER
Silver as Ag mg/l	.002	<.001
Sulfate as SO4 mg/l	480	80.0
Suspended Solids mg/l	26.0	37.5
Total Dissolved Solids mg/l	1,050	420
pH Units	8.30	8.20

*Neil Ford*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

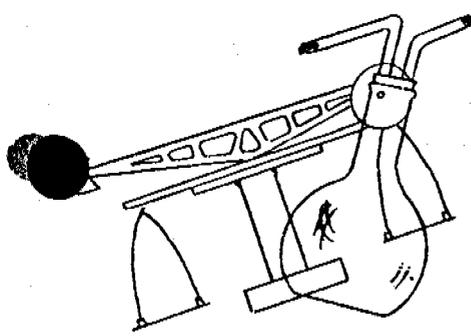
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2  
**CERTIFICATE OF ANALYSIS**

---

Sulfate as SO <sub>4</sub> mg/l	610	Suspended Solids mg/l	39.5
Total Dissolved Solids mg/l	1,238	Turbidity NTU	2.00
Zinc as Zn mg/l	.010	pH Units	8.10

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 02/14/80  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

80-008742

84539

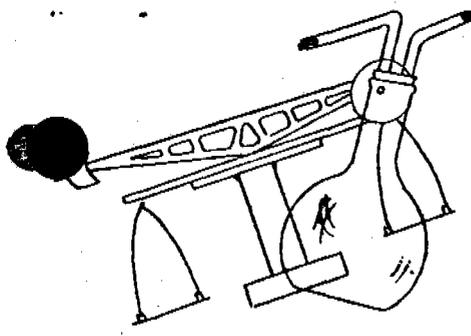
*INV*  
*8/8*

SAMPLE: MINE WATER SAMPLES DATED 1/29/80 RECEIVED 2/01/80 FOR  
SCHEDULE A ANALYSIS

	002	004
Acidity as CaCO3 mg/l	34.0	32.0
Alkalinity as CaCO3 mg/l	630.00	550.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.095	.550
Manganese as Mn mg/l	.033	.072
Oil and Grease mg/l	8.4	3.4
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	9.0	4.0
Total Dissolved Solids mg/l	1,400	1,250
pH Units	7.90	7.80

*[Signature]*  
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LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 02/05/80  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

80-008589

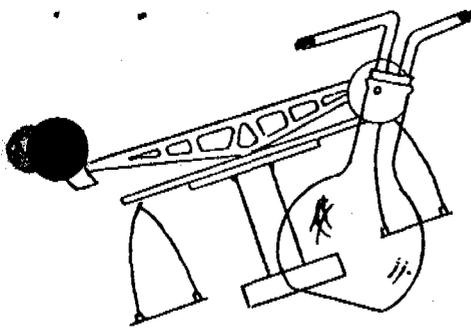
*HW*  
*142*

SAMPLE: CREEK WATER DATED 1/15/80 RECEIVED 1/17/80 FOR SERIES  
B ANALYSIS.

UPPER	LOWER
GRASSY	GRASSY
TRAIL	TRAIL
CREEK	CREEK

Hardness as CaCO <sub>3</sub> mg/l	18.0	12.0
Alkalinity as CaCO <sub>3</sub> mg/l	288.00	478.00
Arsenic as As mg/l	<.001	.003
Chloride as Cl mg/l	2.0	42.0
Conductivity umhos/cm	520	1,700
Iron as Fe (Dissolved) mg/l	.060	.078
Iron as Fe (Total) mg/l	.140	.136
Lead as Pb mg/l	<.001	<.001
Manganese as Mn mg/l	.045	.050
Nitrate as NO <sub>3</sub> -N mg/l	<.01	.16
Oil and Grease mg/l	9.8	4.2
Phosphate PO <sub>4</sub> -P Ortho mg/l	.020	.100
Potassium as K mg/l	5.68	6.60

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# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

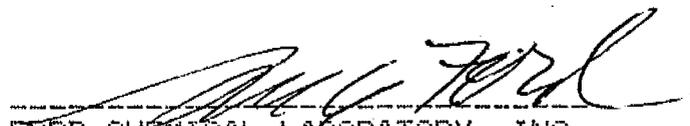
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

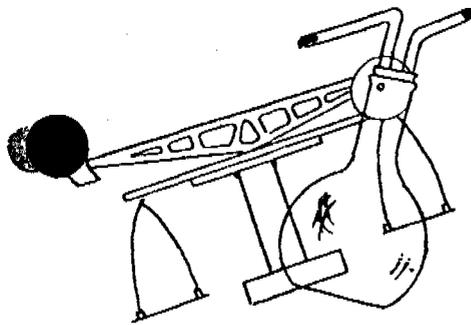
PAGE: 2

### CERTIFICATE OF ANALYSIS

79-008589

	UPPER GRASSY TRAIL CREEK	LOWER GRASSY TRAIL CREEK
Selenium as Se mg/l	<.001	.004
Silver as Ag mg/l	<.001	.001
Sulfate as SO <sub>4</sub> mg/l	78.0	600
Suspended Solids mg/l	105	9.0
Total Dissolved Solids mg/l	310	1,100
pH Units	7.80	8.20

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/31/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-008308

84539

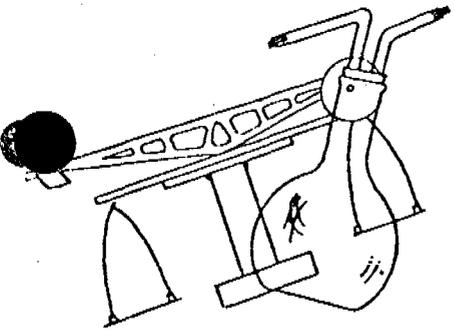
INV.  
#114-

SAMPLE: WATER SAMPLES DATED 12/18/79 RECEIVED 12/19/79

	MINE WATER 002	MINE WATER 003	MINE WATER 004
--	----------------------	----------------------	----------------------

Acidity as CaCO3 mg/l	42.0	<.1	26.0
Alkalinity as CaCO3 mg/l	620.00	510.00	480.00
Arsenic as As mg/l	<.001	<.001	<.001
Iron as Fe (Total) mg/l	.088	.210	.430
Manganese as Mn mg/l	.060	.062	.059
Oil and Grease mg/l	3.8	2.0	3.0
Silver as Ag mg/l	<.001	<.001	<.001
Suspended Solids mg/l	13.0	1.0	7.5
Total Dissolved Solids mg/l	1,700	1,600	1,600
pH Units	7.90	8.60	7.80

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/26/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-008185

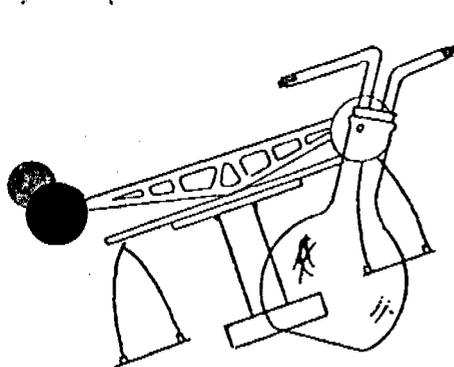
34539

INV  
\*27

SAMPLE: WATER DATED 12/4/79 RECEIVED 12/6/79 FOR TEST "C"

	SAMPLE 004	LOWER GRASSY TRAIL CREEK	UPPER GRASSY TRAIL CREEK
Alkalinity as CaCO <sub>3</sub> mg/l	456.00	472.00	308.00
Arsenic as As mg/l	<.001	<.001	.004
Barium as Ba mg/l	.021	.029	.055
Bicarbonate as HCO <sub>3</sub> mg/l	556.32	522.16	373.76
Boron as B mg/l	.485	.485	.100
Cadmium as Cd mg/l	.004	<.001	<.001
Calcium as Ca mg/l	100.80	63.20	64.00
Carbonate as CO <sub>3</sub> mg/l	<.01	26.40	<.01
Chloride as Cl mg/l	32.0	44.0	6.0
Chromium as Cr (Hex.) mg/l	<.001	<.001	<.001
Chromium as Cr (Tot) mg/l	<.001	.003	<.001
Conductivity umhos/cm	3,300	1,760	1,800
Copper as Cu mg/l	.009	.009	.003

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# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

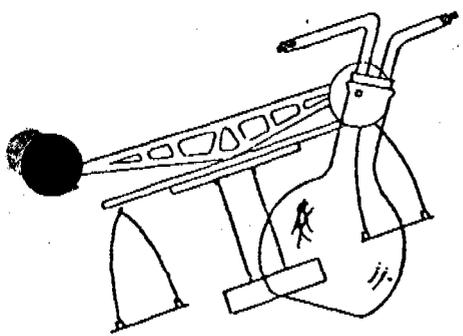
PAGE: 2

## CERTIFICATE OF ANALYSIS

79-008185

	SAMPLE 004	LOWER GRASSY TRAIL CREEK	UPPER GRASSY TRAIL CREEK
Fluoride as F mg/l	.86	.57	.17
Hardness as CaCO3 mg/l	568	326	322
Iron as Fe (Dissolved) mg/l	1.240	.026	.029
Iron as Fe (Total) mg/l	1.985	.035	.039
Lead as Pb mg/l	<.001	<.001	<.001
Magnesium as Mg mg/l	75.84	40.32	33.88
Manganese as Mn mg/l	.650	.014	.039
Mercury as Hg mg/l	<.00020	<.00020	<.00020
Nickel as Ni mg/l	.013	.016	<.001
Nitrate as NO3-N mg/l	.13	.10	.36
Oil and Grease mg/l	2.8	.6	1.2
Potassium as K mg/l	8.610	1.320	4.550
Selenium as Se mg/l	<.001	<.001	.002
Silica as SiO2 mg/l	13.00	13.00	19.00
Silver as Ag mg/l	.001	<.001	<.001
Sodium as Na mg/l	510.40	294.00	289.00
Sulfate as SO4 mg/l	1,142	430	590

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Bacteriological and Chemical Analysis

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 3

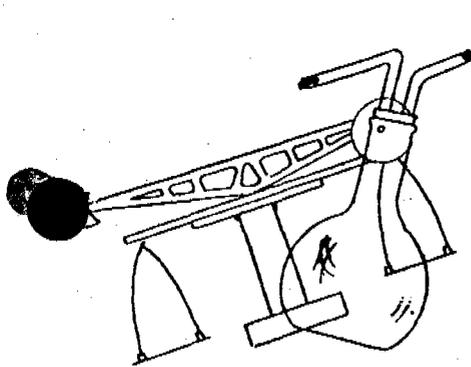
## CERTIFICATE OF ANALYSIS

79-008185

SAMPLE	LOWER	UPPER
004	GRASSY	GRASSY
	TRAIL	TRAIL
	CREEK	CREEK

Suspended Solids mg/l	18.0	.5	<.1
Total Dissolved Solids mg/l	2,150	1,150	1,170
Turbidity NTU	10.00	5.00	2.00
Zinc as Zn mg/l	.116	.005	.012
Units	7.60	8.40	8.00

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/24/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

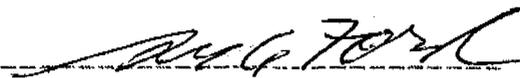
79-008022

INV  
876

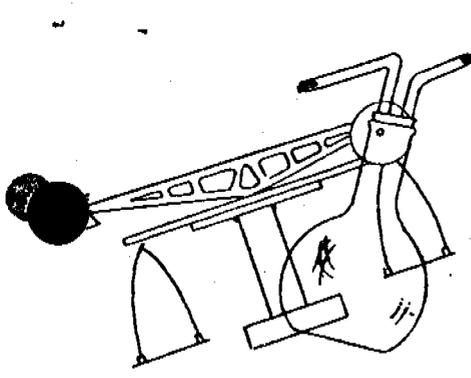
SAMPLE: WATER SAMPLES DATED 11/14/79 RECEIVED 11/16/79

A 002      A TEST  
                  004

Acidity as CaCO <sub>3</sub> mg/l	22.0	24.0
Alkalinity as CaCO <sub>3</sub> mg/l	556.00	468.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe (Total) mg/l	.073	.760
Manganese as Mn mg/l	.075	.083
Oil and Grease mg/l	.8	1.8
Silver as Ag mg/l	.003	.003
Suspended Solids mg/l	9.0	9.0
Total Dissolved Solids mg/l	1,600	1,500
pH Units	7.60	7.60

  
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52?



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE  
CERTIFICATE

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

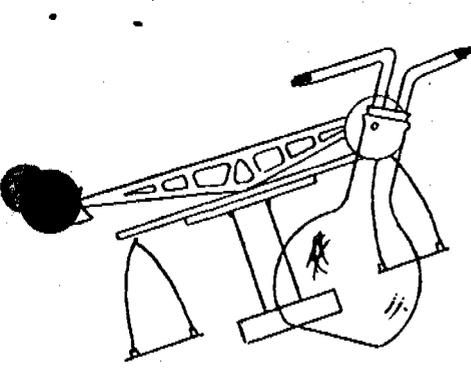
84539

SAMPLE: WATER SAMPLES DATED 11/06/79 RECEIVED 11/08/79

UPR            LWR  
GRASSY        GRASSY  
TRAIL          TRAIL  
CREEK         CREEK

Acidity as CaCO3 mg/l	10.0	10.0
Alkalinity as CaCO3 mg/l	258.00	440.00
Arsenic as As mg/l	<.001	.007
Chloride as Cl mg/l	28.0	6.0
Conductivity umhos/cm	610	1,650
Iron as Fe (Dissolved) mg/l	.120	.186
Iron as Fe (Total) mg/l	.286	.410
Lead as Pb mg/l	<.001	.006
Manganese as Mn mg/l	.016	.085
Nitrate as NO3-N mg/l	<.01	.08
Oil and Grease mg/l	<1.0	1.4
Phosphate PO4-P Ortho mg/l	.020	.610
Potassium as K mg/l	12.500	36.800

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# Ford Chemical

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*Bacteriological and Chemical Analysis*

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PHONE 485-5761

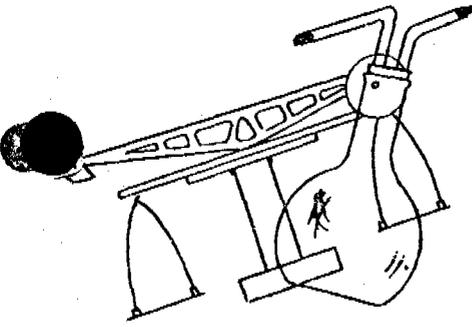
PAGE: 2  
CERTIFICATE OF ANALYSIS

79-007920

UPR	LWR
GRASSY	GRASSY
TRAIL	TRAIL
CREEK	CREEK

-----	-----	-----
Selenium as Se mg/l	<.001	.003
Silver as Ag mg/l	<.001	.002
Sulfate as SO4 mg/l	74.0	520
Suspended Solids mg/l	2.0	7.0
Total Dissolved Solids mg/l	364	1,230
pH Units	7.85	8.15

*Myra Ford*  
-----  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 12/03/79  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

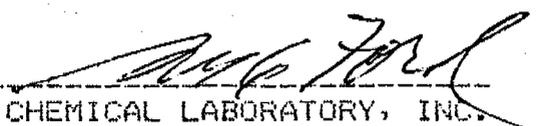
79-007834

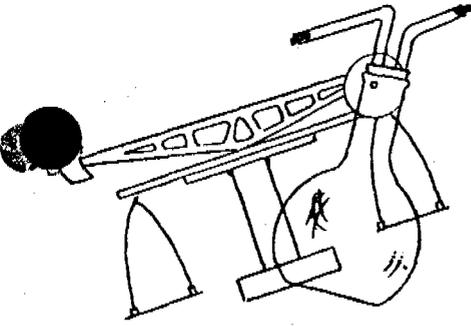
INV  
D-10<sup>02</sup>

SAMPLE: WATER DATED 10/30/79 RECEIVED 11/1/79.

	STATION 002	STATION 004
Acidity as CaCO <sub>3</sub> mg/l	18.0	20.0
Alkalinity as CaCO <sub>3</sub> mg/l	548.00	542.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe (Total) mg/l	.095	.724
Manganese as Mn mg/l	.065	.072
Oil and Grease mg/l	3.2	2.2
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	26.0	26.0
Total Dissolved Solids mg/l	1,525	1,598
pH Units	7.79	7.85

se ?

  
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*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 11/07/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

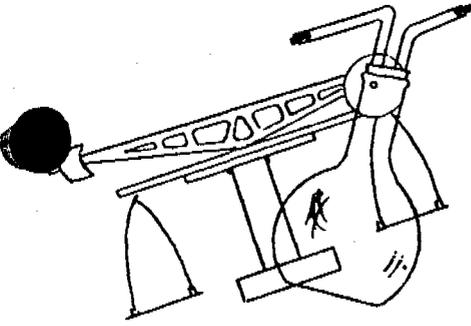
84539

79-007577 *JLV*  
*8/76*

SAMPLE: TWO MINE WATERS DATED 10/10/79 RECEIVED 10/12/79

	002	004
===== Acidity as CaCO3 mg/l	32.0	36.0
Alkalinity as CaCO3 mg/l	552.00	540.00
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.085	.810
Manganese as Mn mg/l	.069	.077
Oil and Grease mg/l	4.6	3.4
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	8.0	13.0
Total Dissolved Solids mg/l	1,500	1,600
pH Units	7.90	7.80

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 11/03/79  
CERTIFICATE OF ANALYSIS

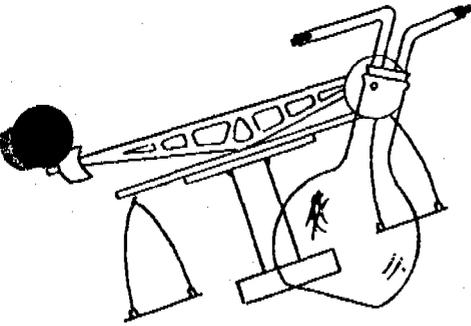
KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-007450 IKV  
8/10/79

84539

SAMPLE: CREEK WATER SAMPLES DATED 10-2-79 RECEIVED 10-4-79.

	UPR B TEST	LWR B TEST
Acidity as CaCO3 mg/l	22.0	14.0
Alkalinity as CaCO3 mg/l	262.00	438.00
Arsenic as As mg/l	<.001	.005
Chloride as Cl mg/l	7.0	21.0
Conductivity umhos/cm	600	1,600
Iron as Fe (Dissolved) mg/l	.130	.176
Iron as Fe (Total) mg/l	.250	.385
Manganese as Mn mg/l	.015	.040
Mercury as Hg mg/l	<.0002	<.0002
Nitrate as NO3-N mg/l	.10	.04
Oil and Grease mg/l	<1.0	<1.0
Sulfate as SO4 mg/l	74.0	490
Suspended Solids mg/l	1.0	4.0



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*Bacteriological and Chemical Analysis*

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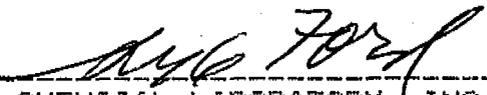
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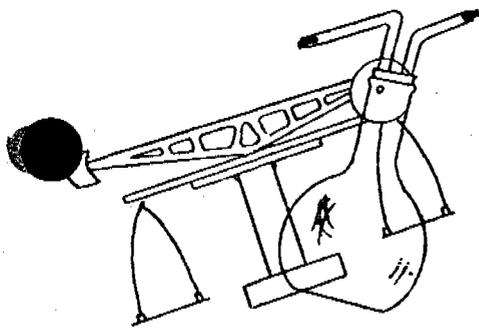
CERTIFICATE OF ANALYSIS

79-007450

UPR                      LWR  
B TEST                  B TEST

	UPR B TEST	LWR B TEST
Total Dissolved Solids    mg/l	350	1,200
pH Units	7.80	8.10

  
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# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 10/17/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

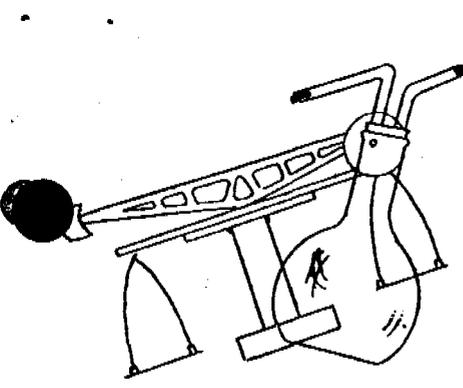
79-007085

INV  
3170<sup>e</sup>

SAMPLE: WATER RECEIVED 9/14/79.

UPPER	LOWER
G.	G.T.
TRL CR	CRK
9/12/79	9/12/79

Alkalinity as CaCO <sub>3</sub> mg/l	296.00	422.00
Arsenic as As mg/l	<.001	.001
Barium as Ba mg/l	.080	.030
Bicarbonate as HCO <sub>3</sub> mg/l	361.12	514.84
Boron as B mg/l	.110	.260
Cadmium as Cd mg/l	<.001	<.001
Calcium as Ca mg/l	90.40	102.40
Carbonate as CO <sub>3</sub> mg/l	<.01	<.01
Chloride as Cl mg/l	6.0	34.0
Chromium as Cr (Hex.) mg/l	<.001	<.001
Chromium as Cr (Tot) mg/l	<.001	.002
Conductivity umhos/cm	650	1,780
Copper as Cu mg/l	.004	.001



# Ford Chemical

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*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

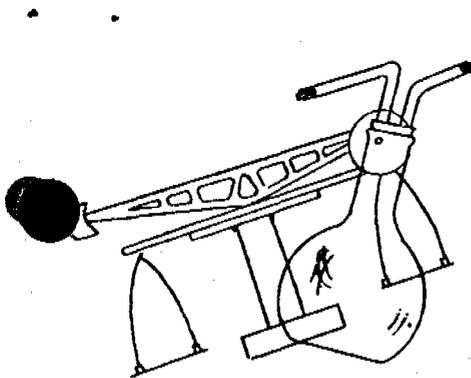
PAGE: 2  
CERTIFICATE OF ANALYSIS

79-007085

UPPER	LOWER
G.	G.T.
TRL CR	CRK
9/12/79	9/12/79

	UPPER	LOWER
	G.	G.T.
	TRL CR	CRK
	9/12/79	9/12/79
=====	=====	=====
Fluoride as F mg/l	.27	.30
Hardness as CaCO3 mg/l	242	276
Iron as Fe (Dissolved) mg/l	.030	.030
Iron as Fe (Total) mg/l	.030	.040
Lead as Pb mg/l	<.001	<.001
Magnesium as Mg mg/l	3.84	4.80
Manganese as Mn mg/l	.004	.001
Mercury as Hg mg/l	<.0002	<.0002
Nickel as Ni mg/l	<.001	<.001
Nitrate as NO3-N mg/l	<.01	<.01
Potassium as K mg/l	1.280	4.410
Selenium as Se mg/l	<.001	.003
Silica as SiO2 mg/l	15.50	10.00
Silver as Ag mg/l	<.001	.002
Sodium as Na mg/l	62.80	300.00
Sulfate as SO4 mg/l	74.0	450
Total Dissolved Solids mg/l	420	1,158

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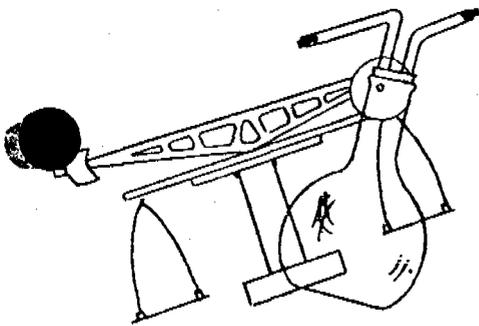
PAGE: 3  
CERTIFICATE OF ANALYSIS

79-007085

UPPER	LOWER
G.	G.T.
TRL CR	CRK
9/12/79	9/12/79

=====	=====	=====
Turbidity NTU	1.50	1.80
Zinc as Zn mg/l	.007	.009
pH Units	7.80	8.20

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 10/16/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

79-007084 *JNV*  
*+260*

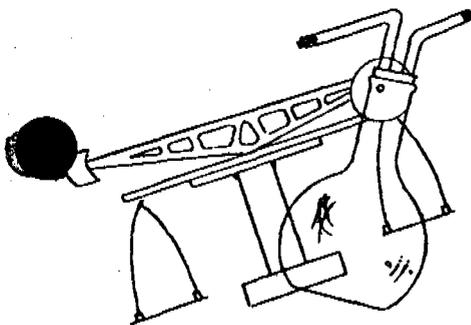
SAMPLE: WASTEWATER FROM MINE DISCHARGE RECEIVED 9/14/79.

002                      004  
9/12/79                  9/12/79

	002 9/12/79	004 9/12/79
Acidity as CaCO3 mg/l	32.0	36.0
Alkalinity as CaCO3 mg/l	666.00	548.00
Arsenic as As mg/l	.002	.003
Iron as Fe mg/l	.050	.870
Manganese as Mn mg/l	.078	.142
Oil and Grease mg/l	3.0	1.2
Selenium as Se mg/l	.006	.005
Silver as Ag mg/l	.001	<.001
Suspended Solids mg/l	29.0	22.0
Total Dissolved Solids mg/l	1700	1700
pH Units	7.60	7.60

*[Signature]*  
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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 10/12/79

**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

79-006742

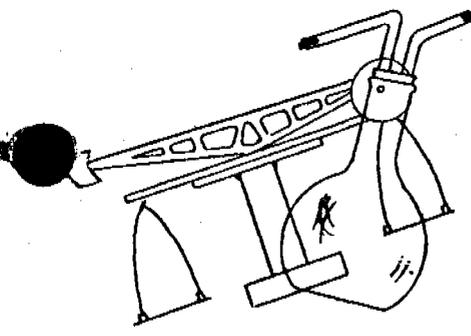
INV  
1860

SAMPLE: WASTEWATER RECEIVED 8/30/79

	SAMPLE 002	SAMPLE 004
Acidity as CaCO3 mg/l	18.0	16.0
Alkalinity as CaCO3 mg/l	674.00	786.00
Arsenic as As (Tot) mg/l	.003	.003
Iron as Fe (Total) mg/l	.930	.560
Manganese as Mn (Tot) mg/l	.232	.164
Oil and Grease mg/l	<1.0	<1.0
Selenium as Se (Tot) mg/l	.002	.004
Silver as Ag (Total) mg/l	<.001	<.001
Suspended Solids mg/l	10.0	12.0
Total Dissolved Solids mg/l	1,700	1,700
pH Units	7.90	8.10

*[Signature]*  
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*Bacteriological and Chemical Analysis*

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PHONE 485-5761

DATE: 09/12/79

**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

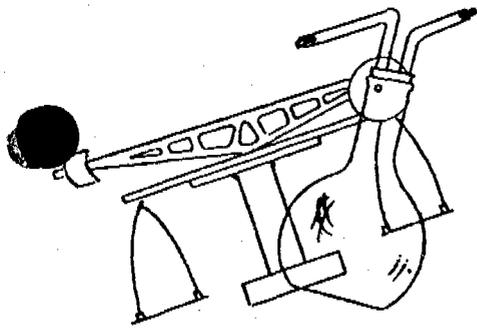
79-006282 LNK

84539

SAMPLE: WASTEWATER DATED 8/15/79 RECEIVED 8/16/79.

	SAMPLE 002	SAMPLE 003	SAMPLE 004
Acidity as CaCO <sub>3</sub> mg/l	12.0	12.0	20.0
Alkalinity as CaCO <sub>3</sub> mg/l	958.00	540.00	520.00
Ammonia as N mg/l	.003	.003	.003
Iron as Fe mg/l	.800	.280	.080
Manganese as Mn mg/l	.242	.054	.094
Oil and Grease mg/l	1.4	1.0	1.2
Selenium as Se mg/l	.004	.005	.004
Silver as Ag mg/l	.004	.004	.003
Suspended Solids mg/l	14.0	3.0	15.0
Total Dissolved Solids mg/l	2,000	1,800	1,700
pH Units	7.72	7.90	7.61

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 09/05/79

## CERTIFICATE OF ANALYSIS

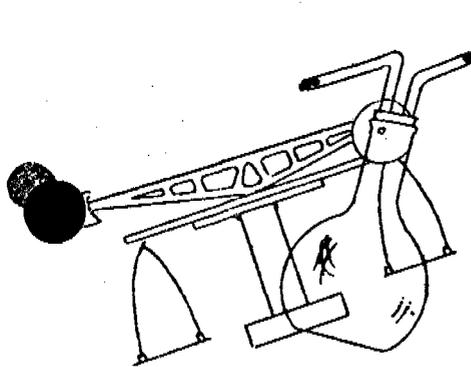
KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

79-005676 INV

SAMPLE: WATER SAMPLES DATED 7/24/79 RECEIVED 7/26/79.

	#003	#004	UPPER GRASSY TRAIL	CRS. WEST PILE SEEP	CLR. WTR. POND
Alkalinity as CaCO <sub>3</sub> mg/l	606.00	472.00	268.00	612.00	382.00
Asenic as As mg/l	<.001	<.001	<.001	.017	.003
Barium as Ba mg/l	.060	.020	.060	.070	.050
Bicarbonate as HCO <sub>3</sub> mg/l	751.20	575.84	326.96	746.64	451.40
Boron as B mg/l	.385	.600	.070	.060	.370
Cadmium as Cd mg/l	<.001	.002	<.001	<.001	<.001
Calcium as Ca mg/l	56.00	88.00	51.20	432.00	76.80
Carbonate as CO <sub>3</sub> mg/l	<.01	<.01	<.01	<.01	7.20
Chloride as Cl mg/l	32.0	42.0	4.0	214	48.0
Chromium as Cr (Hex.) mg/l	<.001	<.001	<.001	<.001	<.001
Chromium as Cr (Tot) mg/l	.018	.003	.003	.160	.018
Conductivity umhos/cm	2,700	3,000	350	19,400	3,200
Copper as Cu mg/l	.007	.005	.003	.033	.011



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

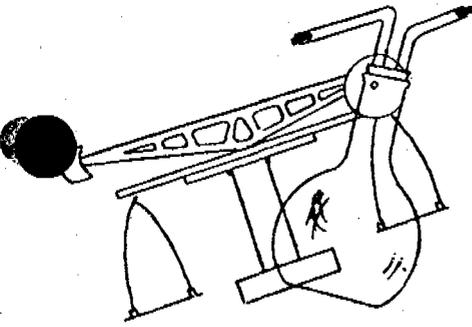
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2

**CERTIFICATE OF ANALYSIS**

77-00567

	#003	#004	UPPER GRASSY TRAIL CRK	CRS. WEST FILE SEEP	CLR. WTR. POND
Fluoride as F mg/l	1.11	1.06	.23	.56	1.12
Hardness as CaCO3 mg/l	346	474	272	4,130	546
Iron as Fe (Dissolved) mg/l	.960	1.870	.030	.390	.080
Iron as Fe (Total) mg/l	1.030	1.930	.130	.570	.230
Lead as Pb mg/l	.005	<.001	<.001	<.001	<.001
Magnesium as Mg mg/l	49.44	60.96	34.56	732.00	84.96
Manganese as Mn mg/l	.105	.645	.012	.575	.019
Mercury as Hg mg/l	<.0002	<.0002	<.0002	<.0002	<.0002
Nickel as Ni mg/l	.074	.086	.016	.236	.069
Nitrate as NO3-N mg/l	.13	.04	<.01	.15	.19
Oil and Grease mg/l	<1.0	1.4	<1.0	<1.0	<1.0
Potassium as K mg/l	8.930	8.530	1.240	670.000	10.600
Selenium as Se mg/l	<.001	<.001	<.001	.025	.007
Silica as SiO2 mg/l	8.80	9.30	13.00	15.00	8.30
Silver as Ag mg/l	.004	.004	.001	.012	.004
Sodium as Na mg/l	499.00	509.00	30.26	2,052.00	508.00
Sulfate as SO4 mg/l	754	1,010	60.0	8,140	1,150



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 3

### CERTIFICATE OF ANALYSIS

79-005676

#003

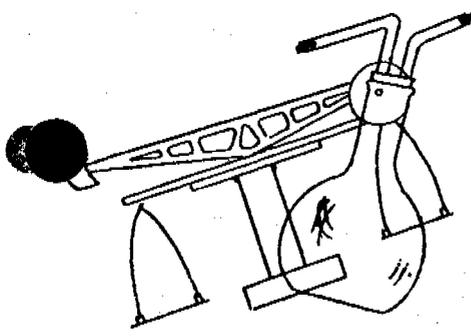
#004

UPPER  
GRASSY  
TRAIL CRK

CRS. WEST  
PILE  
SEEP

CLR. WTR.  
POND

	#003	#004	UPPER GRASSY TRAIL CRK	CRS. WEST PILE SEEP	CLR. WTR. POND
Total Dissolved Solids me/l	1,776	2,000	345	12,600	2,100
Turbidity NTU	3.00	4.00	5.00	1,000.00	5.00
Zinc as Zn me/l	.037	.104	.030	.078	.066
pH Units	7.40	7.36	7.49	7.82	7.80



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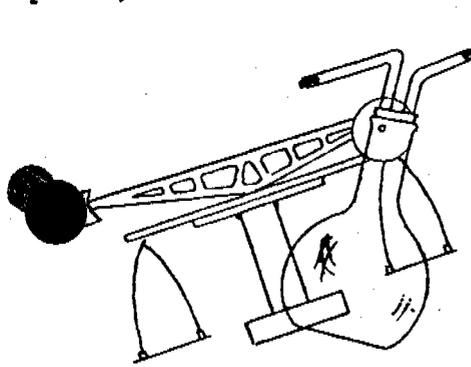
PAGE: 4

### CERTIFICATE OF ANALYSIS

79-005676

LWR. GRSY.  
TRL. CRK.  
STREAM

Alkalinity as CaCO <sub>3</sub> mg/l	296.00
Arsenic as As mg/l	<.001
Barium as Ba mg/l	.060
Bicarbonate as HCO <sub>3</sub> mg/l	297.68
Boron as B mg/l	.090
Cadmium as Cd mg/l	<.001
Calcium as Ca mg/l	48.00
Carbonate as CO <sub>3</sub> mg/l	31.20
Chloride as Cl mg/l	8.0
Chromium as Cr (Hex.) mg/l	<.001
Chromium as Cr (Tot) mg/l	.039
Conductivity umhos/cm	730
Copper as Cu mg/l	.007
Fluoride as F mg/l	.27
Hardness as CaCO <sub>3</sub> mg/l	302
Iron as Fe (Dissolved) mg/l	.090
Iron as Fe (Total) mg/l	.290



# Ford Chemical

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*Bacteriological and Chemical Analysis*

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PAGE: 5

**CERTIFICATE OF ANALYSIS**  
79-005676

LWR. GRSY.  
TRL. CRK.  
STREAM

Lead as Pb mg/l	<.001
Magnesium as Mg mg/l	43.68
Manganese as Mn mg/l	.022
Mercury as Hg mg/l	<.0002
Nickel as Ni mg/l	.030
Nitrate as NO <sub>3</sub> -N mg/l	.20
Oil and Grease mg/l	<1.0
Potassium as K mg/l	1.942
Selenium as Se mg/l	<.001
Silica as SiO <sub>2</sub> mg/l	11.00
Silver as Ag mg/l	.002
Sodium as Na mg/l	67.10
Sulfate as SO <sub>4</sub> mg/l	130
Total Dissolved Solids mg/l	483
Turbidity NTU	10.00
Zinc as Zn mg/l	.035
pH Units	8.17

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PHONE 485-5761

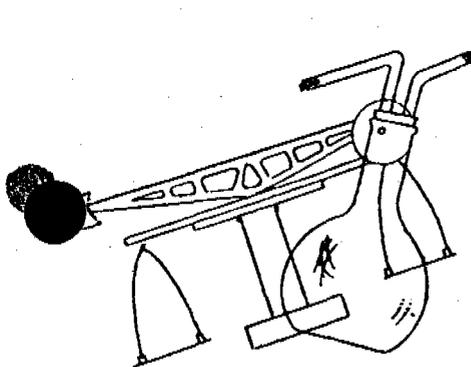
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**CERTIFICATE OF ANALYSIS**

79-005676

LWR. GRBY.  
TRL. CRK.  
STREAM

  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE

SALT LAKE CITY, UTAH 84115

PHONE 485-5761

DATE: 08/14/79

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-005368 *DL*

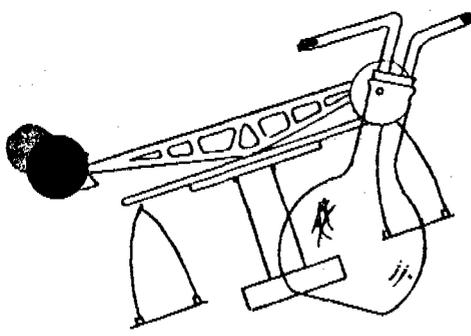
84539

SAMPLE: WATER RECEIVED 7/12/79 FOR MONTHLY ANALYSIS DATED 7/10/79.

	STATION 002	STATION 003	STATION 004
Acidity as CaCO <sub>3</sub> mg/l	20.0	22.0	18.0
Alkalinity as CaCO <sub>3</sub> mg/l	668.00	636.00	492.00
Arsenic as As mg/l	.001	.002	.002
Iron as Fe mg/l	.010	.010	.015
Manganese as Mn mg/l	.009	.002	.004
Oil and Grease mg/l	1.3	<1.0	<1.0
Selenium as Se mg/l	.005	.005	.004
Silver as Ag mg/l	.004	.003	.003
Suspended Solids mg/l	2.0	3.0	11.0
Total Dissolved Solids mg/l	1,700	1,600	1,700
pH Units	7.60	7.73	7.72

*R. C. Ford*  
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# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

### Received

JUL 24 1979

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

DATE: 07/23/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-004304 IN ✓

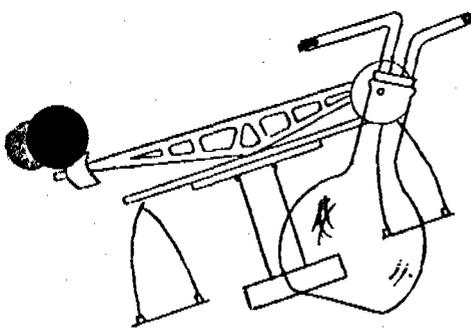
84539

*CLR WTR*

SAMPLE: WATER FROM POND DATED 6/25/79 RECEIVED ON 6/27/79.  
*(SLURRY)*

Alkalinity as CaCO <sub>3</sub> mg/l	364.00	Arsenic as As mg/l	.002
Barium as Ba mg/l	.03	Bicarbonate as HCO <sub>3</sub> mg/l	444.08
Boron as B mg/l	.390	Cadmium as Cd mg/l	<.001
Calcium as Ca mg/l	52.80	Carbonate as CO <sub>3</sub> mg/l	<.01
Chloride as Cl mg/l	52.0	Chromium as Cr (Dis) mg/l	<.001
Chromium as Cr (Hex.) mg/l	<.001	Conductivity umhos/cm	2,660
Copper as Cu mg/l	.013	Fluoride as F mg/l	.93
Hardness as CaCO <sub>3</sub> mg/l	276	Iron as Fe (Dissolved) mg/l	.050
Iron as Fe (Total) mg/l	1.030	Lead as Pb mg/l	.004
Magnesium as Mg mg/l	82.56	Manganese as Mn mg/l	.009
Mercury as Hg mg/l	<.0002	Nickel as Ni mg/l	<.001
Nitrate as NO <sub>3</sub> -N mg/l	<.01	Potassium as K mg/l	10.300
Selenium as Se mg/l	<.001	Silica as SiO <sub>2</sub> mg/l	6.95
Silver as Ag mg/l	.003	Sodium as Na mg/l	410.00
Sulfate as SO <sub>4</sub> mg/l	900	Total Dissolved Solids mg/l	1,730

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*Bacteriological and Chemical Analysis*

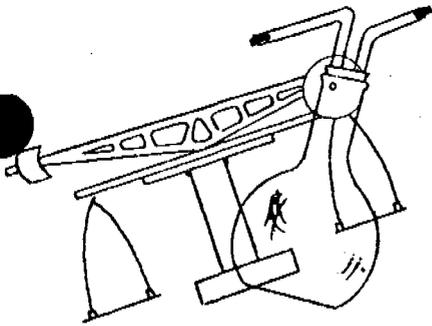
40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

PAGE: 2  
CERTIFICATE OF ANALYSIS

---

Turbidity NTU	50.00	Zinc as Zn mg/l	.015
pH Units	7.55		

*R. G. Ford*  
FORD CHEMICAL LABORATORY, INC.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/10/79

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

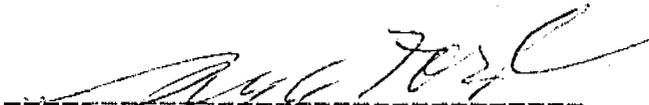
79-004175

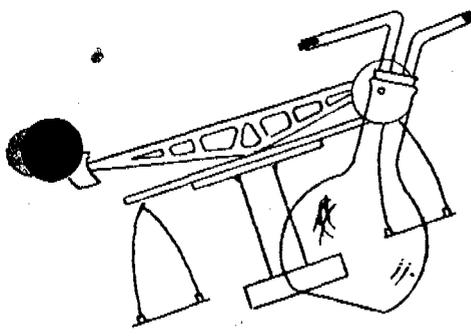
84539

SAMPLE: 3 MONTHLY WATER SAMPLES DATED 6/25/79 RECEIVED 6/27/79.

4175-1	4175
003	2
	004

Acidity as CaCO <sub>3</sub> mg/l	<.1	<.1
Alkalinity as CaCO <sub>3</sub> mg/l	780.80	561.20
Arsenic as As mg/l	<.001	<.001
Iron as Fe mg/l	.050	.090
Manganese as Mn mg/l	.081	.090
Oil and Grease mg/l	<1.0	<1.0
Selenium as Se mg/l	<.001	<.001
Silver as Ag mg/l	<.001	<.001
Suspended Solids mg/l	30.0	14.0
Total Dissolved Solids mg/l	1,590	1,510
pH Units	7.71	7.79

  
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*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 07/09/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

84539

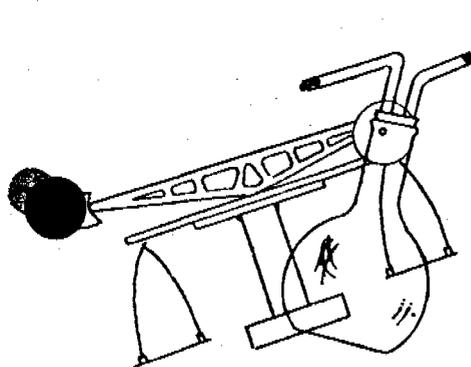
79-003841

SAMPLE: WATER SAMPLES DATED 6-11-79 RECIEVED 6-12-79.

	002	001 4
Acidity as CaCO3 ms/l	20.0	20.0
Alkalinity as CaCO3 ms/l	490.00	530.00
enic as As ms/l	.001	.001
Iron as Fe (Total) ms/l	<.010	.040
Manganese as Mn ms/l	.092	.058
Oil and Grease ms/l	3.6	15.4
Selenium as Se ms/l	.003	.004
Silver as As ms/l	.003	.003
Suspended Solids ms/l	12.0	26.0
Total Dissolved Solids ms/l	1,521	1,498
pH Units	7.61	7.62

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 06/22/79

## CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

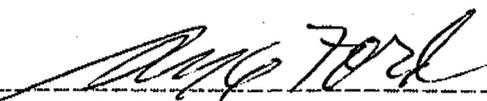
84539

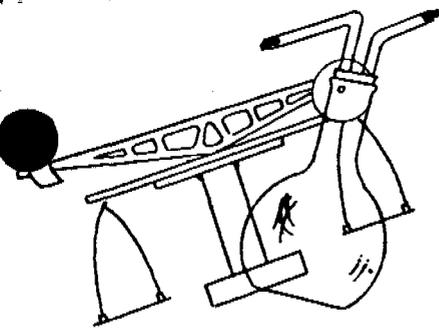
79-003429 INV

SAMPLE: PROCESS WATER DATED 5/23/79 RECEIVED ON 5/24/79.

002                      003

	002	003
Acidity as CaCO <sub>3</sub> mg/l	58.0	42.0
Alkalinity as CaCO <sub>3</sub> mg/l	570.00	556.00
Arsenic as As mg/l	.003	.003
Iron as Fe mg/l	.019	.634
Manganese as Mn mg/l	.180	.148
Oil and Grease mg/l	<1.0	1.0
Selenium as Se mg/l	.009	.007
Silver as Ag mg/l	.003	.004
Suspended Solids mg/l	11.0	5.0
Total Dissolved Solids mg/l	1,710	1,703
pH Units	7.60	7.76

  
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# Ford Chemical

**LABORATORY, INC.**  
*Bacteriological and Chemical Analysis*

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 PHONE 485-5761

DATE: 06/13/79  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
 SUNNYSIDE, UTAH

79-003130

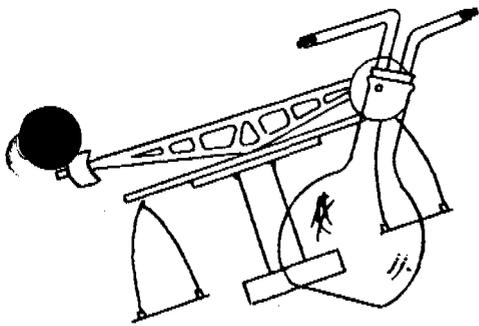
84539

SAMPLE: CULINARY WATERS RECEIVED MAY 16, 1979 DATED MAY 15, 1979.

LOWER	UPPER
GRASSY	GRASSY
TRAIL	TRAIL
CREEK	CREEK

	=====	=====	=====
Alkalinity as CaCO3 mg/l	262.00	222.00	
Arsenic as As mg/l	.004	<.001	
Barium as Ba mg/l	.14	.05	
Bicarbonate as HCO3 mg/l	319.64	270.84	
Boron as B mg/l	.130	.100	
Cadmium as Cd mg/l	<.001	<.001	
Calcium as Ca mg/l	44.80	44.50	
Carbonate as CO3 mg/l	<.01	<.01	
Chloride as Cl mg/l	10.0	8.0	
Chromium as Cr (Dis) mg/l	.004	.001	
Chromium as Cr (Hex.) mg/l	.001	<.001	
Conductivity umhos/cm	780	510	
Copper as Cu mg/l	.041	.042	

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# Ford Chemical

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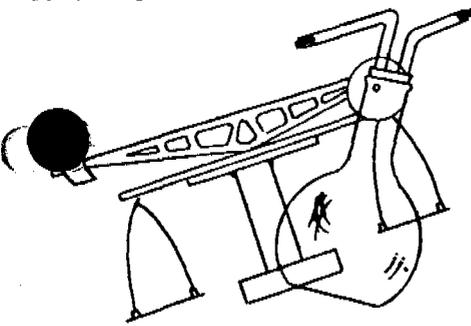
*Bacteriological and Chemical Analysis*

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PHONE 485-5761

PAGE: 2  
**CERTIFICATE OF ANALYSIS**

79-003130

	LOWER GRASSY TRAIL CREEK	UPPER GRASSY TRAIL CREEK
Fluoride as F mg/l	.08	.12
Hardness as CaCO <sub>3</sub> mg/l	260	250
Iron as Fe (Dissolved) mg/l	3.996	.293
Iron as Fe (Total) mg/l	39.800	4.714
Lead as Pb mg/l	.003	<.001
Magnesium as Mg mg/l	35.81	33.39
Manganese as Mn mg/l	.654	.069
Mercury as Hg mg/l	<.0002	<.0002
Nickel as Ni mg/l	.023	.002
Nitrate as NO <sub>3</sub> -N + NO <sub>2</sub> -N mg/l	.17	.02
Potassium as K mg/l	2.451	1.344
Selenium as Se mg/l	<.001	<.001
Silica as SiO <sub>2</sub> mg/l	5.40	3.90
Silver as Ag mg/l	<.001	<.001
Sodium as Na mg/l	57.90	24.94
Sulfate as SO <sub>4</sub> mg/l	170	72.0
Total Dissolved Solids mg/l	510	330



# Ford Chemical

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*Bacteriological and Chemical Analysis*

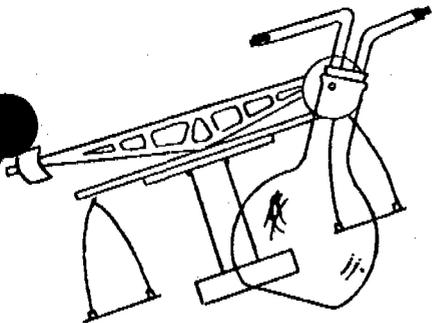
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PAGE: 3  
**CERTIFICATE OF ANALYSIS**  
79-003130

LOWER      UPPER  
GRASSY    GRASSY  
TRAIL      TRAIL  
CREEK     CREEK

	LOWER	UPPER
Turbidity NTU	3.00	.90
Zinc as Zn mg/l	.093	.043
pH Units	7.00	7.85

*[Signature]*  
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# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

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SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

DATE: 06/13/79  
CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

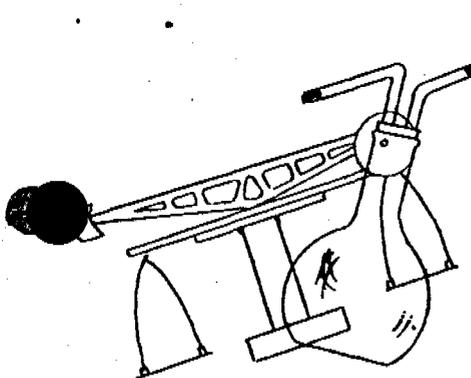
79-003130 INV

84539

SAMPLE: CULINARY WATERS RECEIVED MAY 16, 1979 DATED MAY 15, 1979.

LOWER	UPPER
GRASSY	GRASSY
TRAIL	TRAIL
CREEK	CREEK

	LOWER	UPPER
	GRASSY	GRASSY
	TRAIL	TRAIL
	CREEK	CREEK
=====	=====	=====
Alkalinity as CaCO <sub>3</sub> mg/l	262.00	222.00
Arsenic as As mg/l	.004	<.001
Barium as Ba mg/l	.14	.05
Bicarbonate as HCO <sub>3</sub> mg/l	319.64	270.84
Boron as B mg/l	.130	.100
Cadmium as Cd mg/l	<.001	<.001
Calcium as Ca mg/l	44.80	44.50
Carbonate as CO <sub>3</sub> mg/l	<.01	<.01
Chloride as Cl mg/l	10.0	8.0
Chromium as Cr (Dis) mg/l	.004	.001
Chromium as Cr (Hex.) mg/l	.001	<.001
Conductivity umhos/cm	780	510
Copper as Cu mg/l	.041	.042



# Ford Chemical

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*Bacteriological and Chemical Analysis*

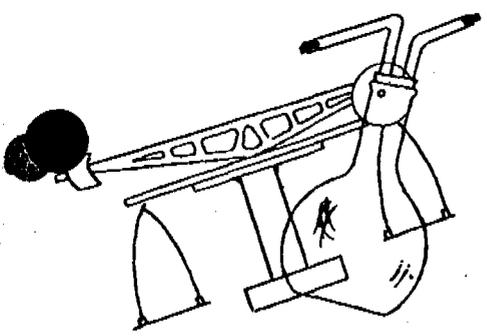
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PHONE 485-5761

PAGE: 2

**CERTIFICATE OF ANALYSIS**

79-003130

	LOWER GRASSY TRAIL CREEK	UPPER GRASSY TRAIL CREEK
Fluoride as F mg/l	.08	.12
Hardness as CaCO3 mg/l	260	250
Iron as Fe (Dissolved) mg/l	3.996	.293
Iron as Fe (Total) mg/l	39.800	4.714
Lead as Pb mg/l	.003	<.001
Magnesium as Mg mg/l	35.81	33.39
Manganese as Mn mg/l	.654	.069
Mercury as Hg mg/l	<.0002	<.0002
Nickel as Ni mg/l	.023	.002
Nitrate as NO3-N + NO2-N mg/l	.17	.02
Potassium as K mg/l	2.451	1.344
Selenium as Se mg/l	<.001	<.001
Silica as SiO2 mg/l	5.40	3.90
Silver as Ag mg/l	<.001	<.001
Sodium as Na mg/l	57.90	24.94
Sulfate as SO4 mg/l	170	72.0
Total Dissolved Solids mg/l	510	330



# Ford Chemical

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*Bacteriological and Chemical Analysis*

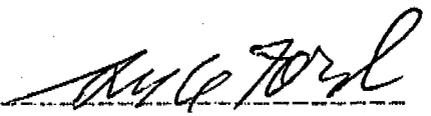
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PHONE 485-5761

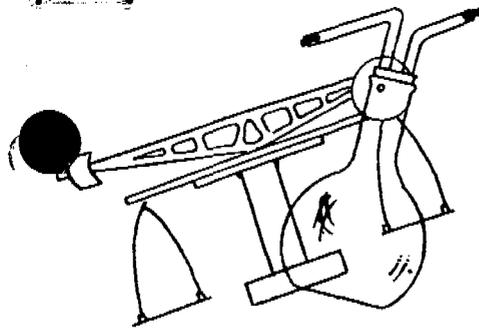
PAGE: 3  
**CERTIFICATE OF ANALYSIS**  
79-003130

LOWER GRASSY TRAIL CREEK  
UPPER GRASSY TRAIL CREEK

---

Turbidity NTU	3.00	.90
Zinc as Zn mg/l	.093	.043
pH Units	7.00	7.85

  
FORD CHEMICAL LABORATORY, INC.

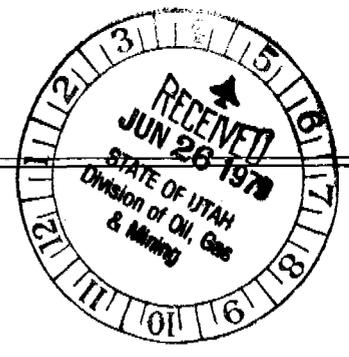


# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761



DATE: 06/15/79

### CERTIFICATE OF ANALYSIS

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

79-003129

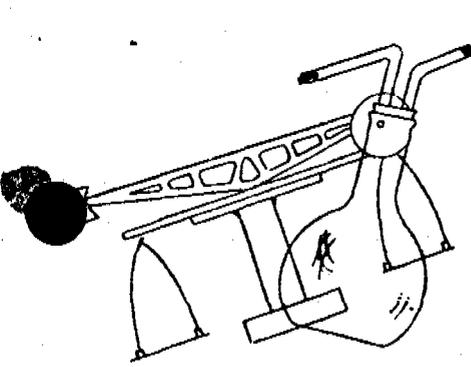
84539

SAMPLE: WASTEWATER SAMPLES RECEIVED MAY 16, 1979.

	002 5-14-79	003 5-8-79	004 5-8-79
Acidity as CaCO3 mg/l	30.0	10.0	12.0
Alkalinity as CaCO3 mg/l	618.00	582.00	542.00
Arsenic as As mg/l	.002	.005	.001
Iron as Fe mg/l	1.074	1.954	.608
Manganese as Mn mg/l	.316	.252	.111
Oil and Grease mg/l	<1.0	<1.0	<1.0
Selenium as Se mg/l	.008	.007	.002
Silver as Ag mg/l	.003	.003	.002
Suspended Solids mg/l	25.0	39.0	11.0
Total Dissolved Solids mg/l	1,800	1,650	1,500
pH Units	7.70	7.75	7.85

*[Signature]*  
FORD CHEMICAL LABORATORY, INC.

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*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
 SALT LAKE CITY, UTAH 84115  
 PHONE 485-5761

DATE: 06/07/79  
**CERTIFICATE OF ANALYSIS**

KAISER STEEL CORP.  
 SUNNYSIDE, UTAH

79-002802 INV

84539

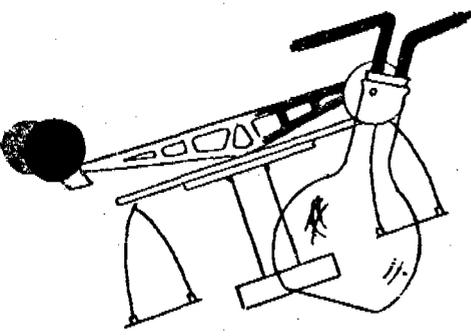
SAMPLE: WASTEWATER DATED 4-27-79, RECEIVED ON MAY 3, 1979:

002	004	002	004
		4-27-79	4-27-79
		8 AM	8 AM
		PERSONNEL	PERSONNEL

=====			
Hardness as CaCO3 mg/l	6.0	12.0	
Alkalinity as CaCO3 mg/l	598.00	472.00	
Arsenic as As mg/l	.002	<.001	
BOD 5 Day mg/l	<1.0	<1.0	
Iron as Fe mg/l	.006	.350	
MPN Fecal Coliform MPN/100 ml			2.0 <2.0
MPN Total Coliform MPN/100 ml			110 <2.0
Oil and Grease mg/l	<1.0	<1.0	
Selenium as Se mg/l	.008	.006	
Silver as Ag mg/l	.003	.003	
Suspended Solids mg/l	3.0	2.0	
Total Dissolved Solids mg/l	1,750	1,500	
pH Units	7.80	7.85	

FORD CHEMICAL LABORATORY, INC.

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or, extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

April 9, 1979

Kaiser Steel Corporation  
Sunnyside, Utah 84539

### CERTIFICATE OF ANALYSIS

Attn: Barry Grossley

79-1647

Gentlemen:

The following analysis is on sample of wastewater received on March 21, 1979.

Sample: Wastewater..

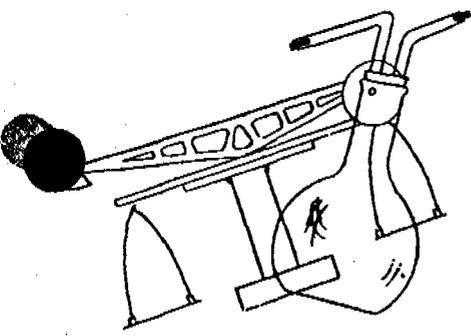
	Station 001	Station 002
Suspended Solids mg/l	23.0	15.0
Total Dissolved Solids mg/l	1,500	1,520
Iron as Fe mg/l	0.326	0.025
Arsenic as As mg/l	< 0.001	< 0.001
Selenium as Ag mg/l	0.004	0.003
Oil & Grease mg/l	< 1.0	2.8
pH Units	7.76	7.63
Alkalinity as CaCO3 mg/l	414.0	664.0
Acidity as CaCO3 mg/l	50.0	44.0
Silver as Ag mg/l	< 0.001	< 0.001

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

March 16, 1979

Kaiser Steel Corporation  
Sunnyside, Utah 84539

**CERTIFICATE OF ANALYSIS**  
79-1271

Attn: Barry Grossley

Gentlemen:

The following analysis is on sample of wastewater received on March 5, 1979.

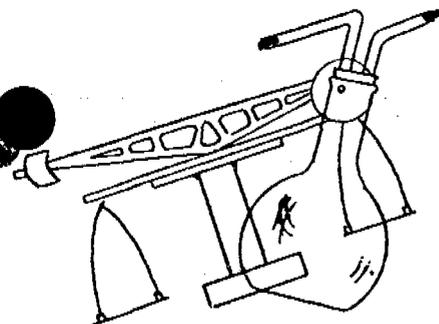
Sample: Wastewater dated 2/28/79.

	Station 001	Station 002	Station 003
Bio-Chemical Oxygen Demand mg/l	3.7	5.7	5.9
Suspended Solids mg/l	10.0	4.0	11.0
Total Dissolved Solids mg/l	1,674	1,882	1,622
Iron as Fe mg/l	0.364	0.658	0.017
Arsenic as As mg/l	0.007	0.001	0.005
Selenium as Se mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag mg/l	< 0.001	< 0.001	< 0.001
Oil & Grease mg/l	< 1.0	< 1.0	< 1.0
pH Units	8.13	7.75	8.05
Alkalinity as CaCO3 mg/l	436.0	804.0	432.0
Acidity as CaCO3 mg/l	< 1.0	16.0	< 1.0
Total Coliform MPN/100 ml	79	79	33
Fecal Coliform MPN/100 ml	< 2	< 2	< 2

Sincerely,

FORD CHEMICAL LABORATORY, INC.

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# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

February 21, 1979

Kaiser Steel Corporation  
Sunnyside, Utah 84539

Attn: Mr. Barry Grossley

Gentlemen:

The following analysis is on sample of water received on February 8, 1979.

Sample: Water.

### CERTIFICATE OF ANALYSIS

79-786

	Station 001	Station 002
Suspended Solids mg/l	24.0 ✓	26.0 -
Total Dissolved Solids mg/l	1,693	1,733
Iron as Fe mg/l	0.486	0.532
Arsenic as As mg/l	0.002	0.003
Selenium as Se mg/l	< 0.001	< 0.001
Silver as Ag mg/l	< 0.001	< 0.001
Oil & Grease mg/l	< 1.0	1.4
pH Units	7.42	7.71
Alkalinity as CaCO <sub>3</sub> mg/l	428.0	432.0
Acidity as CaCO <sub>3</sub> mg/l	30.0	14.0

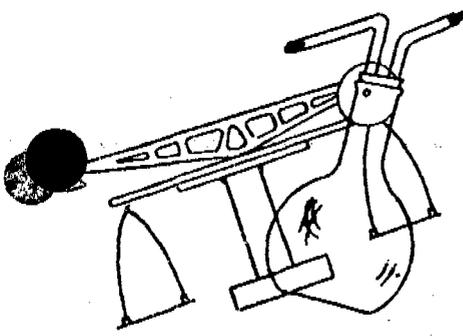
Sincerely,

FORD CHEMICAL LABORATORY, INC.



Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: February 26, 1979

Name Sunnyside City Corporation

Address City Hall

Sunnyside, Utah 84539

CERTIFICATE OF ANALYSIS  
79-780-4

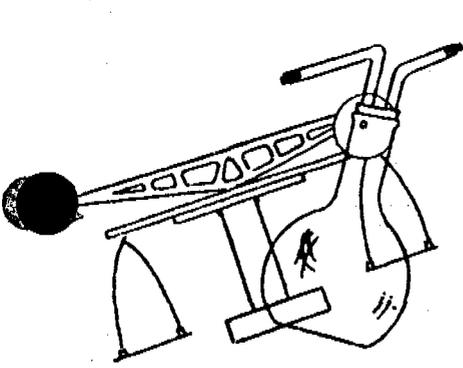
Water received on 2/6/79 labeled: "Water from C Section".

Analysis started on: 2/6/79

Turbidity	<u>2.0</u> NTU <sup>10</sup>	Total Hardness as CaCO <sub>3</sub>	<u>290.0</u> mg/l
Conductivity	<u>580.0</u> umhos/cm	Iron as Fe (Total)	<u>0.071</u> mg/l
pH	<u>7.02</u> Units	Iron as Fe (Filtered)	<u>0.063</u> mg/l
Total Dissolved Solids 180°C.	<u>380.0</u> mg/l <sup>500-10</sup>	Lead as Pb	<u>&lt;0.001</u> mg/l <sup>5</sup>
Alkalinity as CaCO <sub>3</sub>	<u>270.0</u> mg/l	Magnesium as Mg	<u>40.80</u> mg/l
Arsenic as As	<u>&lt;0.001</u> mg/l <sup>10</sup>	Manganese as Mn	<u>0.032</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>329.40</u> mg/l	Mercury as Hg	<u>&lt;0.0002</u> mg/l
Barium as Ba	<u>0.03</u> mg/l <sup>10</sup>	Nickel as Ni	<u>&lt;0.001</u> mg/l
Boron as B	<u>0.200</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.02</u> mg/l
Cadmium as Cd	<u>&lt;0.001</u> mg/l	Nitrite as NO <sub>2</sub> -N	<u>&lt;0.01</u> mg/l
Calcium as Ca	<u>48.0</u> mg/l	Potassium as K	<u>1.590</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt;0.01</u> mg/l	Selenium as Se	<u>&lt;0.001</u> mg/l <sup>10</sup>
Chloride as Cl	<u>6.0</u> mg/l <sup>250</sup>	Silica as SiO <sub>2</sub>	<u>14.5</u> mg/l
Chromium as Cr (Total)	<u>&lt;0.001</u> mg/l	Silver as Ag	<u>&lt;0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt;0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>84.0</u> mg/l
Copper as Cu	<u>0.470</u> mg/l <sup>10</sup>	Sodium as Na	<u>32.9</u> mg/l
Surfactants MBAS	<u>&lt;0.05</u> mg/l	Zinc as Zn	<u>0.079</u> mg/l
Fluoride as F	<u>0.18</u> mg/l <sup>10</sup>		
Oil & Grease	<u>2.0</u> mg/l		

Ford Chemical Laboratory, Inc.

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# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: February 26, 1979

Name Sunnyside City

Address City Hall

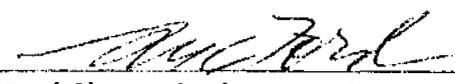
Sunnyside, Utah 84539

CERTIFICATE OF ANALYSIS  
79-780-3

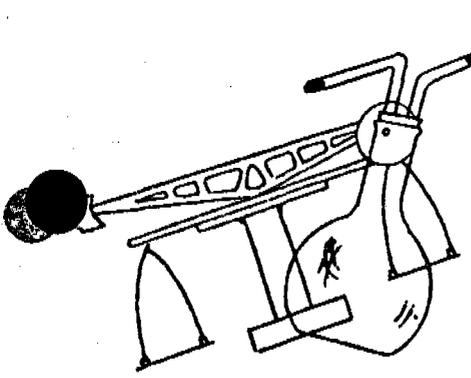
Water received on 2/6/79 labeled "Dragerton Pump House".

Analysis started on: 2/6/79

Turbidity	<u>1.0</u> NTU	Total Hardness as CaCO <sub>3</sub>	<u>290.0</u> mg/l
Conductivity	<u>550.0</u> umhos/cm	Iron as Fe (Total)	<u>0.194</u> mg/l
pH	<u>7.88</u> Units	Iron as Fe (Filtered)	<u>0.185</u> mg/l
Total Dissolved Solids 180°C.	<u>355.0</u> mg/l	Lead as Pb	<u>&lt; 0.001</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>274.0</u> mg/l	Magnesium as Mg	<u>43.20</u> mg/l
Arsenic as As	<u>&lt; 0.001</u> mg/l	Manganese as Mn	<u>0.050</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>309.88</u> mg/l	Mercury as Hg	<u>&lt; 0.0002</u> mg/l
Barium as Ba	<u>0.04</u> mg/l	Nickel as Ni	<u>&lt; 0.001</u> mg/l
Boron as B	<u>0.180</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.02</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Nitrite as NO <sub>2</sub> -N	<u>&lt; 0.01</u> mg/l
Calcium as Ca	<u>44.0</u> mg/l	Potassium as K	<u>1.596</u> mg/l
Carbonate as CO <sub>3</sub>	<u>12.0</u> mg/l	Selenium as Se	<u>&lt; 0.001</u> mg/l
Chloride as Cl	<u>16.0</u> mg/l	Silica as SiO <sub>2</sub>	<u>15.50</u> mg/l
Chromium as Cr (Total)	<u>&lt; 0.001</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt; 0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>62.0</u> mg/l
Copper as Cu	<u>0.007</u> mg/l	Sodium as Na	<u>32.3</u> mg/l
Surfactants MBAS	<u>&lt; 0.05</u> mg/l	Zinc as Zn	<u>0.004</u> mg/l
Fluoride as F	<u>0.18</u> mg/l		
Oil & Grease	<u>&lt; 1.0</u> mg/l		

  
Ford Chemical Laboratory, Inc.

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# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: February 26, 1979

Name Sunnyside City

Address City Hall

Sunnyside, Utah 84539

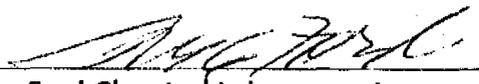
### CERTIFICATE OF ANALYSIS

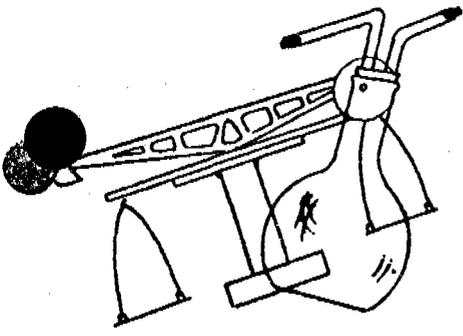
79-780-2

Water received on 2/6/79 labeled "Water from City Hall".

Analysis started on: 2/6/79

Turbidity	<u>0.96</u> NTU	Total Hardness as CaCO <sub>3</sub>	<u>302.0</u> mg/l
Conductivity	<u>350.0</u> umhos/cm	Iron as Fe (Total)	<u>0.280</u> mg/l
pH	<u>7.74</u> Units	Iron as Fe (Filtered)	<u>0.270</u> mg/l
Total Dissolved Solids at 180°C.	<u>540.0</u> mg/l	Lead as Pb	<u>&lt;0.001</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>290.0</u> mg/l	Magnesium as Mg	<u>41.76</u> mg/l
Arsenic as As	<u>&lt;0.001</u> mg/l	Manganese as Mn	<u>0.063</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>305.0</u> mg/l	Mercury as Hg	<u>&lt;0.0002</u> mg/l
Barium as Ba	<u>0.04</u> mg/l	Nickel as Ni	<u>&lt;0.001</u> mg/l
Boron as B	<u>0.130</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.02</u> mg/l
Cadmium as Cd	<u>&lt;0.001</u> mg/l	Nitrite as NO <sub>2</sub> -N	<u>&lt;0.01</u> mg/l
Calcium as Ca	<u>51.2</u> mg/l	Potassium as K	<u>1.501</u> mg/l
Carbonate as CO <sub>3</sub>	<u>24.0</u> mg/l	Selenium as Se	<u>&lt;0.001</u> mg/l
Chloride as Cl	<u>10.0</u> mg/l	Silica as SiO <sub>2</sub>	<u>14.0</u> mg/l
Chromium as Cr (Total)	<u>&lt;0.001</u> mg/l	Silver as Ag	<u>&lt;0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt;0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>64.0</u> mg/l
Copper as Cu	<u>0.011</u> mg/l	Sodium as Na	<u>31.0</u> mg/l
Surfactants MBAS	<u>&lt;0.05</u> mg/l	Zinc as Zn	<u>0.171</u> mg/l
Fluoride as F	<u>0.18</u> mg/l		
Oil & Grease	<u>&lt;1.0</u>		

  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: February 26, 1979

Name Sunnyside City Corporation

Address City Hall

Sunnyside, Utah 84539

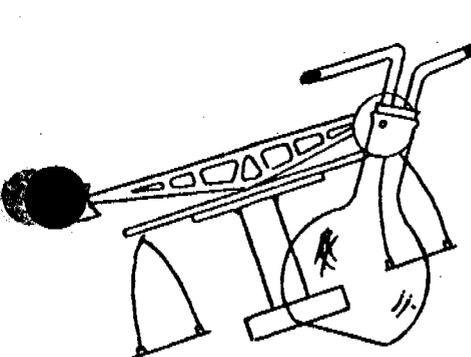
**CERTIFICATE OF ANALYSIS**  
79-780-1

Water received on 2/6/79 labeled "From Storage Tank".

Analysis started on: 2/6/79

Turbidity	<u>1.20</u> NTU	Total Hardness as CaCO <sub>3</sub>	<u>300.0</u> mg/l
Conductivity	<u>540.0</u> umhos/cm	Iron as Fe (Total)	<u>0.283</u> mg/l
pH	<u>7.75</u> Units	Iron as Fe (Filtered)	<u>0.270</u> mg/l
Total Dissolved Solids at 180°C.	<u>350.0</u> mg/l	Lead as Pb	<u>&lt; 0.001</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>294.0</u> mg/l	Magnesium as Mg	<u>43.20</u> mg/l
Arsenic as As	<u>&lt; 0.001</u> mg/l	Manganese as Mn	<u>0.064</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>295.24</u> mg/l	Mercury as Hg	<u>&lt; 0.0002</u> mg/l
Barium as Ba	<u>0.05</u> mg/l	Nickel as Ni	<u>&lt; 0.001</u> mg/l
Boron as B	<u>0.095</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.02</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Nitrite as NO <sub>2</sub> -N	<u>&lt; 0.01</u> mg/l
Calcium as Ca	<u>48.0</u> mg/l	Potassium as K	<u>1.528</u> mg/l
Carbonate as CO <sub>3</sub>	<u>31.2</u> mg/l	Selenium as Se	<u>&lt; 0.001</u> mg/l
Chloride as Cl	<u>14.0</u> mg/l	Silica as SiO <sub>2</sub>	<u>14.0</u> mg/l
Chromium as Cr (Total)	<u>&lt; 0.001</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt; 0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>60.0</u> mg/l
Copper as Cu	<u>0.009</u> mg/l	Sodium as Na	<u>34.0</u> mg/l
Surfactants MBAS	<u>&lt; 0.05</u> mg/l	Zinc as Zn	<u>0.150</u> mg/l
Fluoride as F	<u>0.17</u> mg/l		
Oil & Grease	<u>&lt; 1.0</u>		

Ford Chemical Laboratory, Inc.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

January 8, 1979

Kaiser Steel Corporation  
Sunnyside, Utah 84539

## CERTIFICATE OF ANALYSIS

Attn: Barry Grossley

78-4182

Gentlemen:

The following analysis is on sample of water received on December 18, 1978.

Sample: Water.

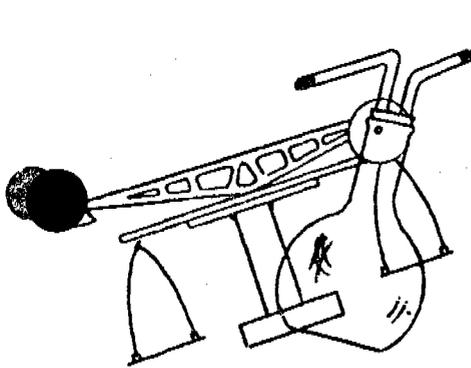
	Station 001	Station 003
Suspended Solids mg/l	18.0	12.0
Total Dissolved Solids mg/l	1,522	1,512
Iron as Fe mg/l	0.293	2.254
Arsenic as As mg/l	0.045	0.021
Selenium as Se mg/l	< 0.001	< 0.001
Silver as Ag mg/l	< 0.001	0.002
Oil & Grease mg/l	3.2	2.2
pH Units	8.11	7.73
Alkalinity as CaCO3 mg/l	456.0	500.0
Acidity as CaCO3 mg/l	12.0	20.0

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

December 22, 1978

QUARTERLY SAMPLE

\$58.00 / SAMPLE

Kaiser Steel Corporation  
Sunnyside, Utah 84539

### CERTIFICATE OF ANALYSIS

Attn: Barry Grossley

78-4016

Gentlemen:

The following analysis is on sample of wastewater received on November 29, 1978.

Sample: Water dated 11/27/78.

Analysis started: 11/29/78.

THESE  
THREE ITEMS  
ONLY  
GIVE A  
QUARTER

	Station 001	Station 002	Station 003
Bio-Chemical Oxygen Demand mg/l	12.0	6.5	3.0
Suspended Solids mg/l	106.0 x	14.0 ✓	7.0 ✓
pH Units	8.08	7.87	7.84
Total Coliform MPN/100 ml	130	90	790
Fecal Coliform MPN/100 ml	< 2	< 2	< 2
Total Dissolved Solids mg/l	1,430.0	1,522.0	1,418.0
Iron as Fe mg/l	0.074	0.056	0.382
Arsenic as As mg/l	0.007	0.001	0.001
Selenium as Se mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag mg/l	0.007	0.004	0.007
Oil & Grease mg/l	4.6	1.2	1.0
Alkalinity as CaCO3 mg/l	452.0	748.0	520.0
Acidity as CaCO3 mg/l	14.0	22.0	20.0

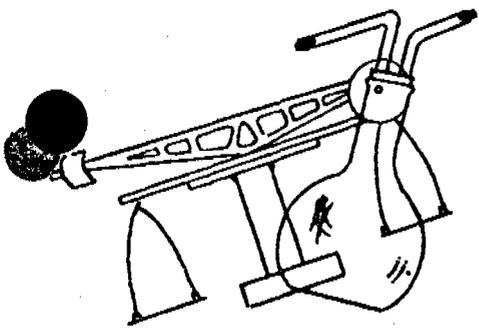
Sincerely,

FORD CHEMICAL LABORATORY, INC.

*Lyle S. Ford*  
Lyle S. Ford

LSF/do

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# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

December 11, 1978

REGULAR BI-MONTHLY SAMPLE

Kaiser Steel Corporation  
Sunnyside, Utah 84539

\$38.00 / SAMPLE

CERTIFICATE OF ANALYSIS

78-3268

Attn: Barry Grossley

Gentlemen:

The following analysis is on sample of water received on November 10, 1978.

Sample: Water dated 11/9/78.

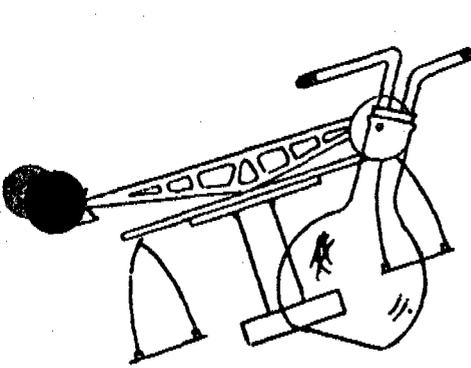
	Station 001	Station 002	Station 003
Suspended Solids mg/l	6.0 ✓	14.0 ✓	5.0 ✓
Total Dissolved Solids mg/l	1,530.0	820.0	1,533.0
Iron as Fe mg/l	0.012	0.057	0.180
Arsenic as As mg/l	0.006	<0.001	<0.001
Selenium as Se mg/l	<0.001	<0.001	<0.001
Silver as Ag mg/l	<0.001	<0.001	<0.001
Oil & Grease mg/l	1.2	2.7	1.4
pH Units	7.83	8.00	7.92
Alkalinity as CaCO3 mg/l	440.0	668.0	520.0 <sup>32x</sup>
Acidity as CaCO3 mg/l	10.0	6.0	16.0

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 8, 1978

Kaiser Steel Corporation  
Sunnyside, Utah 84539

**CERTIFICATE OF ANALYSIS**  
78-3139

Attn: Barry Grossley

Gentlemen:

The following analysis is on samples of water received on October 31, 1978.

Sample: Water 001, dated 10/26/78.

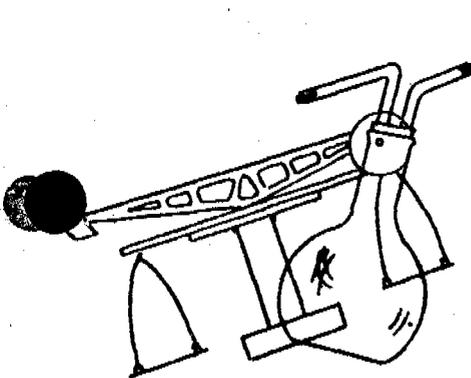
	Results
Suspended Solids	13.0 mg/l ✓
Total Dissolved Solids	1,490 mg/l
Iron as Fe	0.240 mg/l
Arsenic as As	<0.001 mg/l
Selenium as Se	<0.001 mg/l
Silver as Ag	<0.001 mg/l
Oil & Grease	2.3 mg/l
pH	7.17 Units
Alkalinity as CaCO <sub>3</sub>	424.0 mg/l
Acidity as CaCO <sub>3</sub>	10.0 mg/l

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115

PHONE 485-5761

November 8, 1978

Kaiser Steel Corporation  
Sunnyside, Utah 84539

Attn: Barry Grossley

**CERTIFICATE OF ANALYSIS**

78-2783

Gentlemen:

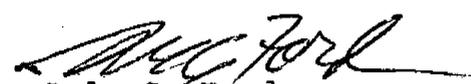
The following analysis is on samples of water received on October 13, 1978.

Sample: Station 001.

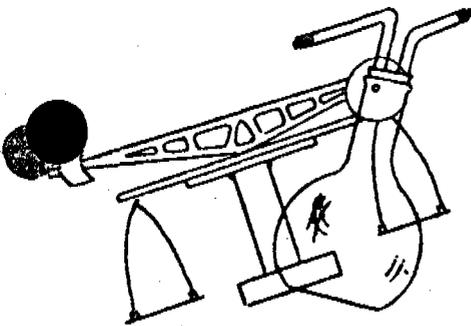
	Results
Suspended Solids	4.0 mg/l ✓
Total Dissolved Solids	1,520 mg/l
Iron as Fe	0.200 mg/l
Arsenic as As	< 0.001 mg/l
Selenium as Se	< 0.001 mg/l
Silver as Ag	0.010 mg/l
Oil & Grease	< 1.0 mg/l
pH	7.60 Units
Alkalinity as CaCO <sub>3</sub>	436.0 mg/l
Acidity as CaCO <sub>3</sub>	8.0 mg/l

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

October 30, 1978

Kaiser Steel Corporation  
Sunnyside, Utah 84539

Attn: Barry Grossley

Gentlemen:

**CERTIFICATE OF ANALYSIS**  
78-2644

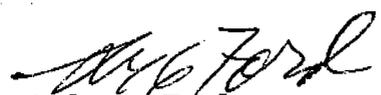
The following analysis is on sample of wastewater received on October 2, 1978.

Sample: Water for quarterly analysis. Analysis started 10/2/78.

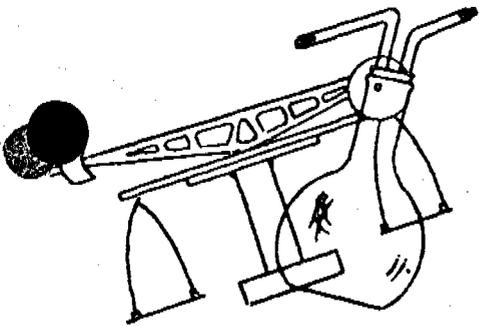
	Station 001	Station 002
Bio-Chemical Oxygen Demand mg/l	1.3	6.0
Suspended Solids mg/l	7.0 ✓	19.0 ✓
pH Units	7.60	7.85
Selenium as Se mg/l	< 0.001	< 0.001
Alkalinity as CaCO3 mg/l	480.0	510.0
Acidity as CaCO3 mg/l	20.0	48.0
Total Dissolved Solids mg/l	4,320	1,640
Arsenic as As mg/l	0.005	< 0.001
Iron as Fe mg/l	0.214	0.227
Silver as Ag mg/l	0.012	0.010
Oil & Grease mg/l	2.4	8.2
Total Coliform MPN/100 ml	5	70
Fecal Coliform MPN/100 ml	< 2	2

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/do



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

October 5, 1978

Kaiser Steel Corporation  
Sunnyside, Utah 84539

### CERTIFICATE OF ANALYSIS

Attn: Barry Grossley

78-2539

Gentlemen:

The following analysis is on samples of wastewater received on September 21, 1978:

Sample: Wastewater.

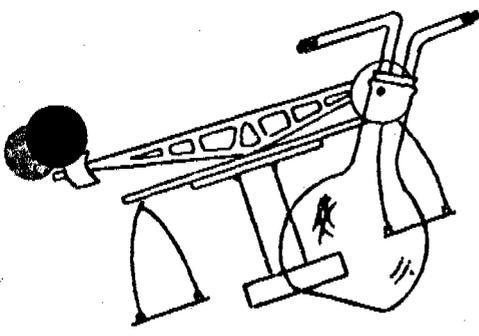
	Station 001	Station 004
Suspended Solids mg/l	7	19
Total Dissolved Solids mg/l	1,530	1,510
Iron as Fe mg/l	0.211	0.033
Arsenic as As mg/l	< 0.001	< 0.001
Selenium as Se mg/l	< 0.001	< 0.001
Silver as Ag mg/l	0.006	0.008
Oil & grease mg/l	< 1.0	2.0
pH Units	7.95	7.96
Alkalinity as CaCO <sub>3</sub> mg/l	500.0	520.0
Acidity as Ca CO <sub>3</sub> mg/l	24.0	20.0

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/do



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 8, 1978

Kaiser Steel Corporation  
Sunnyside, Utah 84539

Attn: Barry Grossley

Gentlemen:

**CERTIFICATE OF ANALYSIS**  
78-2359-A

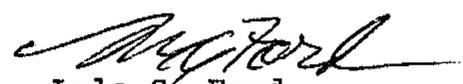
The following analysis is on samples of water received on September 5, 1978.

Sample: Water.

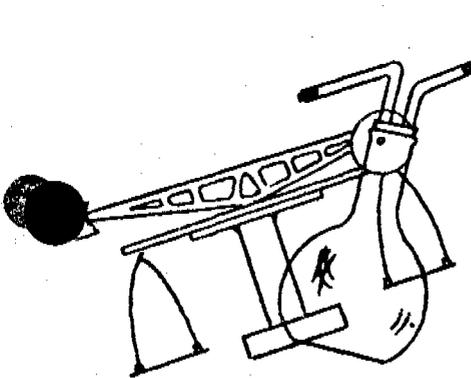
	Station 001	Station 004
Suspended Solids mg/l	65.0 <sup>X</sup>	35.0 <sup>X</sup>
Total Dissolved Solids mg/l	1,530	1,521
Iron as Fe mg/l	0.220	0.060
Arsenic as As mg/l	<0.001	<0.001
Silver as Ag mg/l	0.005	0.002
Oil & Grease mg/l	<1.0	1.4
pH Units	7.27	7.40
Alkalinity as CaCO3 mg/l	440.	544.
Acidity as CaCO3 mg/l	28.0	30.0
Selenium as Se mg/l	<0.001	<0.001

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 8, 1978

Kaiser Steel Corporation  
Attn: Barry Grossley  
Sunnyside, Utah 84539

**CERTIFICATE OF ANALYSIS**  
78-2134-A

Gentlemen:

The following analysis is on samples of wastewater received on August 11, 1978.

Sample: Wastewater dated 8/10/78. Analysis started 8/11/78 at 10:30 a.m.

	Station 001	Station 003	Station 004
Bio-Chemical Oxygen Demand mg/l	5.4	3.0	2.8
Suspended Solids mg/l	278.0 %	98.0 %	0.0 ✓
Total Dissolved Solids mg/l	1,680.0	1,640.0	1,552.0
Iron as Fe mg/l	0.066	0.055	0.084
Arsenic as As mg/l	<0.001	<0.001	<0.001
Selenium as Se mg/l	<0.001	<0.001	<0.001
Silver as Ag mg/l	<0.001	<0.001	<0.001
Oil & Grease mg/l	4.4	2.4	<1.0
pH Units	8.03	7.96	8.11
Total Coliform MPN/100 ml	11,000	330	20
Fecal Coliform MPN/100 ml	200	50	< 20
Alkalinity as CaCO3 mg/l	480 <sup>10</sup>	492 <sup>13</sup>	520 <sup>21</sup>
Acidity as CaCO3 mg/l	24	28	18

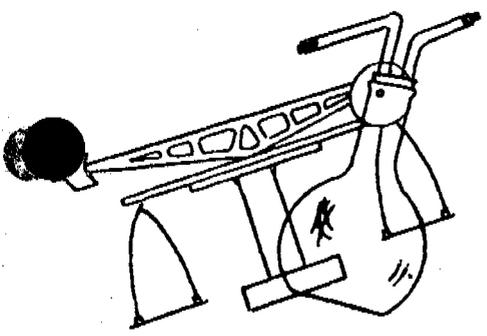
Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/do

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 8, 1978

Kaiser Steel Corporation  
Attn: Barry Grossley  
Sunnyside, Utah 84539

**CERTIFICATE OF ANALYSIS**  
78-2016-A

Gentlemen:

The following analysis is on samples of wastewater received on August 1, 1978:

Sample: Wastewater dated 7/27/78.

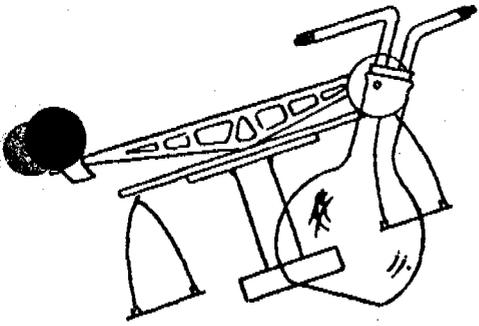
	Station 001	Station 004
Suspended Solids mg/l	18.0 ✓	22.0 ✓
Total Dissolved Solids mg/l	1,600	1,600
Iron as Fe mg/l	0.201	0.058
Selenium as Se mg/l	< 0.001	< 0.001
Silver as Ag mg/l	0.005	0.004
Oil & Grease mg/l	< 1.0	2.2
pH Units	7.91	7.90
Alkalinity as CaCO3 mg/l	510	562
Acidity as CaCO3 mg/l	26	20
Arsenic as As mg/l	< 0.001	< 0.001

Sincerely,

FORD CHEMICAL LABORATORY, INC.

*Lyle S. Ford*  
Lyle S. Ford

LSF/do



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

August 9, 1978

**Received**

AUG 10 1978

KAISER STEEL CORP.  
SUNNYSIDE, UTAH

**CERTIFICATE OF ANALYSIS**

78-1896

Kaiser Steel Corporation  
Sunnyside, Utah

Gentlemen:

The following analysis is on samples of wastewater received on July 19, 1978.

Sample: wastewater

Station 001 Results

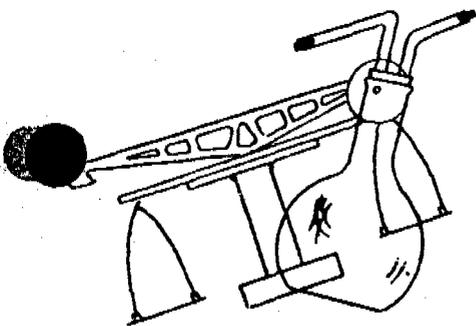
Suspended Solids	30.0 mg/l ✓
Total Dissolved Solids	1,580 mg/l
Iron as Fe	0.240 mg/l
Arsenic as As	<0.001 mg/l
Selenium as Se	<0.001 mg/l
Silver as Ag	0.006 mg/l
Oil & Grease	2.0 mg/l
pH	7.87 units
Alkalinity	490.0 mg/l
Acidity	90.0 mg/l

Sincerely,

FORD CHEMICAL LABORATORY, INC.

*Lyle S. Ford*  
Lyle S. Ford

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or, extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

July 27, 1978

Kaiser Steel Corporation  
ATTN: Mr. Barry Grossley  
Sunnyside, UT 84539

**CERTIFICATE OF ANALYSIS**

78-1718

Dear Mr. Grossley:

The following analysis is on samples of water received on July 3, 1978:

Sample: Wastewater:

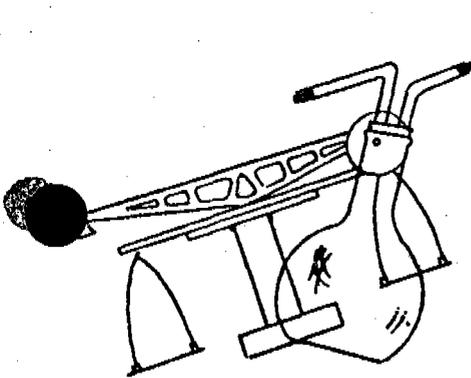
	Station 001	Station 003
Suspended Solids Mg/l	211.0 x	20.0 ✓
Total Diss. Solids Mg/l	1,500	1,400
Iron as Fe Mg/l	1.940	0.301
Selenium as Se Mg/l	< 0.001	< 0.001
Arsenic as As Mg/l	0.011	0.002
Silver as Ag Mg/l	0.006	0.005
Oil and Grease Mg/l	3.0	2.0
pH Units	7.68	8.20
Alkalinity as CaCO <sub>3</sub> Mg/l	466.0	490.0
Acidity Mg/l	20.0	< 1.0 <sup>410</sup>

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

July 12, 1978

**CERTIFICATE OF ANALYSIS**  
78-1557

Kaiser Steel Corp.  
ATTN: Mr. Barry Grossley  
Sunnyside, UT 84539

Dear Mr. Grossley:

The following analysis is on samples of wastewater received on June 19, 1978:

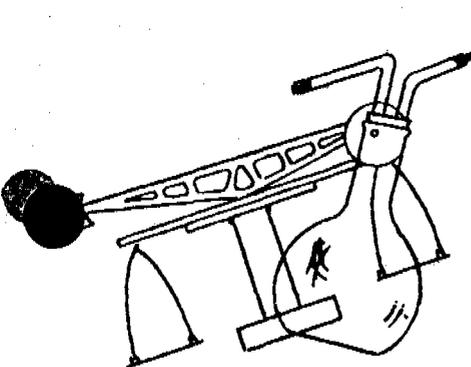
Sample: Wastewater:

	Station 001	Station 003
Suspended Solids Mg/l	16.0 ✓	15.0 ✓
Total Dissolved Solids Mg/l	1,600	3,600
Iron as Fe Mg/l	0.075	2.430
Arsenic as As Mg/l	0.014	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001
Silver as Ag Mg/l	0.005	0.009
Oil and Grease Mg/l	< 1.0	< 1.0
pH Units	7.85	7.43
Alkalinity as CaCO3 Mg/l	470.0 <sup>152</sup>	230.0 <sup>152</sup>
Acidity Mg/l	32.0	36.0

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

June 21, 1978

Kaiser Steel Corporation  
ATTN: Mr. Barry Grossley  
Sunnyside, UT 84539

**CERTIFICATE OF ANALYSIS**  
78-1354

Dear Mr. Grossley:

The following analysis is on sample of water received on May 31, 1978:

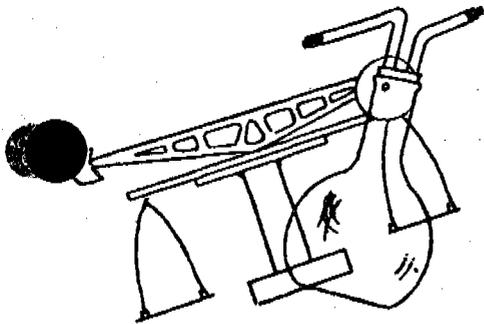
Sample: 001 Water Station:

	RESULTS
Suspended Solids	11.0 Mg/l ✓
Total Dissolved Solids	1,754.0 Mg/l
Iron as Fe	0.433 Mg/l
Arsenic as As	< 0.001 Mg/l
Selenium as Se	< 0.001 Mg/l
Silver as Ag	0.008 Mg/l
Oil and Grease	< 1.0 Mg/l
pH	7.33 Units
Alkalinity as CaCO <sub>3</sub>	464.0 Mg/l
Acidity	54.0 Mg/l

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

June 1, 1978

Kaiser Steel Corp.  
ATTN: Mr. Barry Grossley  
Sunnyside, UT 84539

**CERTIFICATE OF ANALYSIS**

78-1144

Dear Mr. Grossley:

The following analysis is on a sample of wastewater received on May 11, 1978:

Sample: Wastewater dated May 10, 1978:

Analysis Started: May 11, 1978 at 4:00 p.m.:

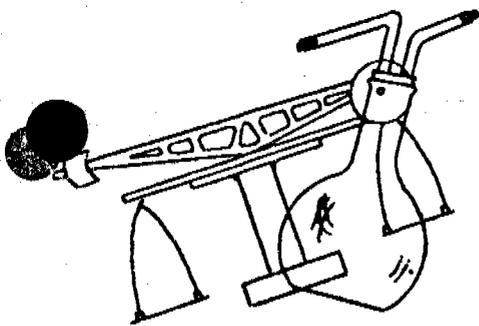
	001	003
Bio-Chemical Oxygen Demand mg/l	2.3	1.1
Suspended Solids Mg/l	34.0 X	11.0 ✓
Total Dissolved Solids Mg/l	1,778	1,328
Iron as Fe Mg/l	1.075	0.301
Arsenic as As Mg/l	0.043	0.003
Silver as Ag Mg/l	0.008	0.007
Oil and Grease Mg/l	3.8	5.0
pH Units	7.83	7.90
Total Coliform MPN/100ml	7,900	49
Fecal Coliform MPN/100ml	5	33

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

May 12, 1978

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

### CERTIFICATE OF ANALYSIS

78-989

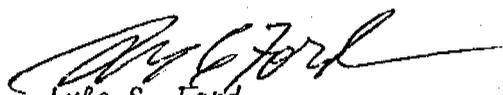
Dear Mr. Paluso:

The following analysis is on samples of water received on April 27, 1978:

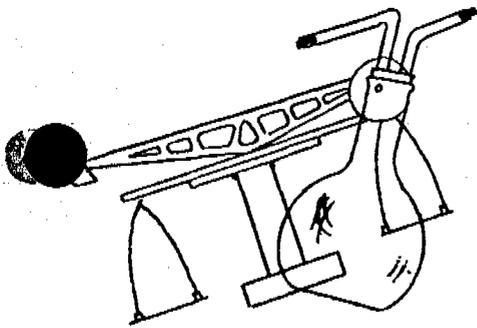
Sample: Water dated April 26, 1978:

	Sample 001	Sample 002	Sample 003
Suspended Solids Mg/l	12.0 ✓	11.0 ✓	4.0 ✓
Total Dissolved Solids Mg/l	1,673	1,571	1,365
Iron as Fe Mg/l	1.081	0.026	0.294
Arsenic as As Mg/l	0.037	< 0.001	< 0.001
Silver as Ag Mg/l	0.007	0.006	0.006
Oil and Grease Mg/l	12.4	6.0	10.8
pH Units	7.78	7.68	7.82
Alkalinity as CaCO3 Mg/l	468.0	828.0	508.0
Acidity Mg/l	36.0	46.0	20.0

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

April 6, 1978

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS

78-623

Dear Mr. Paluso:

The following analysis is on samples of wastewater received on March 27, 1978:

Sample: Effluent Water (Monthly)

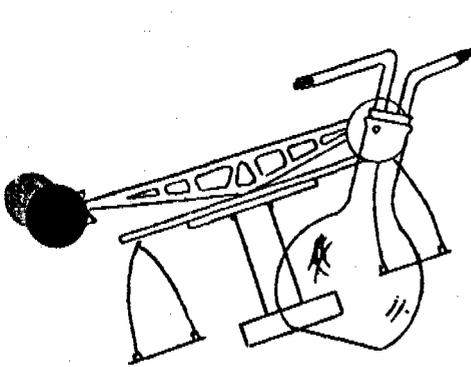
	Station 001 3/21/78	Station 002 3/23/78	Station 004 3/21/78
Suspended Solids Mg/l	17.0 ✓	8.0 ✓	8.0 ✓
Total Dissolved Solids Mg/l	1,796	1,465	1,433
Iron as Fe Mg/l	0.124	0.025	0.102
Arsenic as As Mg/l	0.021	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	0.006	0.005	0.005
Oil and Grease Mg/l	2.3	2.1	2.4
pH Units	7.90	7.77	7.90

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

March 23, 1978

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

## CERTIFICATE OF ANALYSIS

78-514

Dear Mr. Paluso:

The following analysis is on sample of water received on March 13, 1978:

Sample: Monthly:

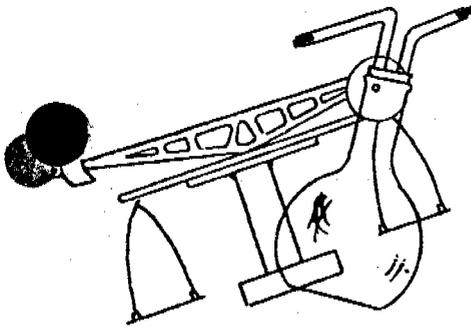
	Station 001 3/8/78	Station 002 3/9/78	Station 004 3/8/78
Suspended Solids Mg/l	9.0	6.0	7.0
Total Dissolved Solids Mg/l	1,759	1,438	1,478
Iron as Fe Mg/l	0.361	0.405	0.639
Arsenic as As Mg/l	0.014	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	0.010	0.008	0.008
Oil and Grease	2.6	4.5	1.9
pH Units	7.21	7.17	7.01

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

March 23, 1978

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
78-514-2

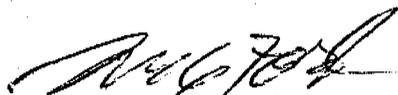
Dear Mr. Paluso:

The following analysis is on sample of water received on March 13, 1978:

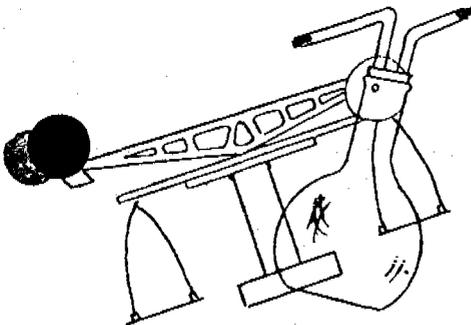
Sample: Quarterly Requirement:

	003, 3/9/78
Bio-Chemical Oxygen Demand	3.0 Mg/l
Suspended Solids	24.0 Mg/l -
Total Dissolved Solids	5,250.0 Mg/l
Iron as Fe	2.068 Mg/l
Arsenic as As	< 0.001 Mg/l
Selenium as Se	< 0.001 Mg/l
Silver as Ag	0.012 Mg/l
Oil and Grease	1.2 Mg/l
pH	7.83 Units
Total Coliform MPN/100ml	33
Fecal Coliform MPN/100ml	< 2

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

March 7, 1978

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
78-403

Dear Mr. Paluso:

The following analysis is on samples of wastewater received on February 27, 1978:

Sample: Water Dated February 22, 1978:

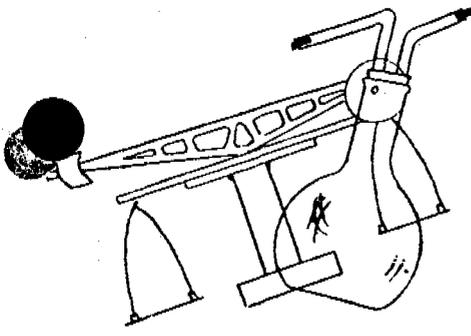
	Station 001	Station 002	Station 004
Suspended Solids Mg/l	6.0 ✓	7.0 ✓	6.0 ✓
Total Dissolved Solids Mg/l	1,661.0	1,438.0	1,474.0
Iron as Fe Mg/l	0.252	0.425	0.432
Arsenic as As Mg/l	< 0.001	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	0.008	0.007	0.007
Oil and Grease Mg/l	6.6	10.4	5.0
pH Units	7.87	7.66	7.92

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LF/js



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

February 27, 1978

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
78-297

Dear Mr. Paluso:

The following analysis is on samples of wastewater received on February 10, 1978:

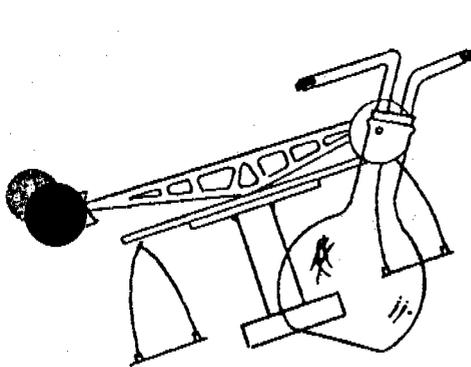
Sample: Wastewater Dated February 8, 1978 (Quarterly):

Analysis Started: February 9, 1978:

	001	002	004
Bio-Chemical Oxygen Demand Mg/l	1.0	2.5	1.0
Suspended Solids Mg/l	14.0	11.0	8.0
Total Dissolved Solids Mg/l	1,704.0	1,495.0	1,485.0
Iron as Fe Mg/l	0.408	0.529	0.180
Arsenic as As Mg/l	0.013	<0.001	<0.001
Selenium as Se Mg/l	<0.001	<0.001	<0.001
Silver as Ag Mg/l	0.005	0.002	0.003
Oil and Grease Mg/l	2.8	4.3	5.0
pH Units	7.81	7.72	7.80
Total Coliform MPN/100ml	13,000	8	100
Fecal Coliform MPN/100ml	2	<2	<2

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

February 10, 1978

Kaiser Steel Corporation  
ATTN: MR. Tom Paluso  
Sunnyside, UT 84539

## CERTIFICATE OF ANALYSIS

78-203

Dear Mr. Paluso:

The following analysis is on sample of wastewater received on January 26, 1978:

Sample: Wastewater Dated January 25, 1978:

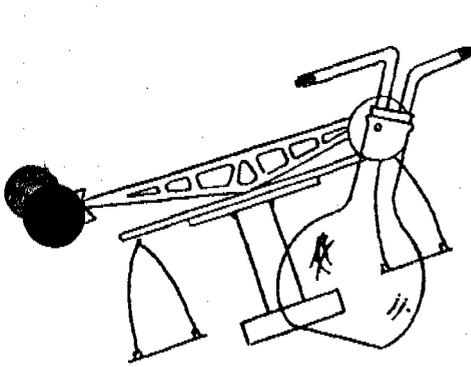
	001	002	004
Suspended Solids Mg/l	7.0	18.0	8.0
Total Dissolved Solids Mg/l	1,658.0	1,442.0	1,510.0
Iron as Fe Mg/l	0.221	1.139	0.463
Arsenic as As Mg/l	< 0.001	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	< 0.001	< 0.001	< 0.001
Oil and Grease Mg/l	2.7	2.4	4.0
pH Units	8.11	7.96	8.00

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115

PHONE 485-5761  
February 3, 1978

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
78-111

Gentlemen:

The following analysis is on samples of water received on January 17, 1978:

Sample: Monthly Dated January 13, 1978:

	Station 001	Station 002	Station 004
Suspended Solids Mg/l	11.0	14.0	14.0
Total Dissolved Solids Mg/l	1,748.0	1,485.0	1,567.0
Iron as Fe Mg/l	0.590	0.411	0.255
Arsenic as As Mg/l	0.020	<0.001	<0.001
Selenium as Se Mg/l	<0.001	<0.001	<0.001
Silver as Ag Mg/l	0.003	0.002	0.003
Oil and Grease Mg/l	4.6	1.5	2.0
pH Units	8.15	7.93	8.00

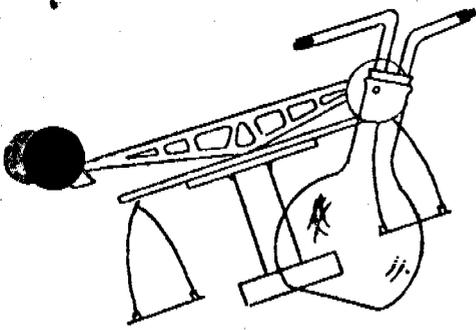
Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

SF/jms

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or, extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

January 20, 1978

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

## CERTIFICATE OF ANALYSIS

78-19

Dear Mr. Paluso:

The following analysis is on samples of wastewater received on January 4, 1978:

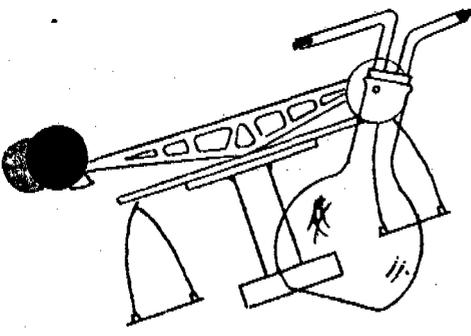
Sample: Wastewater Quarterly Samples Dated December 29, 1977, Grab:

	001	002	003	004
Bio-Chemical Oxygen Demand Mg/l	1.2	2.3	6.6	2.1
Suspended Solids Mg/l	11.0	16.0	21.0	18.0
Total Dissolved Solids Mg/l	1,662	1,483	5,959	1,381
Iron as Fe Mg/l	0.428	0.628	0.600	0.319
Arsenic as As Mg/l	< 0.001	< 0.001	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	< 0.001	< 0.001	< 0.001	< 0.001
Oil and Grease Mg/l	< 0.1	< 0.1	4.6	2.6
pH Units	7.91	7.93	7.59	8.01
Total Coliform MPN/100ml	90	13	5	33
Fecal Coliform MPN/100ml	< 2	< 2	< 2	< 2

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

December 29, 1977

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

### CERTIFICATE OF ANALYSIS

77-6453

Dear Mr. Paluso:

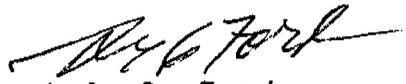
The following analysis is on sample of wastewater received on December 9, 1977:

Sample: Wastewater:

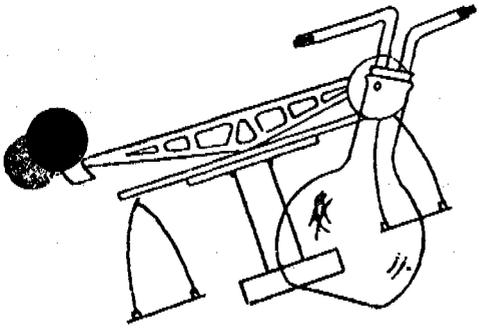
	Station 001	Station 002	Station 004
Suspended Solids Mg/l	15.0	18.0	22.0
Total Dissolved Solids Mg/l	1,689.0	1,447.0	1,528.0
Iron as Fe Mg/l	0.216	0.285	0.233
Arsenic as As Mg/l	< 0.001	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	< 0.001	< 0.001	< 0.001
Oil and Grease Mg/l	2.0	2.4	2.5
pH Units	7.05	7.13	7.40

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115

PHONE 485-5761  
December 13, 1977

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

### CERTIFICATE OF ANALYSIS

77-2408

Dear Mr. Paluso:

The following analysis is on sample of wastewater received on November 28, 1977:

Sample: Wastewater:

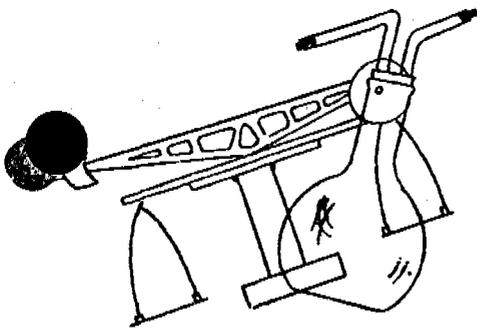
	001	002
Suspended Solids Mg/l	15.0 ✓	10.0 ✓
Total Dissolved Solids Mg/l	1,732.0	1,354.0
Iron as Fe Mg/l	0.534	1.532
Arsenic as As Mg/l	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001
Silver as Ag Mg/l	< 0.001	< 0.001
Oil and Grease Mg/l	5.2	6.2
pH Units	6.91	7.10

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

SF/jms



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 28, 1977

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

## CERTIFICATE OF ANALYSIS

77-2306

Dear Mr. Paluso:

The following analysis is on sample of water received on November 11, 1977:

Sample: Wastewater:

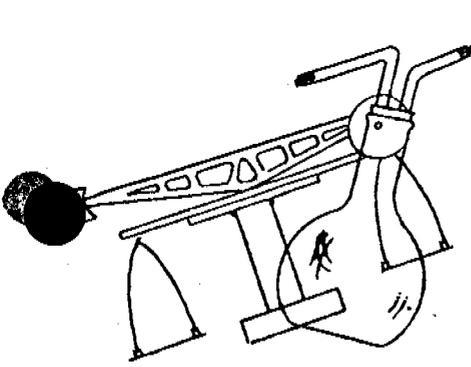
	Station 001	Station 003	Station 004
Suspended Solids Mg/l	16.0 ✓	8.0 ✓	27.0 ✓
Total Dissolved Solids Mg/l	1,630	1,438	1,559
Iron as Fe Mg/l	0.180	0.160	0.185
Arsenic as As Mg/l	< 0.001	< 0.001	0.001
Selenium as Se Mg/l	< 0.001	0.001	< 0.001
Silver as Ag Mg/l	< 0.001	< 0.001	< 0.001
Oil and Grease Mg/l	1.4	2.3	2.7
pH Units	7.80	7.86	7.82

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

November 14, 1977

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
77-2165

Dear Mr. Paluso:

The following analysis is on sample of wastewater received on October 28, 1977:

Sample: Wastewater - Quarterly:

	001	0021	003	004
Bio-Chemical Oxygen Demand Mg/l	2.5	5.2	4.4	2.4
Suspended Solids Mg/l	21.0 ✓	13.0 ✓	24.0 ✓	15.0 ✓
Total Dissolved Solids Mg/l	1,486.0	1,582.0	1,671.0	5,714.0 ✓
Iron as Fe Mg/l	0.077	0.112	0.115	0.021
Arsenic as As Mg/l	0.008	<0.001	<0.001	<0.001
Selenium as Se Mg/l	0.002	0.005	<0.001	<0.001
Silver as Ag Mg/l	0.024	<0.001	<0.001	<0.001
Oil and Grease Mg/l	6.6	16.5	4.9	5.4
pH Units	8.11	7.95	7.75	8.15
Total Coliform MPN/100ml	1,900	790	7	230
Fecal Coliform MPN/100ml	<2.2	<2.2	<2.2	<2.2

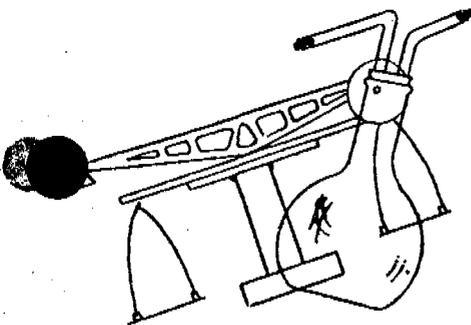
Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford

LSF/jms

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# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

October 31, 1977

Kaiser Steel Corporation  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
77-5827

Dear Mr. Paluso:

The following analysis is on sample of wastewater received on October 14, 1977:

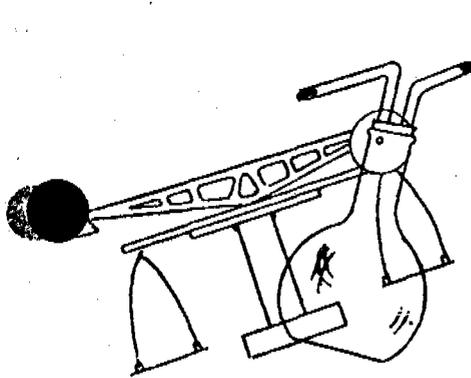
Sample: Wastewater Quarterly Samples:

	Station 001	Station 002	Station 004
Bio-Chemical Oxygen Demand /l	1.9	7.0	2.1
Suspended Solids Mg/l	26.0 ✓	36.0 X	35.0 X
Total Dissolved Solids Mg/l	1,703.0	1,716.0	1,541.0
Iron as Fe Mg/l	1.071	1.246	0.318
Arsenic as As Mg/l	0.025	< 0.001	0.007
Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Silver as Ag Mg/l	0.002	0.002	< 0.001
Oil and Grease Mg/l	3.5	< 1.0	2.3
pH Units	8.05	7.85	8.00

Sincerely,

FORD CHEMICAL LABORATORY, INC.

Lyle S. Ford



*Ford Chemical*  
**LABORATORY, INC.**  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
 SALT LAKE CITY, UTAH 84115  
 PHONE 485-5761

October 13, 1977

Kaiser Steel Corp.  
 ATTN: Mr. Tom Paluso  
 Sunnyside, UT 84539

**CERTIFICATE OF ANALYSIS**  
 77-5317

Dear Mr. Paluso:

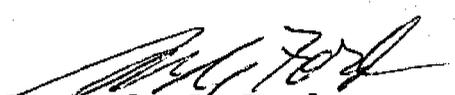
The following analysis is on sample of water received on September 20, 1977:

Sample: Water Dated September 16, 1977, Station 001:

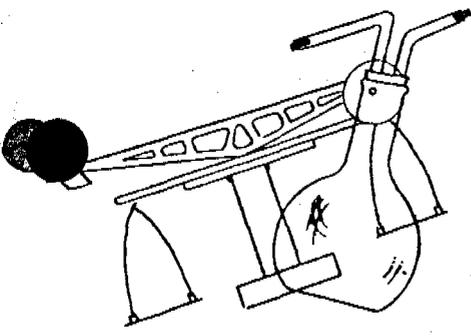
	Results
Suspended Solids	24.0 Mg/l ✓
Total Dissolved Solids	1,725.0 Mg/l
Iron as Fe	0.015 Mg/l
Arsenic as As	0.003 Mg/l
Selenium as Se	< 0.001 Mg/l
Silver as Ag	0.004 Mg/l
Oil and Grease	1.9 Mg/l
pH	7.03 Units

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
 Lyle S. Ford

LSF/jms



# Ford Chemical LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

September 2, 1977

Kaiser Steel Company  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
77-4457

Dear Mr. Paluso:

The following analysis is on sample of water received on August 18, 1977:

Sample: Water:

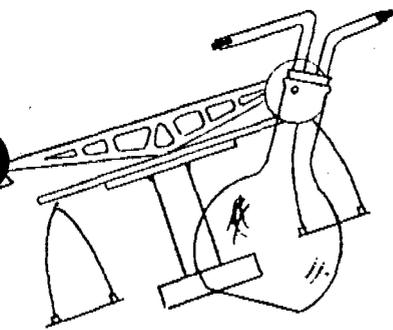
	Station 001	Station 002
Suspended Solids Mg/l	28.0	8.0
Tot. Dissolved Solids Mg/l	1,723.0	1,412.0
Iron as Fe Mg/l	0.479	1.278
Arsenic as As Mg/l	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001
Silver as Ag Mg/l	0.004	0.003
Oil and Grease Mg/l	3.1	< 1.0
pH Units	7.85	7.80

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761  
July 6, 1977

Kaiser Steel Corp.  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
77-3244

Gentlemen:

The following analysis is on sample of water received on June 20, 1977:

Sample: Water Monthly Samples:

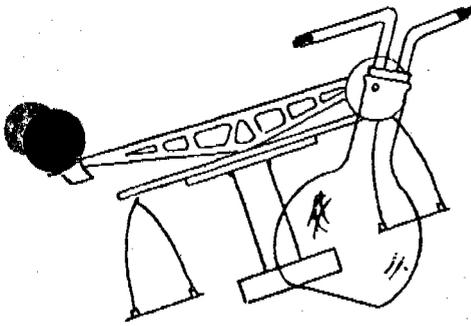
	Station 001	Station 002
Suspended Solids Mg/l	43.0 X	< 1.0
Tot. Diss. Solids Mg/l	1,775.0	1,389.0
Iron as Fe Mg/l	1.542	0.820
Arsenic as As Mg/l	< 0.001	< 0.001
Selenium as Se Mg/l	< 0.001	< 0.001
Silver as Ag Mg/l	0.023	0.005
Oil and Grease Mg/l	7.2	1.9
pH Units	7.81	7.79

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.  
*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

June 13, 1977

Kaiser Steel Corp.  
ATTN: Mr. Tom Paluso  
Sunnyside, UT 84539

CERTIFICATE OF ANALYSIS  
77-2746

Dear Mr. Paluso:

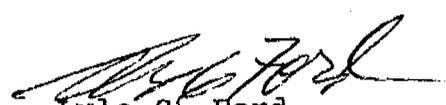
The following analysis is on sample of water received on May 23, 1977:

Sample: Wate:

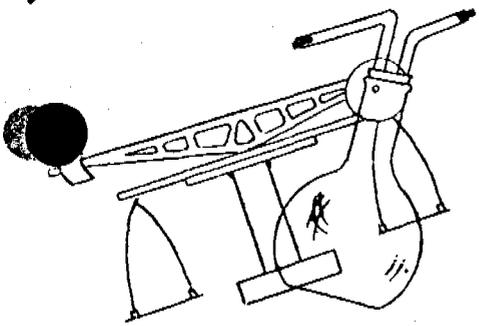
	001	002	004
Suspended Solids Mg/l	17.0✓	12.0✓	36.0✗
Total Dissolved Solids Mg/l	1,718.0	1,139.0	1,490.0
Total Iron as Fe Mg/l	0.968	0.568	1.956
Total Arsenic as As Mg/l	< 0.001	< 0.001	< 0.001
Total Selenium as Se Mg/l	< 0.001	< 0.001	< 0.001
Total Silver as Ag Mg/l	0.042	0.023	0.020
Oil and Grease Mg/l	1.9	< 1.0	< 1.0
pH Units	7.11	7.06	7.21

Sincerely,

FORD CHEMICAL LABORATORY, INC.

  
Lyle S. Ford

LSF/jms



# Ford Chemical

LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE

SALT LAKE CITY, UTAH 84115

PHONE 485-5761

May 10, 1977

Kaiser Steel Company  
Sunnyside, Utah

CERTIFICATE OF ANALYSIS  
77-2178

Gentlemen:

The following analysis is on sample of wastewater received on April 25, 1977:

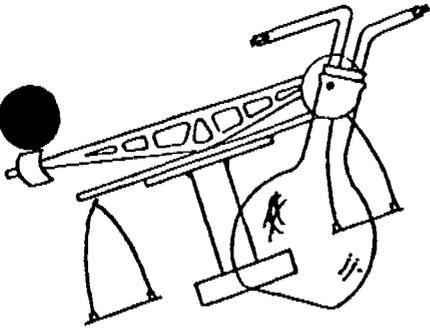
Sample: Wastewater:

	001	002	003	004
Bio-Chemical Oxygen Demand Mg/l	4.0	4.0	5.0	4.0
Suspended Solids Mg/l	9.0	10.0	73.0	20.0
Total Dissolved Solids Mg/l	1,750.0	1,500.0	1,650.0	1,500.0
Iron as Fe Mg/l	0.274	0.252	2.830	0.693
Arsenic as As Mg/l	<0.001	<0.001	<0.001	<0.001
Silver as Ag Mg/l	<0.001	<0.001	<0.001	<0.001
Oil and Grease Mg/l	<1.0	<1.0	<1.0	<1.0
pH Units	7.55	7.75	7.67	7.70
Total Coliform MPN/100ml	430	75	43	75
Fecal Coliform MPN/100ml	<3	8-3	3	459

Sincerely,

FORD CHEMICAL LABORATORY, INC.

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# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: March 4, 1977

Name Kaiser Steel Corporation

Address Sunnyside, Utah

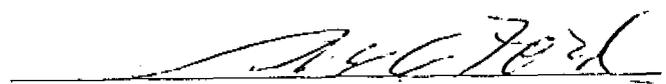
(6000)

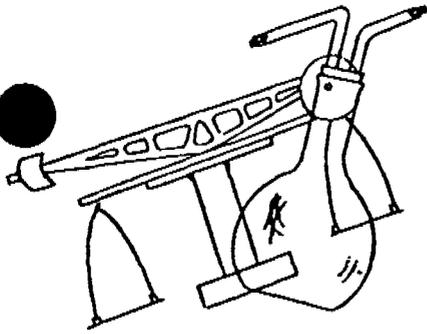
Sample Water labeled 15th Right No. 1 Mine received on February 28, 1977.

CERTIFICATE OF ANALYSIS

77-1092

Acidity	<u>1.50</u> JTU	Fluoride as F	<u>0.63</u> mg/l
Conductivity	<u>1,350</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>242.0</u> mg/l
pH	<u>7.97</u>	Iron (Total) as Fe	<u>0.220</u> mg/l
Total Dissolved Solids at 180° C.	<u>880.0</u> mg/l	Iron (Filtered) as Fe	<u>0.100</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>356.0</u> mg/l	Lead as Pb	<u>&lt;0.001</u> mg/l
Aluminum as Al	<u>0.009</u> mg/l	Magnesium as Mg	<u>37.92</u> mg/l
Arsenic as As	<u>&lt;0.001</u> mg/l	Manganese as Mn	<u>0.015</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>434.3</u> mg/l	Mercury as Hg	<u>&lt;0.0002</u> mg/l
Barium as Ba	<u>0.050</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.51</u> mg/l
Boron as B	<u>0.010</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.028</u> mg/l
Cadmium as Cd	<u>&lt;0.001</u> mg/l	Potassium as K	<u>147.7</u> mg/l
Calcium as Ca	<u>33.60</u> mg/l	Selenium as Se	<u>&lt;0.001</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt;0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>19.60</u> mg/l
Chloride as Cl	<u>8.0</u> mg/l	Silver as Ag	<u>&lt;0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt;0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>210.0</u> mg/l
Cyanide as Cn	<u>&lt;0.01</u> mg/l	Sodium as Na	<u>147.7</u> mg/l
Copper as Cu	<u>0.020</u> mg/l	Zinc as Zn	<u>0.150</u> mg/l

  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: March 4, 1977

Name Kaiser Steel Corporation

Address Sunnyside, Utah

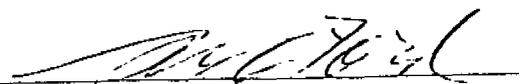
(BAO)

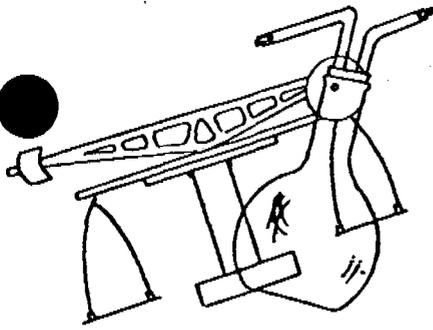
Sample Water labeled 1st Left No. 3 Mine received February 28, 1977.

CERTIFICATE OF ANALYSIS

77-1093

Turbidity	<u>50.00</u> JTU	Fluoride as F	<u>0.15</u> mg/l
Conductivity	<u>2,410</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>630.0</u> mg/l
pH	<u>7.39</u>	Iron (Total) as Fe	<u>0.450</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,570</u> mg/l	Iron (Filtered) as Fe	<u>0.310</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>458.0</u> mg/l	Lead as Pb	<u>&lt;0.001</u> mg/l
Aluminum as Al	<u>0.022</u> mg/l	Magnesium as Mg	<u>85.44</u> mg/l
Arsenic as As	<u>&lt;0.001</u> mg/l	Manganese as Mn	<u>0.020</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>558.8</u> mg/l	Mercury as Hg	<u>&lt;0.0002</u> mg/l
Barium as Ba	<u>0.090</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.03</u> mg/l
Boron as B	<u>0.110</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.029</u> mg/l
Cadmium as Cd	<u>&lt;0.001</u> mg/l	Potassium as K	<u>15.80</u> mg/l
Calcium as Ca	<u>109.6</u> mg/l	Selenium as Se	<u>&lt;0.001</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt;0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>39.60</u> mg/l
Chloride as Cl	<u>26.0</u> mg/l	Silver as Ag	<u>&lt;0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt;0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>600.0</u> mg/l
Cyanide as Cn	<u>&lt;0.01</u> mg/l	Sodium as Na	<u>180.0</u> mg/l
Copper as Cu	<u>0.200</u> mg/l	Zinc as Zn	<u>0.500</u> mg/l

  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: March 4, 1977

Name Kaiser Steel Corporation

CERTIFICATE OF ANALYSIS

Address Sunnyside, Utah

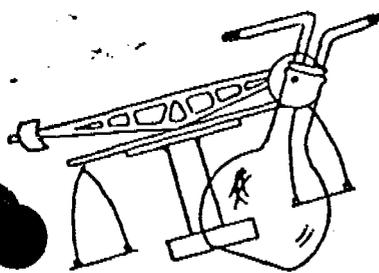
77-1094

(BAD)

Sample Water labeled 16th Right No. 3 Mine received February 28, 1977.

Acidity	<u>0.70</u> JTU	Fluoride as F	<u>0.22</u> mg/l
Conductivity	<u>1,840</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>562.0</u> mg/l
pH	<u>7.64</u>	Iron (Total) as Fe	<u>0.380</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,200</u> mg/l	Iron (Filtered) as Fe	<u>0.200</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>374.0</u> mg/l	Lead as Pb	<u>&lt;0.001</u> mg/l
Aluminum as Al	<u>0.120</u> mg/l	Magnesium as Mg	<u>88.3</u> mg/l
Arsenic as As	<u>&lt;0.001</u> mg/l	Manganese as Mn	<u>0.015</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>456.3</u> mg/l	Mercury as Hg	<u>&lt;0.0002</u> mg/l
Barium as Ba	<u>0.150</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.04</u> mg/l
Boron as B	<u>0.030</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.019</u> mg/l
Cadmium as Cd	<u>&lt;0.001</u> mg/l	Potassium as K	<u>7.50</u> mg/l
Calcium as Ca	<u>77.6</u> mg/l	Selenium as Se	<u>&lt;0.001</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt;0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>35.60</u> mg/l
Chloride as Cl	<u>10.0</u> mg/l	Silver as Ag	<u>&lt;0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt;0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>440.0</u> mg/l
Cyanide as Cn	<u>&lt;0.01</u> mg/l	Sodium as Na	<u>125.0</u> mg/l
Copper as Cu	<u>0.100</u> mg/l	Zinc as Zn	<u>0.180</u> mg/l

Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115

Date: May 13, 1976

Name Kaiser Steel Corp.

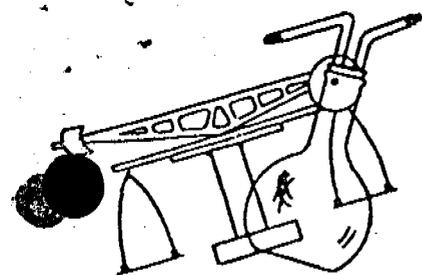
Address Sunnyside, Utah

ATTN: Tom Paluso

CERTIFICATE OF ANALYSIS  
76-3171

Sample Water Samples Received April 22, 1976:

	Whitmore Upper (002)	Main Fan Discharge (003)	#3 Tanks (004)	Twin Shafts (001)	
Alkalinity as CaCO <sub>3</sub> mg/l	264.0	688.0	472.0	476.0	
Bicarbonate as HCO <sub>3</sub> mg/l	322.0	839.3	575.8	580.7	
Calcium as Ca mg/l	48.0	40.8	59.20	76.0	
Carbonate as CO <sub>3</sub> mg/l	<0.01	<0.01	<0.01	<0.01	
Chloride as Cl mg/l	<0.01	60.0	26.0	26.0	
Conductivity umhos/cm	1,270.0	4,180.0	2,950.0	3,250.0	
Fluoride as F mg/l	0.27	1.37	1.23	1.20	5 1-2
Hardness as CaCO <sub>3</sub> mg/l	284	216	292	412.0	
Hydroxide as OH mg/l					
Magnesium as Mg mg/l	39.36	27.36	34.56	55.20	
pH	7.70	7.80	7.70	7.72	
Potassium as K mg/l	1.10	5.65	5.23	8.46	
Sodium as Na mg/l	129	741	462	478.0	
Sulfate as SO <sub>4</sub> mg/l	290	1,010	760	915.0	
Total Dissolved Solids mg/l	829	2,720	1,920	2,130	
Turbidity FTU	2.60	1.30	2.60	5.40	
Total Kjeldahl Nitrogen mg/l					
Ammonia as NH <sub>3</sub> -N mg/l	0.05	2.03	0.20	1.15	
Nitrate as NO <sub>3</sub> -N mg/l	0.045	0.160	0.350	0.230	
Nitrite as NO <sub>2</sub> -N mg/l					
Total Phosphate as PO <sub>4</sub> -P mg/l	0.180	0.075	0.077	0.250	
Ortho Phosphate as PO <sub>4</sub> -P mg/l					
Aluminum as Al mg/l	0.012	0.450	0.028	0.060	
Antimony as Sb mg/l					
Arsenic as As mg/l	<0.001	0.005	<0.001	0.056	



# Ford Chemical

LABORATORY

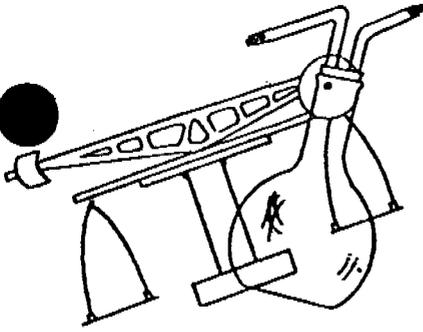
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115

	Whitmore Upper (002)	Main Fan Discharge (003)	#3 Tanks (004)	Twin Shafts (001)	
Barium as Ba mg/l	0.089	0.048	0.062	0.078	
Beryllium as Be mg/l					
Boron as B mg/l	0.005	0.015	0.010	0.016	
Cadmium as Cd mg/l	<0.001	<0.001	<0.001	<0.001	
Chromium as Cr mg/l	<0.001	<0.001	<0.001	<0.001	
Cobalt as Co mg/l					
Copper as Cu mg/l	<0.001	0.007	0.005	0.008	
Germanium as Ge mg/l					
Iron as Fe mg/l Total	0.155	1.340	0.480	0.410	
Lead as Pb mg/l	<0.001	0.027	0.009	0.290	≤ .05
Manganese as Mn mg/l	<0.001	0.109	0.007	0.178	
Mercury as Hg mg/l	<0.0001	<0.0001	<0.0001	<0.0001	
Molybdenum as Mo mg/l					
Nickel as Ni mg/l					
Selenium as Se mg/l	0.026	0.370	0.275	0.817	≤ .01
Silver as Ag mg/l	<0.001	<0.001	<0.001	<0.001	
Vanadium as V mg/l					
Zinc as Zn mg/l	0.014	3.060	0.049	0.128	
Bio-Chemical Oxygen Demand mg/l	1.2	3.2	1.8	4.0	
Chemical Oxygen Demand mg/l					
Total Organic Carbon mg/l					
Cyanide as Cn mg/l	<0.01	<0.01	<0.01	<0.01	
Silica as SiO <sub>2</sub> mg/l	14.0	7.90	9.0	11.0	
Oil and Grease mg/l	<0.1	<0.1	<0.1	<0.1	
Phenol mg/l	<0.001	<0.001	<0.001	0.002	
Surfactants mg/l					
Settleable Solids ml/l					
Suspended Solids mg/l	4.0	9.0	11.0	24.0	
Total Solids mg/l					

Sincerely,

FORD CHEMICAL LABORATORY, INC.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

Address Sunnyside, UT

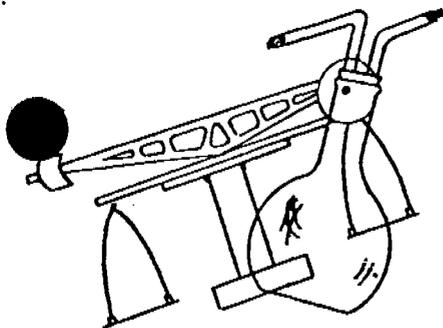
CERTIFICATE OF ANALYSIS  
75-5844

Sample #1 water received on December 12, 1975, under P.O. No. 280-43938

● Turbidity	<u>0.65</u> JTU	Fluoride as F	<u>1.18</u> mg/l
Conductivity	<u>2,960</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>332.0</u> mg/l
pH	<u>7.82</u>	Iron (Total) as Fe	<u>0.379</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,939</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>460.0</u> mg/l	Lead as Pb	<u>0.025</u> mg/l
Aluminum as Al	<u>0.140</u> mg/l	Magnesium as Mg	<u>49.9</u> mg/l
Arsenic as As	<u>&lt; 0.01</u> mg/l	Manganese as Mn	<u>0.180</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>561.2</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.110</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.10</u> mg/l
Boron as B	<u>0.036</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.05</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>6.06</u> mg/l
Calcium as Ca	<u>49.6</u> mg/l	Selenium as Se	<u>&lt; 0.01</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>14.50</u> mg/l
Chloride as Cl	<u>26.0</u> mg/l	Silver as Ag	<u>0.005</u> mg/l
Chromium as Cr (Hex)	<u>0.021</u> mg/l	Sulfate as SO <sub>4</sub>	<u>800.0</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>448.0</u> mg/l
Copper as Cu	<u>0.025</u> mg/l	Zinc as Zn	<u>0.148</u> mg/l
3.O.D. (5-day)	<u>15.0</u> mg/l	Suspended Solids	<u>23.0</u> mg/l
Oil & Grease	<u>3.5</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>21.0</u> mg/l		

*Lyle Ford*

Ford Chemical Laboratory, Inc.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

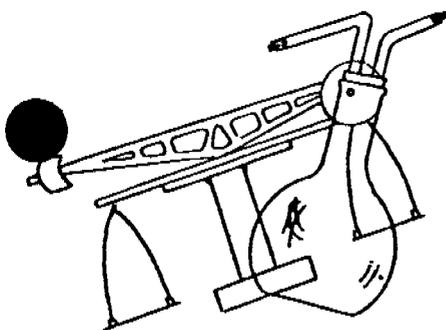
CERTIFICATE OF ANALYSIS  
75-5845

Address Sunnyside, UT

Sample #2water received on December 12, 1975, under P.O. No. 280-43938

Acidity	<u>0.91</u> JTU	Fluoride as F	<u>1.20</u> mg/l
Conductivity	<u>2,990</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>372.0</u> mg/l
pH	<u>8.00</u>	Iron (Total) as Fe	<u>317.0</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,948</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>584.0</u> mg/l	Lead as Pb	<u>0.013</u> mg/l
Aluminum as Al	<u>0.11</u> mg/l	Magnesium as Mg	<u>38.0</u> mg/l
Arsenic as As	<u>&lt; 0.01</u> mg/l	Manganese as Mn	<u>0.098</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>712.4</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.080</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.12</u> mg/l
Boron as B	<u>0.116</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.06</u> mg/l
Cadmium as Cd	<u>0.003</u> mg/l	Potassium as K	<u>7.46</u> mg/l
Calcium as Ca	<u>72.8</u> mg/l	Selenium as Se	<u>&lt; 0.01</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>8.30</u> mg/l
Chloride as Cl	<u>10.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>0.016</u> mg/l	Sulfate as SO <sub>4</sub>	<u>677.5</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>432.0</u> mg/l
Copper as Cu	<u>0.009</u> mg/l	Zinc as Zn	<u>0.097</u> mg/l
B.O.D.	<u>12.5</u> mg/l	Suspended Solids	<u>11.0</u> mg/l
Oil & Grease	<u>2.0</u> mg/l		
Phenol	<u>0.005</u> mg/l		
C.O.D.	<u>18.0</u> mg/l		

*Lytle Ford*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

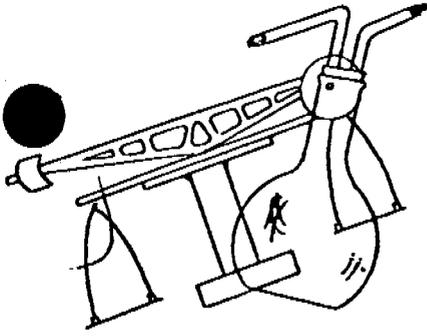
CERTIFICATE OF ANALYSIS  
75-5846

Address Sunnyside, UT

Sample #3 water received on December 12, 1975, under P.O. No. 280-43938

Acidity	3.10	JTU	Fluoride as F	1.74	mg/l
Conductivity	11,690	umhos/cm	Total Hardness as CaCO <sub>3</sub>	3,560	mg/l
pH	7.80		Iron (Total) as Fe	0.675	mg/l
Total Dissolved Solids at 180° C.	7,600	mg/l	Iron (Filtered) as Fe	--	mg/l
Alkalinity as CaCO <sub>3</sub>	538.0	mg/l	Lead as Pb	0.100	mg/l
Aluminum as Al	0.68	mg/l	Magnesium as Mg	675.0	mg/l
Arsenic as As	< 0.01	mg/l	Manganese as Mn	0.885	mg/l
Bicarbonate as HCO <sub>3</sub>	656.3	mg/l	Mercury as Hg	< 0.001	mg/l
Barium as Ba	0.035	mg/l	Nitrate as NO <sub>3</sub> -N	0.07	mg/l
Boron as B	0.650	mg/l	Phosphate as PO <sub>4</sub>	0.05	mg/l
Cadmium as Cd	< 0.001	mg/l	Potassium as K	42.6	mg/l
Calcium as Ca	300.0	mg/l	Selenium as Se	0.13	mg/l
Carbonate as CO <sub>3</sub>	< 0.01	mg/l	Silica as SiO <sub>2</sub>	40.60	mg/l
Chloride as Cl	92.0	mg/l	Silver as Ag	< 0.001	mg/l
Chromium as Cr (Hex)	0.067	mg/l	Sulfate as SO <sub>4</sub>	4,865	mg/l
Cyanide as Cn	< 0.01	mg/l	Sodium as Na	974.0	mg/l
Copper as Cu	0.026	mg/l	Zinc as Zn	1.14	mg/l
B.O.D.	10.7	mg/l	Suspended Solids	25.0	mg/l
Oil & Grease	1.2	mg/l			
Phenol	0.012	mg/l			
C.O.D	250	mg/l			

*Thyle Ford*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

Address Sunnyside, UT

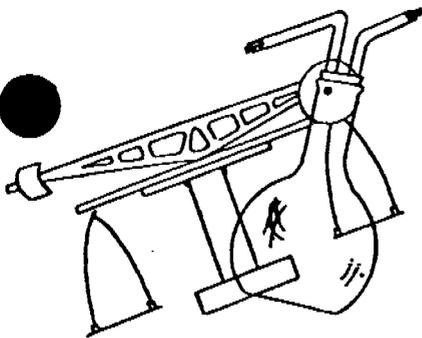
CERTIFICATE OF ANALYSIS  
75-5847

Sample #4 water received on December 12, 1975, under P.O. NO. 280-43938

Acidity	<u>2.00</u>	<u>JTU</u>	Fluoride as F	<u>1.27</u>	<u>mg/l</u>
Conductivity	<u>2,980</u>	<u>umhos/cm</u>	Total Hardness as CaCO <sub>3</sub>	<u>344.0</u>	<u>mg/l</u>
pH	<u>8.03</u>		Iron (Total) as Fe	<u>0.289</u>	<u>mg/l</u>
Total Dissolved Solids at 180° C.	<u>1,940</u>	<u>mg/l</u>	Iron (Filtered) as Fe	<u>--</u>	<u>mg/l</u>
Alkalinity as CaCO <sub>3</sub>	<u>476.0</u>	<u>mg/l</u>	Lead as Pb	<u>0.016</u>	<u>mg/l</u>
Aluminum as Al	<u>0.06</u>	<u>mg/l</u>	Magnesium as Mg	<u>35.52</u>	<u>mg/l</u>
Arsenic as As	<u>0.05</u>	<u>mg/l</u>	Manganese as Mn	<u>0.030</u>	<u>mg/l</u>
Bicarbonate as HCO <sub>3</sub>	<u>580.72</u>	<u>mg/l</u>	Mercury as Hg	<u>&lt; 0.001</u>	<u>mg/l</u>
Barium as Ba	<u>0.035</u>	<u>mg/l</u>	Nitrate as NO <sub>3</sub> -N	<u>0.36</u>	<u>mg/l</u>
Boron as B	<u>0.120</u>	<u>mg/l</u>	Phosphate as PO <sub>4</sub>	<u>0.04</u>	<u>mg/l</u>
Cadmium as Cd	<u>&lt; 0.001</u>	<u>mg/l</u>	Potassium as K	<u>6.07</u>	<u>mg/l</u>
Calcium as Ca	<u>62.4</u>	<u>mg/l</u>	Selenium as Se	<u>0.02</u>	<u>mg/l</u>
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u>	<u>mg/l</u>	Silica as SiO <sub>2</sub>	<u>8.70</u>	<u>mg/l</u>
Chloride as Cl	<u>44.0</u>	<u>mg/l</u>	Silver as Ag	<u>&lt; 0.001</u>	<u>mg/l</u>
Chromium as Cr (Hex)	<u>0.014</u>	<u>mg/l</u>	Sulfate as SO <sub>4</sub>	<u>755.0</u>	<u>mg/l</u>
Cyanide as Cn	<u>&lt; 0.01</u>	<u>mg/l</u>	Sodium as Na	<u>458.0</u>	<u>mg/l</u>
Copper as Cu	<u>0.007</u>	<u>mg/l</u>	Zinc as Zn	<u>0.045</u>	<u>mg/l</u>
B.O.D.	<u>12.0</u>	<u>mg/l</u>	Suspended Solids	<u>4.0</u>	<u>mg/l</u>
Oil & Grease	<u>2.6</u>	<u>mg/l</u>			
Phenol	<u>&lt; 0.001</u>	<u>mg/l</u>			
C.O.D.	<u>16.0</u>	<u>mg/l</u>			

*Lyle Ford*

Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

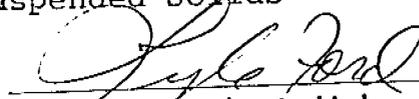
Name Kaiser Steel Corporation

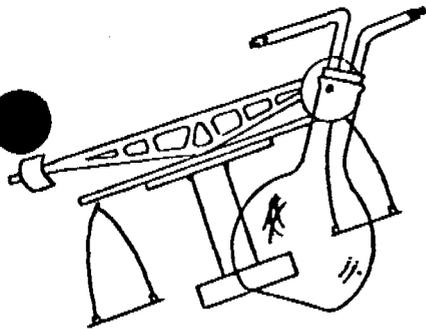
Address Sunnyside, UT

CERTIFICATE OF ANALYSIS  
75-5848

Sample #5 water received on December 12, 1975, under P.O. No. 280-43938

Turbidity	<u>0.51</u> JTU	Fluoride as F	<u>1.14</u> mg/l
Conductivity	<u>2,520</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>200.0</u> mg/l
pH	<u>8.04</u>	Iron (Total) as Fe	<u>0.112</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,638</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>502.0</u> mg/l	Lead as Pb	<u>0.008</u> mg/l
Aluminum as Al	<u>0.09</u> mg/l	Magnesium as Mg	<u>29.2</u> mg/l
Arsenic as As	<u>&lt; 0.01</u> mg/l	Manganese as Mn	<u>0.032</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>612.44</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.061</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.15</u> mg/l
Boron as B	<u>0.020</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.03</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>5.17</u> mg/l
Calcium as Ca	<u>31.2</u> mg/l	Selenium as Se	<u>&lt; 0.01</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>6.70</u> mg/l
Chloride as Cl	<u>24.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>&lt; 0.001</u> mg/l	Sulfate as SO <sub>4</sub>	<u>537.5</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>400.0</u> mg/l
Copper as Cu	<u>0.008</u> mg/l	Zinc as Zn	<u>0.019</u> mg/l
BOD	<u>6.1</u> mg/l	Suspended Solids	<u>7.0</u> / mg/l
Oil & Grease	<u>1.3</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>12.0</u> mg/l		

  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

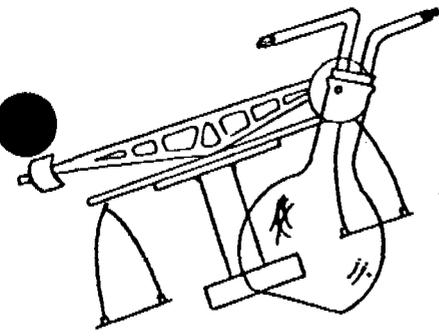
Address Sunnyside, UT

CERTIFICATE OF ANALYSIS  
75-5849

Sample #6 water received on December 12, 1975, under P.O. No. 280-43938

Turbidity	<u>1.20</u>	JTU	Fluoride as F	<u>1.18</u>	mg/l
Conductivity	<u>2,880</u>	umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>348.0</u>	mg/l
pH	<u>8.10</u>		Iron (Total) as Fe	<u>0.218</u>	mg/l
Total Dissolved Solids at 180° C.	<u>1,878</u>	mg/l	Iron (Filtered) as Fe	<u>--</u>	mg/l
Alkalinity as CaCO <sub>3</sub>	<u>464.0</u>	mg/l	Lead as Pb	<u>0.005</u>	mg/l
Aluminum as Al	<u>0.11</u>	mg/l	Magnesium as Mg	<u>52.32</u>	mg/l
Arsenic as As	<u>&lt; 0.01</u>	mg/l	Manganese as Mn	<u>0.022</u>	mg/l
Bicarbonate as HCO <sub>3</sub>	<u>566.08</u>	mg/l	Mercury as Hg	<u>&lt; 0.001</u>	mg/l
Barium as Ba	<u>0.085</u>	mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.38</u>	mg/l
Boron as B	<u>0.012</u>	mg/l	Phosphate as PO <sub>4</sub>	<u>0.03</u>	mg/l
Cadmium as Cd	<u>&lt; 0.001</u>	mg/l	Potassium as K	<u>5.22</u>	mg/l
Calcium as Ca	<u>52.0</u>	mg/l	Selenium as Se	<u>&lt; 0.01</u>	mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u>	mg/l	Silica as SiO <sub>2</sub>	<u>12.60</u>	mg/l
Chloride as Cl	<u>40.0</u>	mg/l	Silver as Ag	<u>&lt; 0.001</u>	mg/l
Chromium as Cr (Hex)	<u>&lt; 0.001</u>	mg/l	Sulfate as SO <sub>4</sub>	<u>740.0</u>	mg/l
Cyanide as Cn	<u>&lt; 0.01</u>	mg/l	Sodium as Na	<u>423.0</u>	mg/l
Copper as Cu	<u>0.013</u>	mg/l	Zinc as Zn	<u>0.048</u>	mg/l
B.O.D.	<u>4.3</u>	mg/l	Suspended Solids	<u>5.0</u>	mg/l
Oil & Grease	<u>1.0</u>	mg/l			
Phenol	<u>&lt; 0.001</u>	mg/l			
C.O.D.	<u>80</u>	mg/l			

*[Signature]*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

Address Sunnyside, UT

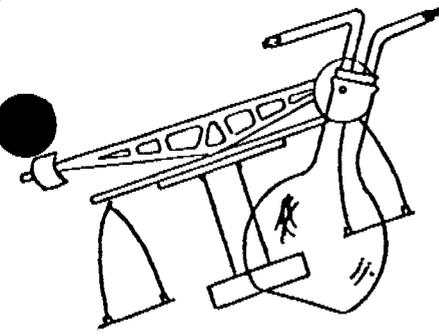
## CERTIFICATE OF ANALYSIS

75-5850

Sample #7 water received on December 12, 1975, under P.O. No. 280-43938

Turbidity	<u>1.60</u> JTU	Fluoride as F	<u>1.27</u> mg/l
Conductivity	<u>8,240</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>1,890</u> mg/l
pH	<u>8.03</u>	Iron (Total) as Fe	<u>0.369</u> mg/l
Total Dissolved Solids at 180° C.	<u>5,350</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>232.0</u> mg/l	Lead as Pb	<u>0.004</u> mg/l
Aluminum as Al	<u>0.14</u> mg/l	Magnesium as Mg	<u>276.0</u> mg/l
Arsenic as As	<u>0.02</u> mg/l	Manganese as Mn	<u>0.034</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>283.0</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.095</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>1.05</u> mg/l
Boron as B	<u>0.146</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.08</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>9.63</u> mg/l
Calcium as Ca	<u>296.0</u> mg/l	Selenium as Se	<u>0.15</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>9.30</u> mg/l
Chloride as Cl	<u>98.0</u> mg/l	Silver as Ag	<u>0.011</u> mg/l
Chromium as Cr (Hex)	<u>0.038</u> mg/l	Sulfate as SO <sub>4</sub>	<u>3,450</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>946.0</u> mg/l
Copper as Cu	<u>0.026</u> mg/l	Zinc as Zn	<u>0.411</u> mg/l
B.O.D.	<u>7.0</u> mg/l	Suspended Solids	<u>72.0x</u> mg/l
Oil & Grease	<u>3.3</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>8.5</u> mg/l		

*Lytle Ford*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

### CERTIFICATE OF ANALYSIS

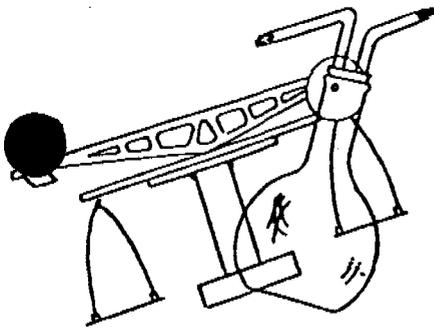
Address Sunnyside, UT

75-5851

Sample #8 water received on December 12, 1975, under P.O. No. 280-43938

Turbidity	<u>2.1</u>	JTU	Fluoride as F	<u>0.82</u>	mg/l
Conductivity	<u>3,792</u>	umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>930.0</u>	mg/l
pH	<u>8.23</u>		Iron (Total) as Fe	<u>1.39</u>	mg/l
Total Dissolved Solids at 180° C.	<u>2,465</u>	mg/l	Iron (Filtered) as Fe	<u>--</u>	mg/l
Alkalinity as CaCO <sub>3</sub>	<u>302.0</u>	mg/l	Lead as Pb	<u>0.034</u>	mg/l
Aluminum as Al	<u>9.3</u>	mg/l	Magnesium as Mg	<u>110.4</u>	mg/l
Arsenic as As	<u>&lt; 0.01</u>	mg/l	Manganese as Mn	<u>0.287</u>	mg/l
Bicarbonate as HCO <sub>3</sub>	<u>368.4</u>	mg/l	Mercury as Hg	<u>&lt; 0.001</u>	mg/l
Barium as Ba	<u>0.115</u>	mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.84</u>	mg/l
Boron as B	<u>0.260</u>	mg/l	Phosphate as PO <sub>4</sub>	<u>0.55</u>	mg/l
Cadmium as Cd	<u>&lt; 0.001</u>	mg/l	Potassium as K	<u>4.86</u>	mg/l
Calcium as Ca	<u>188.0</u>	mg/l	Selenium as Se	<u>&lt; 0.01</u>	mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u>	mg/l	Silica as SiO <sub>2</sub>	<u>5.50</u>	mg/l
Chloride as Cl	<u>40.0</u>	mg/l	Silver as Ag	<u>&lt; 0.001</u>	mg/l
Chromium as Cr (Hex)	<u>0.036</u>	mg/l	Sulfate as SO <sub>4</sub>	<u>1,370</u>	mg/l
Cyanide as Cn	<u>&lt; 0.01</u>	mg/l	Sodium as Na	<u>384.0</u>	mg/l
Copper as Cu	<u>0.053</u>	mg/l	Zinc as Zn	<u>0.043</u>	mg/l
B.O.D.	<u>8.0</u>	mg/l	Suspended solids	<u>174.0</u>	mg/l
Oil & Grease	<u>&lt; 1.0</u>	mg/l			
Phenol	<u>&lt; 0.001</u>	mg/l			
C.O.D.	<u>10.0</u>	mg/l			

*Lyle Ford*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

CERTIFICATE OF ANALYSIS  
75-5852

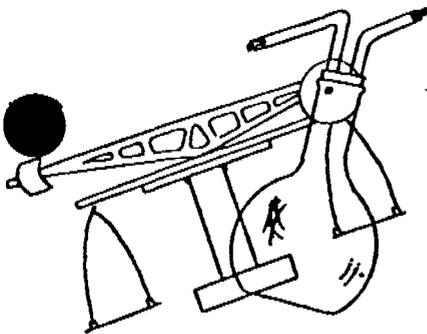
Address Sunnyside, UT

Sample #9 Water received on December 12, 1975, under P.O. No. 280-43938

Turbidity	<u>14.10</u> JTU	Fluoride as F	<u>1.36</u> mg/l
Conductivity	<u>2,870</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>438.0</u> mg/l
pH	<u>8.15</u>	Iron (Total) as Fe	<u>0.204</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,867</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>338.0</u> mg/l	Lead as Pb	<u>0.018</u> mg/l
Aluminum as Al	<u>0.39</u> mg/l	Magnesium as Mg	<u>52.8</u> mg/l
Arsenic as As	<u>0.25</u> mg/l	Manganese as Mn	<u>0.069</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>412.36</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.135</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.36</u> mg/l
Boron as B	<u>0.414</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.05</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>6.19</u> mg/l
Calcium as Ca	<u>87.2</u> mg/l	Selenium as Se	<u>0.45</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>16.20</u> mg/l
Chloride as Cl	<u>46.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>0.026</u> mg/l	Sulfate as SO <sub>4</sub>	<u>875.0</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>389.0</u> mg/l
Copper as Cu	<u>0.019</u> mg/l	Zinc as Zn	<u>0.642</u> mg/l
B.O.D.	<u>45.0</u> mg/l	Suspended Solids	<u>432.0</u> X mg/l
Oil & Grease	<u>5.0</u> mg/l		
Phenol	<u>0.015</u> mg/l		
C.O.D.	<u>55.0</u> mg/l		

*Lytle Ford*

Ford Chemical Laboratory, Inc.



# Ford Chemical

LABORATORY, INC.  
Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

Address Sunnyside, UT

CERTIFICATE OF ANALYSIS

75-5853

Sample #10 water received on December 12, 1975, under P.O. No. 280-43938

Opacity	<u>1.30</u> JTU	Fluoride as F	<u>0.82</u> mg/l
Conductivity	<u>3,000</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>884.0</u> mg/l
pH	<u>8.05</u>	Iron (Total) as Fe	<u>0.780</u> mg/l
Total Dissolved Solids at 180° C.	<u>1,953</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>332.0</u> mg/l	Lead as Pb	<u>0.025</u> mg/l
Aluminum as Al	<u>5.88</u> mg/l	Magnesium as Mg	<u>128.64</u> mg/l
Arsenic as As	<u>0.05</u> mg/l	Manganese as Mn	<u>0.558</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>405.04</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.155</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.74</u> mg/l
Boron as B	<u>0.140</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.025</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>9.07</u> mg/l
Calcium as Ca	<u>139.2</u> mg/l	Selenium as Se	<u>0.35</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>18.20</u> mg/l
Chloride as Cl	<u>36.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>0.019</u> mg/l	Sulfate as SO <sub>4</sub>	<u>1,000</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>236.0</u> mg/l
Copper as Cu	<u>0.019</u> mg/l	Zinc as Zn	<u>18.650</u> mg/l
BOD	<u>6.0</u> mg/l	Suspended Solids	<u>23.0</u> mg/l
Oil & Grease	<u>1.8</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>15.0</u> mg/l		

*[Signature]*  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

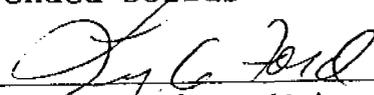
Name Kaiser Steel Corporation

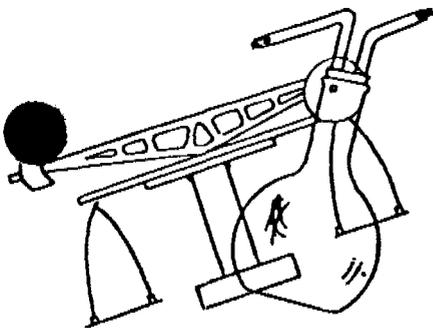
CERTIFICATE OF ANALYSIS  
75-5854

Address Sunnyside, UT

Sample #11 water received on December 12, 1975, under PO No. 280-43938

Turbidity	<u>0.61</u> JTU	Fluoride as F	<u>0.27</u> mg/l
Conductivity	<u>750.0</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>278.0</u> mg/l
pH	<u>8.10</u>	Iron (Total) as Fe	<u>0.079</u> mg/l
Total Dissolved Solids at 180° C.	<u>488.0</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>242.0</u> mg/l	Lead as Pb	<u>&lt; 0.001</u> mg/l
Aluminum as Al	<u>&lt; 0.001</u> mg/l	Magnesium as Mg	<u>37.92</u> mg/l
Arsenic as As	<u>&lt; 0.01</u> mg/l	Manganese as Mn	<u>0.006</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>295.2</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.115</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.07</u> mg/l
Boron as B	<u>0.004</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.03</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>1.259</u> mg/l
Calcium as Ca	<u>48.0</u> mg/l	Selenium as Se	<u>&lt; 0.01</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>2.50</u> mg/l
Chloride as Cl	<u>6.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>0.006</u> mg/l	Sulfate as SO <sub>4</sub>	<u>80.0</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>21.0</u> mg/l
Copper as Cu	<u>0.03</u> mg/l	Zinc as Zn	<u>10.50</u> mg/l
B.O.D.	<u>4.0</u> mg/l	Suspended Solids	<u>5.0</u> mg/l
Oil & Grease	<u>3.0</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>12.0</u> mg/l		

  
Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

Bacteriological and Chemical Analysis

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

Date: December 26, 1975

Name Kaiser Steel Corporation

Address Sunnyside, UT

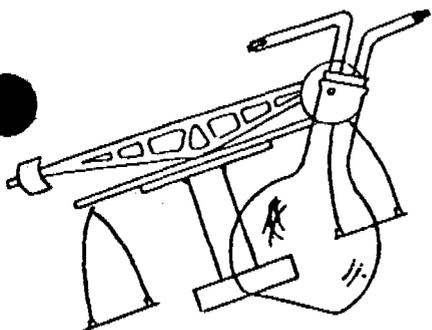
CERTIFICATE OF ANALYSIS  
75-5855

Sample #12 Water received on December 12, 1975, under P.O. No. 280-43938

● Turbidity	<u>0.43</u> JTU	Fluoride as F	<u>0.27</u> mg/l
Conductivity	<u>829.0</u> umhos/cm	Total Hardness as CaCO <sub>3</sub>	<u>288.0</u> mg/l
pH	<u>8.23</u>	Iron (Total) as Fe	<u>3.02</u> mg/l
Total Dissolved Solids at 180° C.	<u>539.0</u> mg/l	Iron (Filtered) as Fe	<u>--</u> mg/l
Alkalinity as CaCO <sub>3</sub>	<u>278.0</u> mg/l	Lead as Pb	<u>&lt; 0.001</u> mg/l
Aluminum as Al	<u>0.490</u> mg/l	Magnesium as Mg	<u>41.28</u> mg/l
Arsenic as As	<u>&lt; 0.01</u> mg/l	Manganese as Mn	<u>1.122</u> mg/l
Bicarbonate as HCO <sub>3</sub>	<u>339.16</u> mg/l	Mercury as Hg	<u>&lt; 0.001</u> mg/l
Barium as Ba	<u>0.155</u> mg/l	Nitrate as NO <sub>3</sub> -N	<u>0.03</u> mg/l
Boron as B	<u>0.205</u> mg/l	Phosphate as PO <sub>4</sub>	<u>0.07</u> mg/l
Cadmium as Cd	<u>&lt; 0.001</u> mg/l	Potassium as K	<u>1.120</u> mg/l
Calcium as Ca	<u>44.8</u> mg/l	Selenium as Se	<u>&lt; 0.01</u> mg/l
Carbonate as CO <sub>3</sub>	<u>&lt; 0.01</u> mg/l	Silica as SiO <sub>2</sub>	<u>12.30</u> mg/l
Chloride as Cl	<u>4.0</u> mg/l	Silver as Ag	<u>&lt; 0.001</u> mg/l
Chromium as Cr (Hex)	<u>0.081</u> mg/l	Sulfate as SO <sub>4</sub>	<u>77.5</u> mg/l
Cyanide as Cn	<u>&lt; 0.01</u> mg/l	Sodium as Na	<u>30.0</u> mg/l
● Copper as Cu	<u>0.101</u> mg/l	Zinc as Zn	<u>1.63</u> mg/l
B.O.D.	<u>2.5</u> mg/l	Suspended Solids	<u>&lt; 1.0</u> mg/l
Oil & Grease	<u>&lt; 1.0</u> mg/l		
Phenol	<u>&lt; 0.001</u> mg/l		
C.O.D.	<u>6.9</u> mg/l		

*Kyle Ford*

Ford Chemical Laboratory, Inc.



# Ford Chemical

## LABORATORY, INC.

*Bacteriological and Chemical Analysis*

40 WEST LOUISE AVENUE  
SALT LAKE CITY, UTAH 84115  
PHONE 485-5761

February 9, 1976

CERTIFICATE OF ANALYSIS  
76-514

Kaiser Steel Corporation  
Sunnyside, Utah

Gentlemen:

The following analysis is on sample of water received on  
December 12, 1975 under P.O. No. 280-43938:

Sample: Water

	Chemical Oxygen Demand
Sample #1	21.0 mg/l
Sample #2	18.0 mg/l
Sample #3	25.0 mg/l
Sample #4	16.0 mg/l
Sample #5	12.0 mg/l
Sample #6	8.0 mg/l
Sample #7	8.5 mg/l
Sample #8	10.0 mg/l
Sample #9	55.0 mg/l
Sample #10	15.0 mg/l
Sample #11	12.0 mg/l
Sample #12	6.0 mg/l

Sincerely,  
FORD CHEMICAL LABORATORY, INC.

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

NAME SUNNYSIDE COGENERATION ASSOC.

ADDRESS P.O. BOX 10

SUNNYSIDE UT 84539

FACILITY SUNNYSIDE COGENERATION ASSOC.

LOCATION SUNNYSIDE UT 84539

ATTN: ENVIRONMENTAL COORDINATOR

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

(2-16)

(17-19)

DT0024759

PERMIT NUMBER

001 H

DISCHARGE NUMBER

01 BIOMONITORING

Form Approved 12345

P - FINAL

OMB No. 2040-0004

MINOR

Approval expires 10-31-94

EFFLUENT

\*\*\* NO DISCHARGE  \*\*\*

NOTE: Read instructions before completing this form.

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	97	11	01		97	11	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			QUALITY OR CONCENTRATION (46-53) (54-61)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPL. TYPE (69-71)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS					
P/F STABRE 48HR ACU CERIODAPHNIA TGM38 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)					
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	PASS=0 DAILY MX FAIL=1					QTRLY COMPO
P/F STABRE 96HR ACU PINEPHALES PROMELAS TGM6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)					
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	PASS=0 DAILY MX FAIL=1					QTRLY COMPO
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

HAROLD C. SALLAS

TYPED OR PRINTED

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

*Harold C. Sallas*

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE

801 888-4476

DATE

97 4 14

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

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

UT0024759  
 PERMIT NUMBER

004 W  
 DISCHARGE NUMBER

MINOR

Form Approved.

F - FINAL OMB No. 2040-0004  
 004 WET TEST REPORT expires 10-31-94

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SALT LAKE CITY, UT 84158-0087 FROM  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
97	03	01	TO	97	03	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

EFFLUENT  
 \*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)	UNITS			
P/F STATRE 48HR ACU CERIODAPHNIA	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
TGM3B 1 0 0	PERMIT REQUIREMENT	*****	*****	****	*****	*****	0	PASS=0		DAILY MX	OTRLY COMPOS
EFFLUENT GROSS VALUE								FAIL=1			
P/F STATRE 96HR ACU PIMEPHALES PROMELAS	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
TGN6C 1 0 0	PERMIT REQUIREMENT	*****	*****	****	*****	*****	0	PASS=0		DAILY MX	OTRLY COMPOS
EFFLUENT GROSS VALUE								FAIL=1			
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

Harold C. Sallas  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE 801 888-4476 DATE 97 4 14  
 AREA CODE NUMBER YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR EITHER SPECIES AT ANY DILUTION.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE WASTE COAL FACILITY  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

**UT0024759**  
 PERMIT NUMBER

**004 W**  
 DISCHARGE NUMBER

MINOR  
 Form Approved. OMB No. 2040-0004  
 F - FINAL 004 MET TEST PERIOD expires 10-31-94  
 EFFLUENT

FACILITY SUNNYSIDE WASTE COAL FACILITY  
 LOCATION SALT LAKE CITY, UT 84158-0087 FROM  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
97	03	01		97	03	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

\*\*\* NO DATA  \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)			
P/F STATRE 48HR ACU CERIODAPHNIA TGM3B 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	( 9A)			DIRLY COMPOS
	PERMIT REQUIREMENT	*****	*****	****	*****	*****	REPORT PASS=0 DAILY MX FAIL=1			
P/F STATRE 96HR ACU PINEPHALES PROMELAS TGN6C 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	( 9A)			DIRLY COMPOS
	PERMIT REQUIREMENT	*****	*****	****	*****	*****	REPORT PASS=0 DAILY MX FAIL=1			
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
801 888-4476  
 AREA CODE NUMBER  
 DATE  
97 4 14  
 YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
**ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR EITHER SPECIES AT ANY DILUTION.**

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

NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84530

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

UT0024750  
 PERMIT NUMBER

004 4  
 DISCHARGE NUMBER

004 WFT TESTING

Form Approved. 12345

OMB No. 2040-0004

Approval expires 10-31-94

P - FINAL  
 MINOR  
 EFFLUENT

\*\*\* NO DISCHARGE  \*\*\*

NOTE: Read instructions before completing this form.

FACILITY SUNNYSIDE COGENERATION ASSOC.

LOCATION SUNNYSIDE UT 84530

ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD							
YEAR	MO	DAY	TO	YEAR	MO	DAY	
97	01	01		97	03	31	
(20-21)		(22-23)		(24-25)		(26-27) (28-29) (30-31)	

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-71)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				
P/F STATE 48HR ACU CERIODAPHNIA EG138 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	DAILY MX FAIL=1			QTRLY COMPO
P/F STATE 96HR ACU PIMEPHALES PROMELAS EGN6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	DAILY MX FAIL=1			QTRLY COMPO
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
 801 888-4476  
 DATE  
 97 4 14

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

ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR EITHER SPECIES AT ANY DILUTION.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539  
 FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SUNNYSIDE UT 84539  
 ATTN: ENVIRONMENTAL COORDINATOR

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

PERMIT NUMBER UT0 24759 DISCHARGE NUMBER 97 4

002 BIOMONITORING  
 Form Approved. 1224  
 OMB No. 2040-0004  
 Approval expires 10-31-94

MONITORING PERIOD

FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	97	01	01		97	03	31

(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

EFFLUENT  
 \*\*\* NO DISCHARGE \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)			QUALITY OR CONCENTRATION (46-53)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS					
P/F STABRE 48HR ACU CERIODAPENNIA P6M39 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	( 9A)		
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	*****	*****	*****	PASS=0 DAILY MK FAIL=1		OTRLY COMPOS
P/F STABRE 96HR ACU DIMEPHALBS PROMELAS T6N6C 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	( 9A)		
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	*****	*****	*****	*****	PASS=0 DAILY MK FAIL=1		OTRLY COMPOS
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												
	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT  


TELEPHONE  
 801 888-4476  
 DATE  
 97 4 14

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

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)  
 UT0024759 PERMIT NUMBER  
 013 W DISCHARGE NUMBER

MINOR Form Approved.  
 F - FINAL OMB No. 2040-0004  
 013 BIONOMONITORING Approval expires 10-31-94  
 EFFLUENT

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SALT LAKE CITY, UT 84158-0087 FROM  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD							
YEAR	MO	DAY	TO	YEAR	MO	DAY	
97	03	01		97	03	31	
(20-21)		(22-23)		(24-25)		(26-27)	
				(28-29)		(30-31)	

\*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53) (54-61)			QUALITY OR CONCENTRATION (4 Card Only) (38-45) (46-53) (54-61)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
P/F STATRE 48HR ACU CERIODAPHNIA		*****	*****		*****	*****					
TGM3B 1 0 0	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	PASS=0		OTRLY COMPOS	
EFFLUENT GROSS VALUE				****				DAILY MX FAIL=1			
P/F STATRE 96HR ACU PINEPHALES PROMELAS		*****	*****		*****	*****					
TGN6C 1 0 0	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	PASS=0		OTRLY COMPOS	
EFFLUENT GROSS VALUE				****				DAILY MX FAIL=1			
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE DATE  
 801 888-4476 97 4 14  
 AREA CODE NUMBER YEAR MO DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)  
 ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR BIGHTER TEST SPECIES AT ANY DILUTION.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME **SUNNYSIDE WASTE COAL FACILITY**  
 ADDRESS **P.O. BOX 10**  
**SUNNYSIDE UT 84539**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

**UT0024759**  
 PERMIT NUMBER

**013 W**  
 DISCHARGE NUMBER

MINOR

Form Approved.

F - FINAL OMB No. 2040-0004  
 013 BIOMONITORING SPIRES 10-31-94  
 EFFLUENT

\*\*\* NO DATA  \*\*\*

NOTE: Read instructions before completing this form.

FACILITY **SUNNYSIDE WASTE COAL FACILITY**  
 LOCATION **SALT LAKE CITY, UT 84158-0087** FROM  
 ATTN: **ENVIRONMENTAL COORDINATOR**

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
97	03	01		97	03	31
(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)			
P/F STATRE 48HR ACU CERIODAPHNIA TGM3B 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	( 9A)			DIRTY COMPOS
	PERMIT REQUIREMENT	*****	*****	****	*****	*****	DAILY MX	PASS=0		DIRTY COMPOS
P/F STATRE 96HR ACU PINEPHALES PROMELAS TGN6C 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	( 9A)			DIRTY COMPOS
	PERMIT REQUIREMENT	*****	*****	****	*****	*****	DAILY MX	PASS=0		DIRTY COMPOS
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									
	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
**HAROLD C. SALLAS**  
 TYPED OR PRINTED

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
**801 888-4476**  
 AREA CODE NUMBER  
 DATE  
**97 4 14**  
 YEAR MO DAY

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

**ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR EIGHTER TEST SPECIES AT ANY DILUTION.**

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

00024759  
 PERMIT NUMBER

013 H  
 DISCHARGE NUMBER

013 BIOMONITORING  
 Form Approved 12385  
 OMB No. 2040-0004  
 Approval expires 10-31-94

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SUNNYSIDE UT 84539  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	97	01	01		97	03	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

F - FINAL  
 MINOR  
 EFFLUENT  
 \*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
D/P STATRE 48HR ACU CERIODAPHNIA 08M3B 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
	PERMIT REQUIREMENT	*****	*****	*** ***	*****	*****	0	DAILY MX	PASS=0 FAIL=1		OTRLY COMPOS
D/P STATRE 96HR ACU BIMEPHALES PROMELAS 08H6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)			
	PERMIT REQUIREMENT	*****	*****	*** ***	*****	*****	0	DAILY MX	PASS=0 FAIL=1		OTRLY COMPOS
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

Harold C. Sallas  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE 801 888-4476  
 DATE 97 4 14  
 AREA CODE NUMBER YEAR MO DAY

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

ACUTE TOXICITY OCCURS WHEN 50% OR MORE MORTALITY OCCURS FOR EIGHTER TEST SPECIPS AT ANY DILUTION.

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

NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE NY 84530

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) (17-19)

070024759  
 PERMIT NUMBER

014 W  
 DISCHARGE NUMBER

014 BTOMONITORING

Form Approved. 12345  
 OMB No. 2040-0004  
 Approval expires 10-31-94

FINAL  
 MINOR  
 EFFLUENT

\*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SUNNYSIDE NY 84530  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD							
YEAR	MO	DAY	TO	YEAR	MO	DAY	
97	1	1		97	03	31	
(20-21)		(22-23)		(24-25)		(26-27) (28-29) (30-31)	

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING			(4 Card Only) QUALITY OR CONCENTRATION			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-65)	SAMPLE TYPE (66-70)
		AVERAGE (46-53)	MAXIMUM (54-61)	UNITS	MINIMUM (38-45)	AVERAGE (46-53)	MAXIMUM (54-61)			
P/F STATRE 48HR ACU CARIODAPNNIA TGN3B 1 0 0 EFFLUENT GROSS VALU	SAMPLE MEASUREMENT	*****	*****		*****	*****	( 9A)			
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	DAILY MX PASS=1 FAIL=1			OTRLY COMPOS
P/F STATRE 96HR ACU PINEPHALES PROMELAS TGN6C 1 0 0 EFFLUENT GROSS VALU	SAMPLE MEASUREMENT	*****	*****		*****	*****	( 9A)			
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	DAILY MX PASS=0 FAIL=1			OTRLY COMPOS
	SAMPLE MEASUREMENT									
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	SAMPLE MEASUREMENT									
	PERMIT REQUIREMENT									

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: 801 888-4426  
 DATE: 97 4 14

HAROLD C. SALLAS  
 TYPED OR PRINTED

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

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

NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 1  
SUNNYSIDE UT 84530

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

000047 9  
 PERMIT NUMBER

1 4  
 DISCHARGE NUMBER

BIOMONITORING

Form Approved 12301  
 OMB No. 2040-0004  
 Approval expires 10-31-94

P - FINAL  
 MINOR  
 EFFLUENT

\*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SUNNYSIDE UT 84530  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD							
FROM	YEAR	MO	DAY	TO	YEAR	MO	DAY
	97	01	01		97	03	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

PARAMETER (32-37)	SAMPLE MEASUREMENT	QUANTITY OR LOADING (3 Card Only) (46-53)			QUALITY OR CONCENTRATION (4 Card Only) (38-45)			UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM				
P/F STATE 48HR ACU CERIODAPHRINA TGM3B 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	0	( 9A)			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	DAILY MX FAIL=1	PASS=0			QTRLY COMPOS
P/F STATE 96HR ACU PINEPHALES PROMELAS PGN6C 1 0 0 EFFLUENT GROSS VALUE	*****	*****	*****	*****	*****	*****	0	( 9A)			
	PERMIT REQUIREMENT	*****	*****	*****	*****	*****	DAILY MX FAIL=1	PASS=0			QTRLY COMPOS
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
801 888-4476  
 AREA CODE NUMBER  
 DATE  
97 4 14  
 YEAR MO DAY

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

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME SUNNYSIDE COGENERATION ASSOC.  
 ADDRESS P.O. BOX 10  
SUNNYSIDE UT 84539

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

UT0024759  
 PERMIT NUMBER

014 W  
 DISCHARGE NUMBER

MINOR

Form Approved.

F - FINAL OMB No. 2040-0004  
 014 BIONOMONITORING requires 10-31-94  
 EFFLUENT

FACILITY SUNNYSIDE COGENERATION ASSOC.  
 LOCATION SALT LAKE CITY, UT 84158-0087 FROM  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
97	03	01		97	03	31

\*\*\* NO DISCHARGE  \*\*\*  
 NOTE: Read instructions before completing this form.

PARAMETER (32-37)	X	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
P/P STATRE 48HR ACU CERIODAPHNIA TGM3B 1 0 0 EFFLUENT GROSS VALUE		*****	*****		*****	*****					
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT	*****	*****	***	*****	*****	0	PASS=0		OTRLY COMPOS	
				***				DAILY MX	FAIL=1		
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
HAROLD C. SALLAS  
 TYPED OR PRINTED

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

  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
801 888-4476  
 AREA CODE NUMBER  
 DATE  
97 4 14  
 YEAR MO DAY

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

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)  
 NAME **SUNNYSIDE WASTE COAL FACILITY**  
 ADDRESS **P.O. BOX 10**  
**SUNNYSIDE UT 84539**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
 DISCHARGE MONITORING REPORT (DMR)  
 (2-16) (17-19)

MINOR

Form Approved.

**UT0024759**  
 PERMIT NUMBER

**014 W**  
 DISCHARGE NUMBER

F - FINAL OMB No. 2040-0004  
 014 BIONIA  
 EFFLUENT

FACILITY **SUNNYSIDE WASTE COAL FACILITY**  
 LOCATION **SALT LAKE CITY, UT 84158-0087** FROM  
 ATTN: ENVIRONMENTAL COORDINATOR

MONITORING PERIOD						
YEAR	MO	DAY	TO	YEAR	MO	DAY
97	03	01		97	03	31
(20-21)		(22-23)		(24-25)		(26-27)
				(28-29)		(30-31)

\*\*\* NO DATA  \*\*\*

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	SAMPLE MEASUREMENT	(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUALITY OR CONCENTRATION (38-45)			QUALITY OR CONCENTRATION (46-53)			NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE (54-61)	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS					
P/F STATRE 48HR ACU CERIODAPHNIA TGM3B 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)					
	PERMIT REQUIREMENT	*****	*****	****	*****	*****		DAILY MX	PASS=0	FAIL=1			COMPOS
P/F STATRE 96HR ACU PIMEPHALES PROMELAS TGN6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		*****	*****		( 9A)					
	PERMIT REQUIREMENT	*****	*****	****	*****	*****		DAILY MX	PASS=0	FAIL=1			COMPOS
	SAMPLE MEASUREMENT												
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	SAMPLE MEASUREMENT												
	PERMIT REQUIREMENT												

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER  
**HAROLD C. SALLAS**  
 TYPED OR PRINTED

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

*Harold C. Sallas*  
 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE  
**801 888-4476**  
 AREA CODE NUMBER  
 DATE  
**97 4 14**  
 YEAR MO DAY

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

# CHEMTECH • FORD

## ANALYTICAL LABORATORIES

Chemical and Bacteriological Testing

### ACUTE WHOLE EFFLUENT TOXICITY REPORT CERIODAPHNIA

REPORT DATE: April 10, 1995

PERMITTEE NAME: Sunnyside Cogeneration NPDES NUMBER UT-0024759 OUTFALL NUMBER 001

LAB NUMBER 95-128230

SAMPLE New Well Discharge, Sample collected 3/30/95 at 1800.

TEST (ANIMAL AGE): CERIODAPHNIA < 24 HOURS OLD

TEST START 3/31/95 5:15 pm TEST END 4/2/95 6:30 pm DILUTION WATER Receiving Water

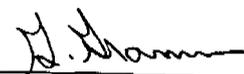
#### ANALYSIS SUMMARY

Results:  Pass  Fail

There was NO significant effect on survival.

ANALYSIS PERFORMED BY: W.E.T. Inc., Lee Rawlings

Please see attached reports.

Approved By: 

## **Acute Whole Effluent Toxicity Report** Ceriodaphnia

DATE: April 5, 1995

PERMITTEE NAME: Ford #128230 (Sunnyside) NPDES NO:

OUTFALL NO:

TEST (Animal/Age): Ceriodaphnia <24 hours.

SAMPLE (Date/Type): 3/30/95 Compositied in Lab.

DATE/TIME TEST BEGAN: 3/31/95 5:15 p.m.

DATE/TIME TEST COMPLETED: 4/2/95 6:30 p.m.

### TEST CONDITIONS

Ceriodaphnia dubia neonates were exposed to diluted effluent as specified by permit. Survival at the end of the test period was measured and statistically evaluated for Acute Toxicity.

Animal Age at Test Start	<24 hours.
Number of Organisms/Dilution Volume/Replicates	5 organisms/15 ml/4 replicates.
Food	YTC with Algac (0.1 ml/day)(fed previous to test).
Aeration	None required.
Dissolved Oxygen	Measured daily old and new.
Water Replacement	Renewed every 24 hours.
Temperature	20 ± 2 degrees C
Photo Period	16 hours ambient light/8 hours dark.
pH	Measured initially and at 24 hours.
Receiving Water	Reconstituted Lab Water (±15% hardness of receiving water).
Receiving Water	Supplied with sample. Used for dilutions.
Sample Concentrations	Control, 6.25%, 12.5%, 25%, 50%, 100%.

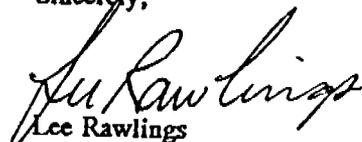
### SUMMARY

Results:  Pass  Fail

There was NO significant effect on survival.

Enclosed are data sheets and statistical reports.

Sincerely,



Lee Rawlings  
Water & Environmental Testing, Inc.

Enclosure

# Region VIII Guidance for Acute Whole Effluent Reporting

PERMITTEE NAME: Ford #128230 (Sunnyside) NPDES NO:

OUTFALL NO:

50% MORTALITY TEST: X Pass    Fail LC50: >100%.

TEST (Animal/Age): Ceriodaphnia <24 hours.

SAMPLE (Date/Type): 3/30/95 Compositied in Lab.

DATE/TIME TEST BEGAN: 3/31/95 5:15 p.m.

DATE/TIME TEST COMPLETED: 4/2/95 6:30 p.m.

## Survival Totals

	Dilutions (% Effluent)						
	Recon Water	Receiving Water	6.25%	12.5%	25%	50%	100%
Initial	20	20	20	20	20	20	20
24 hrs	20	20	20	20	20	20	20
48 hrs	20	20	20	20	20	20	12

## Max/Min Values

	Dilutions (% Effluent)						
	Recon Water	Receiving Water	6.25%	12.5%	25%	50%	100%
Dissolved Oxygen	7.4/7.1	8.9/7.1	8.7/7.0	8.7/7.0	8.6/7.0	8.5/6.9	8.4/6.9
Temperature (°C)	21.4/19.6	20.0/19.6	20.0/19.5	20.0/19.6	20.0/19.4	20.0/19.5	20.4/19.7

Receiving Water used for Dilution? (Y of N) Y

Hardness: Receiving Water 355 Recon Water 338 Effluent 306

Initial Total Residual Chlorine in 100% Effluent: <0.05

Reconstituted pH: Initial 8.51 After 24 hours 8.68

Receiving Water pH: Initial 8.49 After 24 hours 8.59

pH in 100% Effluent: Initial 7.92 After 24 hours 8.67

Ammonia Effluent: Initial 0.21 Recon Initial <0.05

Conductivity: Effluent 876

Alkalinity: 332

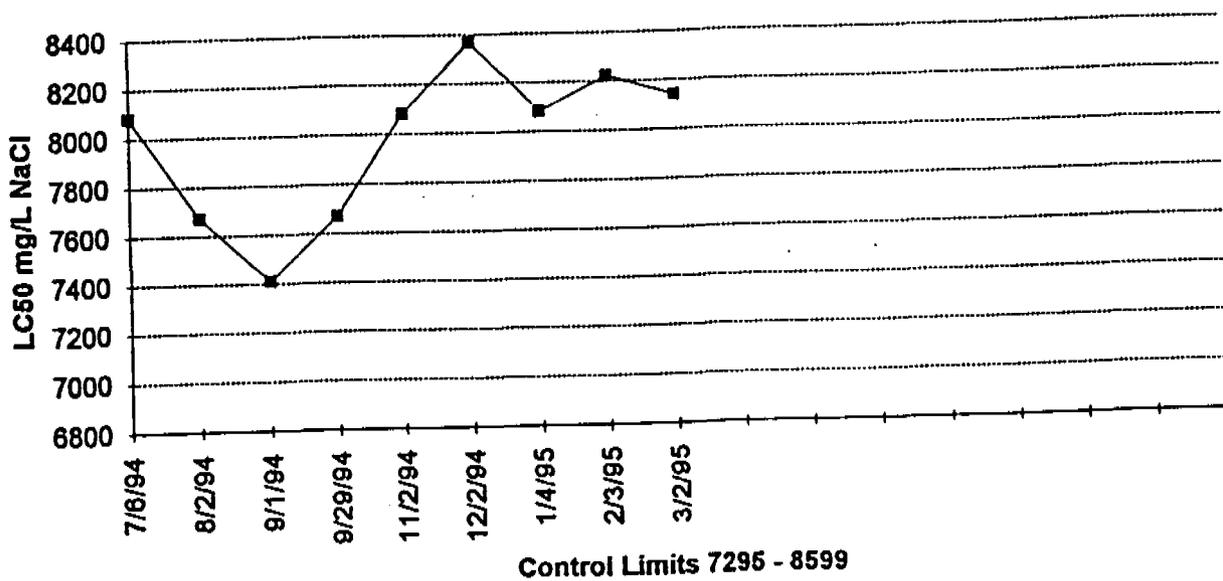
Analyst: Lee Rawlings Laboratory: Water & Environmental Testing, Inc.

Signature: Lee Rawlings

Date: 4/5/95

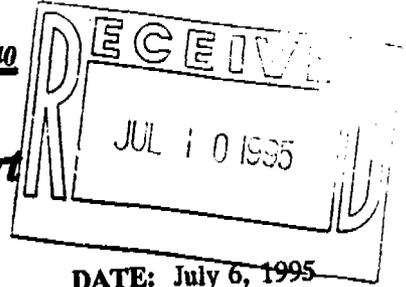
Comments: \_\_\_\_\_

Acute Reference Toxicant Fathead Minnow March 1995



**W.E.T. Inc.**

**Water & Environmental Testing Inc. 573 West 1830 North Suite 5, Orem Utah 84057 (801)221-5440**



**Acute Whole Effluent Toxicity Report**  
**Fathead Minnow**

DATE: July 6, 1995

PERMITTEE NAME: Sunnyside Operating Assoc. NPDES NO:

OUTFALL NO:

TEST (Animal/Age): Fathead Minnow 6 days.

SAMPLE (Date/Type): 6/26/95.

DATE/TIME TEST BEGAN: 6/27/95 6:00 p.m.

DATE/TIME TEST COMPLETED: 7/1/95 7:15 p.m.

**TEST CONDITIONS**

Fathead Minnow larvae were exposed to diluted effluent as specified by permit. Survival at the end of the test period was measured and statistically evaluated for Acute Toxicity.

Animal Age at Test Start	6 days.
Number of Organisms/Dilution Volume/Replicates	10 organisms/150 ml/2 replicates.
Food	Brine Shrimp fed previous to test and at 48 hours.
Aeration	None required.
Dissolved Oxygen	Measured daily old/new.
Water Replacement	Renewed every 24 hours.
Temperature	20 ± 2 degrees C.
Photo Period	16 hours ambient light/8 hours dark.
pH	Measured initially and at 24 hours.
Dilution Water	Reconstituted water (+15% hardness of the sample).
Receiving Water	None was supplied.
Sample Concentrations	Control, 6.25%, 12.5%, 25%, 50%, 100%.

**SUMMARY**

Results:        X    Pass        Fail

There was NO significant effect on survival.

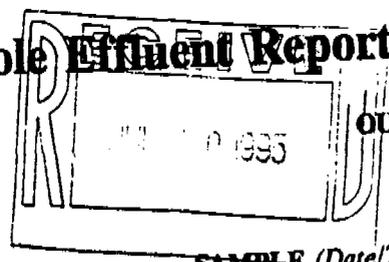
Enclosed are data sheets and statistical reports.

Sincerely,

Lee Rawlings  
Water & Environmental Testing, Inc.

Enclosure

# Region VIII Guidance for Acute Whole Effluent Reporting



OUTFALL NO:

PERMITTEE NAME: Sunnyside Operating Assoc. NPDES NO:

50% MORTALITY TEST: X Pass    Fail LC50: >100%.

TEST (Animal/Age): Fathead Minnow 6 days.

SAMPLE (Date/Type): 6/26/96.

DATE/TIME TEST BEGAN: 6/27/95 6:00 p.m.

DATE/TIME TEST COMPLETED: 7/1/95 7:15 p.m.

## Survival Totals

	Recon Water	Receiving Water	Dilutions (% Effluent)				100%
			6.25%	12.5%	25%	50%	
Initial	20	na	20	20	20	20	20
24 hrs	20	na	20	20	20	20	20
48 hrs	20	na	20	20	20	20	20
72 hrs	20	na	20	20	20	20	20
96 hrs	20	na	20	20	20	20	20

## Max/Min Values

	Recon Water	Receiving Water	Dilutions (% Effluent)				100%
			6.25%	12.5%	25%	50%	
Dissolved Oxygen	7.5/5.7	na	7.6/5.2	7.7/5.0	7.8/4.8	8.2/5.5	8.8/5.4
Temperature (°C)	21.0/20.6	na	21.0/20.5	21.0/20.6	21.0/20.4	21.0/20.3	21.0/19.9

Receiving Water used for Dilution? (Y of N) N

Hardness: Receiving Water na Recon Water 344 Effluent 338

Initial Total Residual Chlorine in 100% Effluent: <0.05

Reconstituted pH: Initial 8.30 After 24 hours 8.33

Receiving Water pH: Initial na After 24 hours na

pH in 100% Effluent: Initial 7.83 After 24 hours 8.40

Ammonia Effluent: Initial 0.12 Recon Initial <0.05

Conductivity: Effluent 791

Alkalinity: 322

Analyst: Lee Rawlings Laboratory: Water & Environmental Testing, Inc.

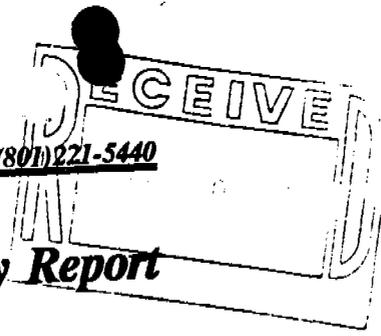
Signature: *Lee Rawlings*

Date: 7-6-95

Comments: \_\_\_\_\_

**W.E.T. Inc.**

Water & Environmental Testing Inc. 573 West 1830 North Suite 5, Orem Utah 84057 (801) 221-5440



**Acute Whole Effluent Toxicity Report**  
Ceriodaphnia

DATE: July 6, 1995

OUTFALL NO:

PERMITTEE NAME: Sunnyside Operating Assoc. NPDES NO:

TEST (Animal/Age): Ceriodaphnia <24 hours.

SAMPLE (Date/Type): 6/26/95.

DATE/TIME TEST BEGAN: 6/27/95 5:45 p.m.

DATE/TIME TEST COMPLETED: 6/29/95 5:00 p.m.

**TEST CONDITIONS**

Ceriodaphnia dubia neonates were exposed to diluted effluent as specified by permit. Survival at the end of the test period was measured and statistically evaluated for Acute Toxicity.

Animal Age at Test Start	<24 hours.
Number of Organisms/Dilution Volume/Replicates	5 organisms/15 ml/4 replicates.
Food	YTC with Algae (0.1 ml/day)(fed previous to test).
Aeration	None required.
Dissolved Oxygen	Measured daily old/new.
Water Replacement	Renewed every 24 hours.
Temperature	20 ± 2 degrees C.
Photo Period	16 hours ambient light/8 hours dark.
pH	Measured initially and at 24 hours.
Dilution Water	Reconstituted water (±15% hardness of the sample).
Receiving Water	None was supplied.
Sample Concentrations	Control, 6.25%, 12.5%, 25%, 50%, 100%.

**SUMMARY**

Results:      X    Pass      Fail

There was NO significant effect on survival.

Enclosed are data sheets and statistical reports.

Sincerely,

A handwritten signature in cursive script that reads "Lee Rawlings".  
Lee Rawlings  
Water & Environmental Testing, Inc.

Enclosure

# Region VIII Guidance for Acute Whole Effluent Reporting

**RECEIVED**  
 OUTFALL NO:  
 11 10 1995  
 SAMPLE (Date/Type): 6/26/95.

PERMITTEE NAME: Sunnyside Operating Assoc. NPDES NO:

50% MORTALITY TEST:  Pass  Fail LC50: >100%.

TEST (Animal/Age): Ceriodaphnia <24 hours.

DATE/TIME TEST BEGAN: 6/27/95 5:45 p.m.

DATE/TIME TEST COMPLETED: 6/29/95 5:00 p.m.

### Survival Totals

	Recon Water	Receiving Water	Dilutions (% Effluent)				
			6.25%	12.5%	25%	50%	100%
Initial	20	na	20	20	20	20	20
24 hrs	20	na	20	20	20	20	20
48 hrs	19	na	19	20	18	18	14

### Max/Min Values

	Recon Water	Receiving Water	Dilutions (% Effluent)				
			6.25%	12.5%	25%	50%	100%
Dissolved Oxygen	7.2/6.8	na	7.2/6.7	7.3/6.8	7.3/6.8	7.4/6.7	7.5/6.7
Temperature (°C)	21.0/20.6	na	21.0/20.8	21.0/20.8	21.0/20.6	21.0/20.4	20.8/20.0

Receiving Water used for Dilution? (Y of N) N

Hardness: Receiving Water na Recon Water 344 Effluent 338

Initial Total Residual Chlorine in 100% Effluent: <0.05

Reconstituted pH: Initial 8.30 After 24 hours 8.56

Receiving Water pH: Initial na After 24 hours na

pH in 100% Effluent: Initial 7.83 After 24 hours 8.45

Ammonia Effluent: Initial 0.12 Recon Initial <0.05

Conductivity: Effluent 791

Alkalinity: 322

Analyst: Lee Rawlings Laboratory: Water & Environmental Testing, Inc.

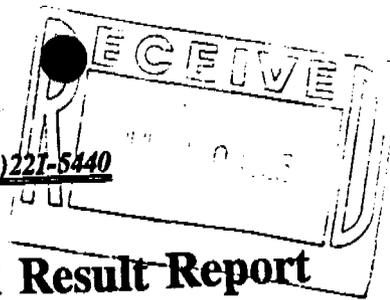
Signature: *Lee Rawlings*

Date: 7-6-95

Comments: \_\_\_\_\_

# W.E.T. Inc.

Water & Environmental Testing Inc. 573 West 1830 North Suite 5, Orem Utah 84057 (801)221-5440



## Acute Whole Effluent Toxicity Chemical Result Report

July 6, 1995

### CUSTOMER NAME:

Sunnyside Operating Assoc.  
Attn: Russ Miller  
P.O. Box 10  
East Carbon, Utah 84520

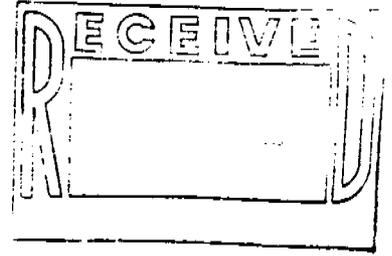
PHONE NUMBER: (801)888-4476  
FAX NUMBER:

### SAMPLE DESCRIPTION:

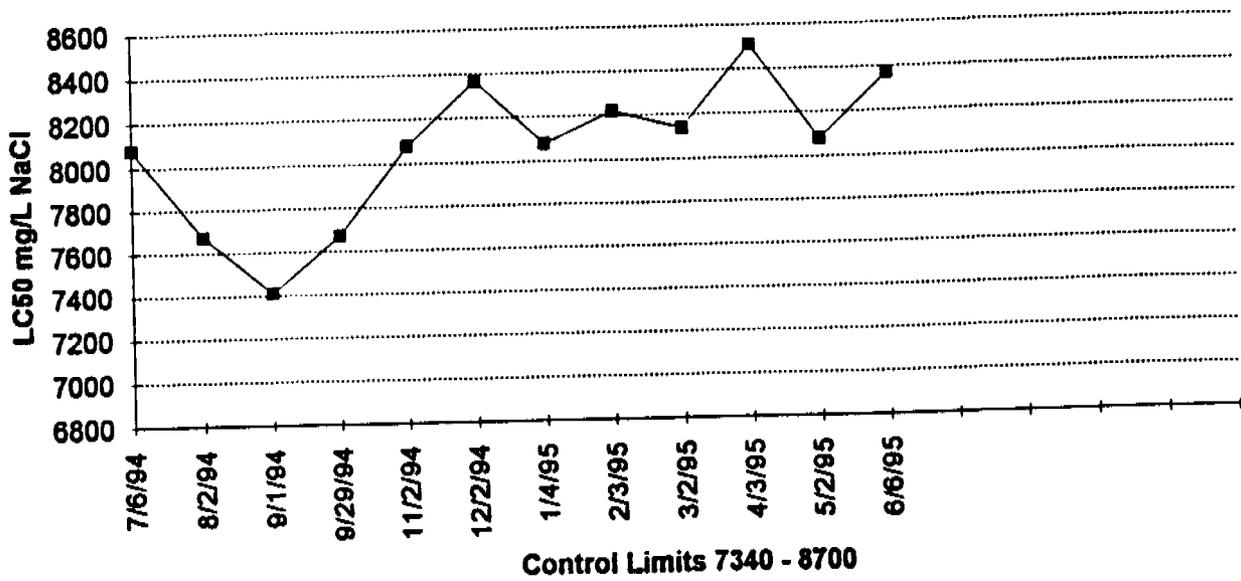
Chemistries to go with Acute 2 Species Toxicity Test Collected 6/26/95.

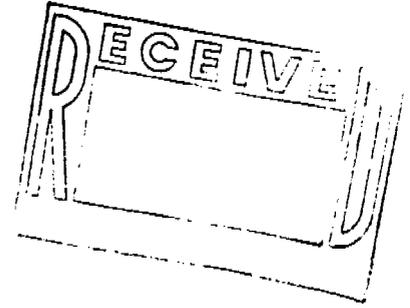
Sample Source	Test Performed	Log Number	Acute Ceriodaphnia	Acute Minnow
Effluent	Total Hardness, Recon (EPA 130.2)	1149	344 mg/L	344 mg/L
	Total Hardness, Effluent (EPA 130.2)	1149	338 mg/L	338 mg/L
	Total Hardness, Receiving Water (EPA 130.2)	Na	na mg/L	na mg/L
	Ammonia, Effluent (EPA 350.2/350.3)	1149	0.12 mg/L	0.12 mg/L
	Ammonia, Receiving Water (EPA 350.2/350.3)	Na	na mg/L	na mg/L
	Initial Chlorine Residual (EPA 330.5)	1149	<0.05 mg/L	<0.05 mg/L
	Final Chlorine Residual (EPA 330.5)	1149	na mg/L	na mg/L
	Conductivity, Effluent (EPA 120.1)	1149	791 umhos/cm	791 umhos/cm
	Alkalinity, Effluent (EPA 310.1)	1149	322 mg/L CaCO <sub>3</sub>	322 mg/L CaCO <sub>3</sub>
	Conductivity, Receiving Water (EPA 120.1)	Na	na umhos/cm	na umhos/cm
	Alkalinity, Receiving Water (EPA 310.1)	Na	na mg/L CaCO <sub>3</sub>	na mg/L CaCO <sub>3</sub>
	Recon Initial pH (EPA 150.1)	1149	8.30	8.30
	After 24 hours pH (EPA 150.1)	1149	8.56	8.33
	100% Initial pH (EPA 150.1)	1149	7.83	7.83
	100% After 24 hours pH (EPA 150.1)	1149	8.45	8.40
	Receiving Water Initial pH (EPA 150.1)	Na	na	na
	Receiving Water After 24 hours pH (EPA 150.1)	Na	na	na

  
Analyst: Lee Rawlings, Chemist  
Water & Environmental Testing, Inc.

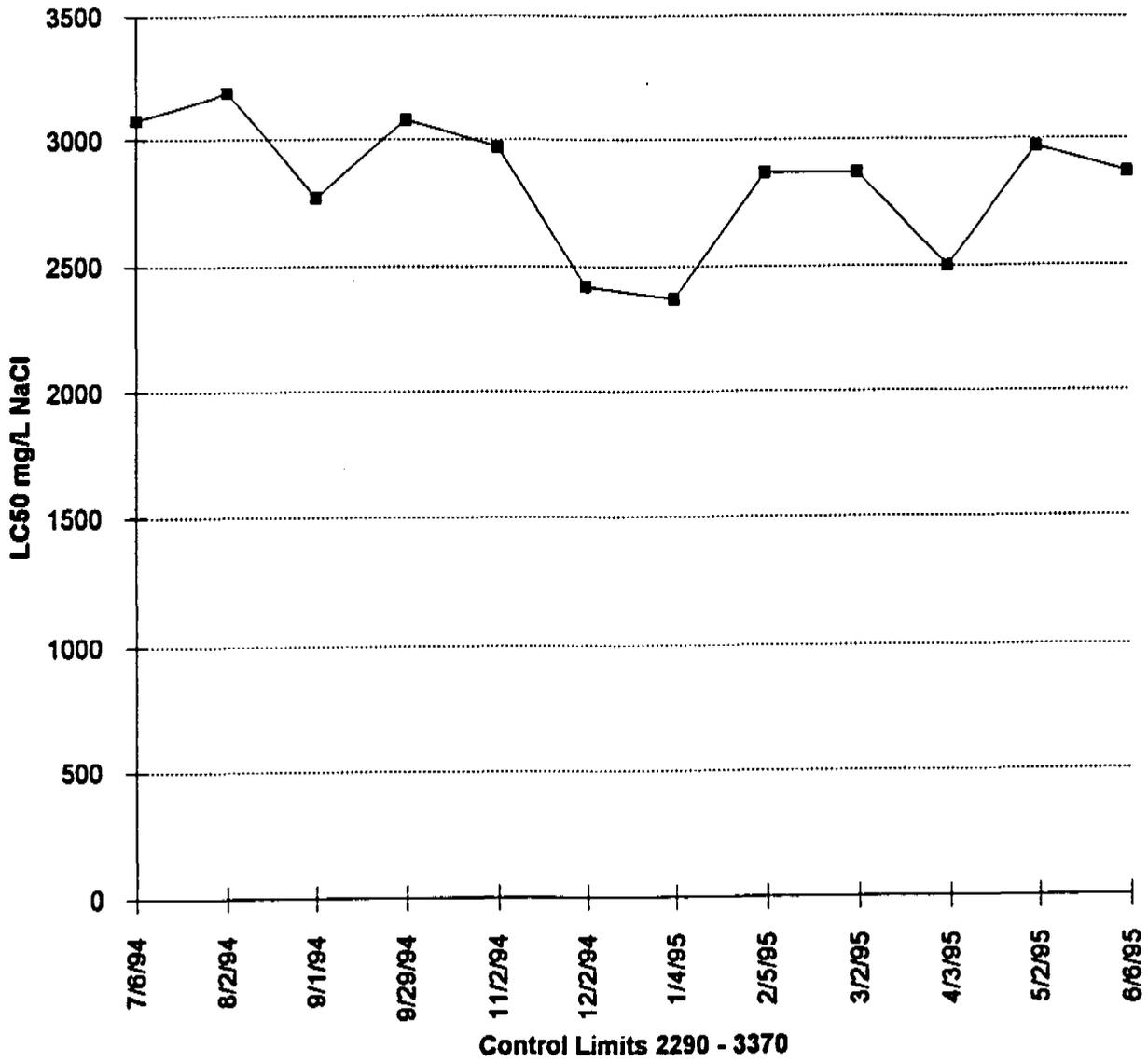


**Acute Reference Toxicant Fathead Minnow June 1995**





**Acute Reference Toxicant Ceriodaphnia June 1995**



Karl

ACUTE WHOLE EFFLUENT TOXICITY REPORT: FATHEAD MINNOW

PERMITTEE: Environmental Power Corp.

NPDES # UT-0024759

20% MORTALITY TEST: XXX PASS FAIL LC50 = >100%

OUTFALL # 004

TEST ANIMAL/AGE Fathead Minnow, 6 days

SAMPLE: 6/7/89 1041

ANALYSIS: BEGIN: 6/9/89 1510 END: 6/13/89 1600

DILUTION WATER: Receiving

MEASUREMENTS	RECON (0%)	0%	DILUTIONS (% EFFLUENT)					100%
			6%	12.5%	25%	50%		
No. LIVE								
INITIAL	20	20	20	20	20	20	20	20
24 HRS	20	20	20	20	20	20	20	20
48 HRS	20	20	20	20	18	20	20	20
72 HRS	20	20	20	19	18	20	20	20
96 HRS	20	20	20	19	18	20	20	20
DO (mg/l)								
INITIAL	7.4	7.8	8.2	8.2	8.2	8.3	8.3	
24 HRS O/N	6.7/7.5	6.3/8.1	6.0/8.1	6.5/8.2	6.4/8.1	6.4/8.0	5.7/7.9	
48 HRS O/N	6.5/7.3	6.4/8.0	6.4/8.2	6.2/8.2	6.5/8.3	6.4/8.2	5.9/8.3	
72 HRS O/N	6.7/7.3	6.6/8.2	6.3/8.3	6.7/8.3	6.5/8.3	6.2/8.4	6.0/8.4	
96 HRS	6.9	6.3	6.3	6.3	6.3	6.2	5.9	
TEMP (C)								
INITIAL	20	20	20	20	20	20	20	
24 HRS O/N	21/20	20/20	21/20	20/20	21/20	21/20	20/20	
48 HRS O/N	21/20	21/20	21/20	21/20	21/20	21/20	21/20	
72 HRS O/N	22/20	21/20	22/20	21/20	21/20	22/20	22/20	
96 HRS	21	22	22	22	22	21	21	

	INIT. ALKALINITY	INIT. HARDNESS	INIT. NH3 (AS N)	INIT. pH	FINAL pH	INIT. CONDUCT.
RECONST.	196	280	<0.1	8.33	8.29	670
0%	209	280	<0.1	8.54	8.47	665
100%	317	222	0.21	8.83	8.43	2250

ANALYST/LABORATORY: Randall Isham, AQUA SURVEYS, 2356 West Bonanza Court, South Jordan, Utah 84065 PH: 801-254-7091

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS:

ACUTE WHOLE EFFLUENT TOXICITY REPORT: CERIODAPHNIA

PERMITTEE: Environmental Power Corp.

NPDES # UT-0024759

20% MORTALITY TEST: XXX PASS FAIL LC50 = >100%

OUTFALL # 004

TEST ANIMAL/AGE Ceriodaphnia dubia, <18 hrs

SAMPLE: 6/7/89 1041

ANALYSIS: BEGIN: 6/9/89 1530 END: 6/11/89 1520

DILUTION WATER: Receiving

MEASUREMENTS	RECON (0%)	0%	DILUTIONS (% EFFLUENT)				
			6%	12.5%	25%	50%	100%
<b>No. LIVE</b>							
INITIAL	20	20	20	20	20	20	20
24 HRS	20	19	20	20	20	20	20
48 HRS	20	19	20	20	20	20	20
<b>DO (mg/l)</b>							
INITIAL	7.4	7.8	8.2	8.2	8.2	8.3	8.3
24 HRS O/N	7.1/7.5	6.9/8.1	6.9/8.1	6.8/8.2	6.8/8.1	6.8/8.0	6.7/7.9
48 HRS	7.0	6.8	6.8	6.7	6.8	6.7	6.6
<b>TEMP (C)</b>							
INITIAL	20	20	20	20	20	20	20
24 HRS O/N	20/21	20/20	21/20	20/20	20/20	21/20	21/20
48 HRS	21	21	21	20	20	21	21

	INIT. ALKALINITY	INIT. HARDNESS	INIT. NH3 (AS N)	INIT. pH	FINAL pH	INIT. CONDUCT.
RECONST.	196	250	<0.1	8.33	8.51	670
0%	209	280	<0.1	8.54	8.62	665
100%	317	222	0.21	8.83	8.98	2250

ANALYST/LABORATORY: Randall Isham, AQUA SURVEYS, 2356 West Bonanza Court,  
South Jordan, Utah 84065 PH: 801-254-7091

SIGNATURE RS Isham

DATE 7/25/89

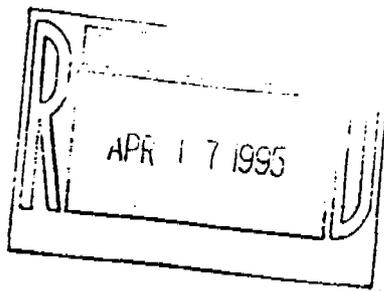
COMMENTS:

# CHEMTECH • FORD

## ANALYTICAL LABORATORIES

Chemical and Bacteriological Testing

*Mise*



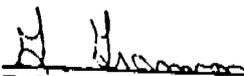
DATE: 04/10/95

SUNNYSIDE COGEN. FAC.  
P.O. BOX 10  
EAST CARBON, UT  
84520

95-128230

SAMPLE: DISCHARGE WATER SAMPLE FROM NEW WELL COLLECTED 3-30-95, 1800  
RECEIVED 3-31-95 FOR ANALYSIS UNDER PO #M95-359-0255.  
WATER CANYON & GRASSY TRAIL CONFLUENCE

	Results	Method Detection Limit
Iron Fe mg/l EPA 200.7	1.03	.01
Oil and Grease mg/l EPA 413.1	ND	5.0
Solids mg/l EPA 160.2*	2	1.0
Tot.Dis.Solids mg/l EPA160.1*	514	1.0

  
FORD ANALYTICAL LABORATORIES

ND = None Detected.      \* = Analyzed at Ford.

# CHEMTECH • FORD

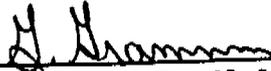
## ANALYTICAL LABORATORIES

Chemical and Bacteriological Testing

PAGE: 2

95-144540

	Results	Method Detection Limit
Susp. Solids mg/l EPA 160.2*	2	1.0
Tot. Dis. Solids mg/l EPA 160.1*	464	1.0
Zinc Zn mg/l EPA 200.7	.036	.010
~BOD Analysis Date/Time	6271500	
~TSS Analysis Date/Time	6271530	

  
FORD ANALYTICAL LABORATORIES

ND = None Detected.

\* = Analyzed at Ford.



007/017 GORDON CK 3.6

TABLE 1

## Sunnyside Cogeneration Associates Facility

Sunnyside, Utah

Groundwater Permit # UGW070002 Compliance Sampling

Huntingdon Engineering and Environmental, Inc.

Sampling Date: July 20 &amp; 21, 1994

Sample Location	Field Parameters			Analytical Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Laboratory Parameters									
				Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Permit Background Values	N.A.	N.A.	N.A.	<0.002	0.019	0.002	0.025	0.266	<0.001	<0.0001	<0.002	<0.001	0.063
Permit Protection Levels	N.A.	N.A.	N.A.	0.012	0.250	0.003	0.03	0.33	0.012	0.0005	0.002	0.012	1.250
Whitmore Springs	18.9	7.98	3400	<0.005	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0002	<0.005	<0.02	<0.02
Freshwater Reservoir	26.3	9.39	780	<0.005	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0002	<0.005	<0.02	<0.02
Coal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Ash Disposal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Well MW-1	22.7	7.25	3140	<0.005	<0.1	<0.003	* <0.04	<0.02	<0.01	<0.0002	<0.005	<0.02	<0.02
Well MW-2	14.9	7.06	2330	<0.005	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0002	<0.005	<0.02	<0.02
Well MW-3	16.4	7.16	1930	<0.005	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0002	<0.005	<0.02	<0.02

Sample Location	Analytical Parameters													Laboratory Information  Laboratory Number
	Laboratory Parameters													
	Inorganics		Cations (mg/l)					Anions (mg/l)						
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3		
Permit Background Values	1615	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Permit Protection Levels	2018	6.5-8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Whitmore Springs	1530	8.3	102	724	300	6	114	59	751	627	0	514	153690	
Freshwater Reservoir	515	9.4	15	247	120	3	51	10	186	219	57	274	153689	
Coal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NA	
Ash Disposal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NA	
Well MW-1	2360	7.5	165	1277	284	7	210	88	1247	587	0	481	**	
Well MW-2	1450	7.7	96	697	274	8	111	48	700	616	0	505	153687	
Well MW-3	1370	7.7	86	622	264	7	99	47	600	593	0	486	153688	

\* Higher detection limit due to interference.

\*\* Duplicate samples taken. Highest reported value is listed. Laboratory numbers: 153686, 153691, 5435/22172

A "&lt;" sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of Analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.

NW = No water present in basin.

NA = Non-Applicable

TABLE 1

## Sunnyside Cogeneration Associates Facility

Sunnyside, Utah

Groundwater Permit # UGW070002 Compliance Sampling

Huntingdon Engineering and Environmental, Inc.

Sampling Date: April 19, 1994

Sample Location	Field Parameters			Analytical Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Laboratory Parameters									
				Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Permit Background Values	N.A.	N.A.	N.A.	<0.002	0.019	0.002	0.025	0.266	<0.001	<0.0001	<0.002	<0.001	0.063
Permit Protection Levels	N.A.	N.A.	N.A.	0.012	0.250	0.003	0.03	0.33	0.012	0.0005	0.002	0.012	1.250
Whitmore Springs	5.6	8.51	1820	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	0.002	<0.01	0.03
Freshwater Reservoir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Coal Runoff Basin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ash Disposal Runoff Basin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well MW-1	13.2	7.38	2670	<0.002	<0.3*	<0.003	<0.06*	<0.06	<0.01	<0.0005	<0.002	<0.01	<0.06*
Well MW-2	13.1	7.47	2180	<0.002	<0.3*	<0.003	<0.06*	<0.06	<0.01	<0.0005	<0.002	<0.01	<0.06*
Well MW-3	11.2	7.72	2030	<0.002	<0.3*	<0.003	<0.06*	<0.06	<0.01	<0.0005	<0.002	<0.01	<0.06*

Sample Location	Analytical Parameters													Laboratory Information  Laboratory Number
	Laboratory Parameters													
	Inorganics		Cations (mg/l)						Anions (mg/l)					
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3		
Permit Background Values	1615	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Permit Protection Levels	2018	6.5-8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Whitmore Springs	1360	8.4	98	698	258	7	110	47	752	432	0	382	150821	
Freshwater Reservoir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Coal Runoff Basin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Ash Disposal Runoff Basin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Well MW-1	2190	7.8	150	1200	266	9	200	88	973	722	0	592	150818	
Well MW-2	1380	7.9	88	714	266	9	120	41	667	627	0	514	150819	
Well MW-3	1170	8.0	80	590	250	8	95	39	624	576	0	476	150820	

\* \* \* sign, indicates a higher detection limit due to interference.

\* < " sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of Analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.

N.D. = No Discharge

N.A. = Non-Applicable

TABLE 1  
**Sunnyside Cogeneration Associates Facility**  
 Sunnyside, Utah

Groundwater Permit # UGW070002 Compliance Sampling

Huntingdon Chen-Northern, Inc.

Sampling Date: January 13, 1994

Sample Location	Field Parameters			Analytical Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Laboratory Parameters									
				Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Permit Background Values	N.A.	N.A.	N.A.	<0.002	0.019	0.002	0.025	0.266	<0.001	<0.0001	<0.002	<0.001	0.053
Permit Protection Levels	N.A.	N.A.	N.A.	0.012	0.250	0.003	0.03	0.33	0.012	0.0005	0.002	0.012	1.250
Whitmore Springs	5.6	8.51	1820	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	0.003	<0.01	<0.02
Freshwater Reservoir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Coal Runoff Basin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ash Disposal Runoff Basin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well MW-1	13.2	7.38	2670	<0.002	<0.1	<0.003	<0.06	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-2	13.1	7.47	2180	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-3	11.2	7.72	2030	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02

Sample Location	Analytical Parameters												Laboratory Information
	Laboratory Parameters												
	Inorganics		Cations (mg/l)					Anions (mg/l)					
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3	
Permit Background Values	1615	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Permit Protection Levels	2018	6.5-8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Whitmore Springs	1440	8.3	82	620	274	6	100	44	633	553	0	453	148514
Freshwater Reservoir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Coal Runoff Basin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ash Disposal Runoff Basin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Well MW-1	2140	7.6	150	1200	274	8	190	79	1130	530	0	434	148511
Well MW-2	1620	7.7	100	780	286	9	130	59	774	593	0	486	148512
Well MW-3	1450	7.7	88	670	272	9	110	53	672	605	0	496	148513

A "-----" sign, indicates the specified location was not sampled during the sampling round.  
 A "<" sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of Analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.  
 N.D. = No Discharge  
 N.A. = Non-Applicable

TABLE 3

Sunnyside Cogeneration Associates Facility  
Sunnyside, Utah

Ground Water Permit # UGW070002 Compliance Sampling

Huntingdon Chen-Northern, Inc.

Sampling Date: June 29, 1993

Sample Location	Field Parameters			Analytical Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Laboratory Parameters									
				Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Whitmore Springs	12	****	2000	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Freshwater Reservoir	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Coal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ash Disposal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Well MW-1	15	6.98	2100	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-2	16	****	2300	<0.002	<0.1	<0.003	0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-3	15	****	2200	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.05

Sample Location	Analytical Parameters												Laboratory Information  Laboratory Number
	Laboratory Parameters												
	Inorganics		Cations (mg/l)					Anions (mg/l)					
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3	
Whitmore Springs	1960	8.1	156	1070	324	8	144	63	930	606	0	497	142304
Freshwater Reservoir	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Coal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.A.
Ash Disposal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.A.
Well MW-1	1790	7.3	126	1030	249	8	171	59	923	580	0	475	142301
Well MW-2	1720	7.2	123	920	282	9	136	63	861	602	0	493	142302
Well MW-3	1720	7.5	120	992	267	8	144	66	864	602	0	493	142303

A "-----" sign, indicates the specified location was not sampled during the sampling round.

A "<" sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of Analyte, if present, below this limit, were not quantifiable. These results should be considered non-detect.

A "\*\*\*\*" sign, indicates the specified parameters were not collected during the sampling round, due to equipment failure.

N.D. = No Discharge

N.A. = Non-Applicable

TABLE 2

Sunnyside Cogeneration Associates Facility  
Sunnyside, Utah

Ground Water Permit # UGW070002 Compliance Sampling

Huntingdon Chen-Northern, Inc.

Sampling Date: May 21, 1993

Sample Location	Analytical Parameters												
	Field Parameters			Laboratory Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Whitmore Springs	21	8.55	1900	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.03
Freshwater Reservoir	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Coal Runoff Basin	17.5	8.81	1950	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.04
Ash Disposal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Well MW-1	18	7.68	1900	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-2	16.5	7.72	2050	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-3	17	7.91	1900	<0.002	<0.1	0.011	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02

Sample Location	Analytical Parameters													Laboratory Information Laboratory Number
	Laboratory Parameters													
	Inorganics		Cations (mg/l)					Anions (mg/l)						
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3		
Whitmore Springs	1700	8.3	87	608	366	10	95	66	898	533	8	450	141072	
Freshwater Reservoir	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
Coal Runoff Basin	1460	8.5	31	185	477	14	26	65	686	490	17	430	141071	
Ash Disposal Runoff Basin	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.A.	
Well MW-1	1810	7.6	118	945	250	10	158	64	1010	1050	0	858	141073	
Well MW-2	1760	7.7	112	889	273	12	148	70	932	852	0	698	141074	
Well MW-3	1710	7.7	108	862	273	14	144	63	858	583	0	478	141075	

A "-----" sign, indicates the specified location was not sampled during the sampling round.

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A "\*\*\*\*" sign, indicates the specified parameters were not collected during the sampling round, due to equipment failure.

N.D. = No Discharge

N.A. = Non-Applicable

TABLE 1

Sunnyside Cogeneration Associates Facility  
Sunnyside, Utah

Ground Water Permit # UGW070002 Compliance Sampling

Huntingdon Chen-Northern, Inc.

Sampling Date: April 29, 1993

Sample Location	Analytical Parameters												
	Field Parameters			Laboratory Parameters									
	Temp. (C)	pH (S.U.)	SC (umhos)	Metals (mg/l)									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Whitmore Springs	16	8.35	2150	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.02
Freshwater Reservoir	11.5	8.35	1250	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.05
Coal Runoff Basin	13	8.59	2150	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.08
Ash Disposal Runoff Basin	17	8.71	950	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-1	16	7.68	2000	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	0.14
Well MW-2	16.5	8.47	2200	<0.002	<0.1	0.006	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02
Well MW-3	14	8.31	1950	<0.002	<0.1	<0.003	<0.02	<0.02	<0.01	<0.0005	<0.002	<0.01	<0.02

Sample Location	Analytical Parameters													Laboratory Information  Laboratory Number
	Laboratory Parameters													
	Inorganics		Cations (mg/l)					Anions (mg/l)						
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3	Carbonate CO3	Alkalinity CaCO3		
Whitmore Springs	1720	8.3	97	698	363	8	111	70	841	521	0	427	140279	
Freshwater Reservoir	919	8.5	34	250	260	7	40	31	284	478	26	436	140276	
Coal Runoff Basin	1430	8.5	27	488	483	13	26	67	593	564	16	488	140277	
Ash Disposal Runoff Basin	741	7.8	115	419	55	4	32	16	439	62	0	51	140278	
Well MW-1	1920	7.3	125	1004	268	12	168	69	821	725	0	594	140273	
Well MW-2	1900	7.5	114	894	288	15	148	73	868	591	0	484	140274	
Well MW-3	1740	7.5	101	1100	280	14	139	74	825	569	0	466	140275	

A "-----" sign, indicates the specified location was not sampled during the sampling round.

A "<" sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of Analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.

A "\*\*\*\*" sign, indicates the specified parameters were not collected during the sampling round, due to equipment failure.

N.D. = No Discharge

N.A. = Non-Applicable









# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Surface Water and Discharge Basin Compliance Sampling

HUNTINGDON Chen - Northern

MONITORING LOCATION NUMBER: Co2/ Runoff Basin (004) GWD

Runoff Basin / Spring / Other: \_\_\_\_\_ Sampling Parameters: ions, Metals, pH, TDS

Date	Time	Personnel	Weather	Discharge Present (yes/no)	Observations (color, sheen, odor, etc.)	Flow (cfs)	Flow Meas. Method	Basin Water Level (feet)	Field Parameters				Collection Point	Sample Taken (yes/no)
									Temp (F)	pH	SC (umhos)	Meter No.		
9/2	1125	CW cm	SW	NO	Dry	-	-	-	-	-	-	-	-	NO
9/20	1800	Rb	SWindy	Yes		49	Flume	17	8.09	2900		Below Flume	yes	
10/10	1135	MH	Cool Windy	Yes	Black High TSS	97.4	"	10.4	8.28	1300		"	yes	
10/26	1140	MH	" "	yes			"	7.9	8.44	1250	6.5	"	yes	
11/6	1200	MH	W/Cold	yes	High TSS Black	97.35	Flume	4.2	8.9	1250	6.1	"	yes	
11/30	1512	GMCW	Cold	yes	High TSS Black w/Sheen	107.6	"	4.9	8.78	1050	-	"	yes	
12/9	1036	cm	Cold	yes	Black High TSS	148.1	Flume	3.4	8.24	2023	7.4	"	yes	
12/23	1040	cm	Cold	yes	Clear V. low flow	4.3	Flume	3.0	8.57	2676	-	"	yes	
1/3/04	1345	Gm	coll Clear	NO	Slurry → SC 2 → SC-2	-	-	-	-	-	-	-	-	NO
2/25	1450	cm	Re.C. 1	NO										NO
3/21/04	1041	TMCW	warm Sunny	NO	Dry out R. W									NO
4/14/04	1604	GMCW	" "	NO	Basin is nearly Dry									NO

\* Basin water level measurements are taken from permanent reference point at basin location.  
 Flow measurement methods: W = Weir, VE = Visual Estimate, CC = Calibrated Container, DF = Debris Flow Rate Estimate

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Surface Water and Discharge Basin Compliance Sampling

HUNTINGDON Chen - Northern

MONITORING LOCATION NUMBER: Coal Runoff Basin

GWD

Runoff Basin / Spring / Other: \_\_\_\_\_

Sampling Parameters: Cations, Anions, METALS, pH, TDS

Date	Time	Personnel	Weather	Discharge Present (yes/no)	Observations (color, sheen, odor, etc.)	Flow (cfs)	Flow Meas. Method	Basin Water Level (feet)	Field Parameters				Collection Point	Sample Taken (yes/no)
									Temp (°C)	pH	SC (umhos)	Meter No.		
9/4/92	1715	GM/CM	Cold/Rainy	yes	no sheen, no foam, no debris	10 gpm	VE	-	12	6.75	2173	41.1	discharge ditch	yes
10/3/92	825	GM	Clear Cool	yes		110	VE	-	9	8.19	2897	11.1	"	yes
11/5/92	1335	GM	Scattered Snow	yes		120	VE	-	4	8.33	2400	8.6	"	yes
12/3/92	1457	GM/CW	Cold Clear	yes		25	VE	-	1.5	-	2386	9.8	"	yes
* 12/2/92	1515	GM/CW	"	yes	taken near res.	25	VE	-	2.0	-	2352	10.0	New Res. at Outlet	yes
1/28/93	1057	GM/CW	Cold Clear	yes		25	VE	-	6	-	1504		"	yes
2/2/93	1115	GM/CW	Cold PC	yes	"	20	VE	-	4	7.90	2150	10.2	"	yes
3/23/93	1049	CW	Warm Sunny	yes	Flow Reduced Cons. discharge	15	VE	-	11.0	7.43	1920	-	"	yes
4/8/93	1510	GM/CW	Clear Cold	yes	at Outflow point	20	VE	-	6	7.32	1900	10.6	"	yes
4/29	1156	GM	Clear Warm	yes		20	VE	-	13	8.59	2150	10.8	"	yes
5/21	1828	GM	"	yes	Flow ~ Normal	35	VE	-	17.5	8.81	1950		"	yes
6/15	1430	RG	Warm Windy	yes	Flow reduced ~ 1/2	8	Flume	-	7	8.3	1700	7.5	"	NO
6/22	0858	GM	Sunny Hot	NO	No Discharge, slurry water is being diverted by bypasses								decanting process	NO

\* Basin water level measurements are taken from permanent reference point at basin location.

Flow measurement methods: W = Weir, VE = Visual Estimate, CC = Calibrated Container, DF = Debris Flow Rate Estimate

\* Taken downstream near reservoir; sample called 004-RES

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153686  
 Sample Name: MW-1/072094  
 Sample Date: 07/20/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1320  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
Alkalinity Bicarbonate as HCO <sub>3</sub>	310.1	37.80 meq/l				
Alkalinity Carbonate as CO <sub>3</sub>	310.1	576 mg/l	--	1400	07/27/94	HB
Alkalinity Total as CaCO <sub>3</sub>	310.1	0 mg/l	--	1400	07/27/94	HB
Chloride as Cl	325.2	472 mg/l	0.43	1400	07/27/94	HB
Sulfate as SO <sub>4</sub>	375.2	85 mg/l	0.72	1630	08/02/94	DD
		1247 mg/l	1.75	1900	07/27/94	DD
<b>CATIONS</b>						
		37.86 meq/l				
Calcium as Ca	200.7	165 mg/l	0.10	1100	07/29/94	BH
Hardness as CaCO <sub>3</sub>	200.7	1250 mg/l	--	1100	07/29/94	BH
Magnesium as Mg	200.7	204 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	7 mg/l	0.18	1100	08/02/94	AAH
Sodium as Na	200.7	291 mg/l	0.81	1130	07/29/94	BH
<b>INORGANICS</b>						
pH	150.1	7.5 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	2180 mg/l	6.3	1500	07/26/94	HB
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	* <0.04 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

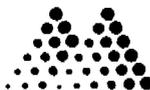
\* Higher detection level due to interferences.

Client Name: HUNTINGDOM - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153691  
 Sample Name: DUPLICATE 153686 MW-1/072094  
 Sample Date: 07/20/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1320  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
		37.96 meq/l				
Alkalinity Bicarbonate as HCO <sub>3</sub>	310.1	587 mg/l	--	1300	08/04/94	BH
Alkalinity Carbonate as CO <sub>3</sub>	310.1	0 mg/l	--	1300	08/04/94	BH
Alkalinity Total as CaCO <sub>3</sub>	310.1	481 mg/l	0.43	1300	08/04/94	BH
Chloride as Cl	325.2	88 mg/l	0.72	1630	08/02/94	DD
Sulfate as SO <sub>4</sub>	375.2	1242 mg/l	1.75	1900	07/27/94	DD
<b>CATIONS</b>						
		37.86 meq/l				
Calcium as Ca	200.7	165 mg/l	0.10	1100	07/29/94	BH
Hardness as CaCO <sub>3</sub>	200.7	1277 mg/l	--	1100	07/29/94	BH
Magnesium as Mg	200.7	210 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	7 mg/l	0.18	1100	08/02/94	BH
Sodium as Na	200.7	284 mg/l	0.81	1000	08/08/94	BH
<b>INORGANICS</b>						
pH	150.1	7.5 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	2250 mg/l	6.3	1500	07/26/94	BH
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	*<0.04 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

\* Higher detection limit due to interferences.

# Analytical Report



## Mountain States Analytical

The Quality Solution

Huntingdon Eng. & Environmental, Inc.  
1127 W. 2320 S.  
Suite B.  
Salt Lake City, UT 84119

Attn: Mr. Rich Giraud  
Project: SCA GWD

Sample ID: MW-1/072094  
Matrix: Waste Water

MSAI Sample: 22172  
MSAI Group: 5435  
Date Reported: 08/09/94

Discard Date: 09/08/94  
Date Submitted: 07/26/94  
Date Sampled: 07/20/94  
Collected by: GM  
Purchase Order:  
Project No.: 5-137.2-91

Test	Analysis	Results as Received	Units	Limit of Quantitation
0212	Solids, Total Dissolved Method: EPA 160.1	2,360	mg/l	10
1125	Sulfate, Turbidimetric Method: EPA 375.4	1,170	mg/l	2

Respectfully Submitted,  
Reviewed and Approved by:

Mark W. Bostrom  
Project Manager

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 150818  
 Sample Name: MW-1/041994  
 Sample Date: 04/19/94  
 Collected by: CHUCK WEMPLE  
 Time Sampled: 1124  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
	<b>34.58 meq/l</b>				
Alkalinity Bicarbonate as HCO <sub>3</sub>	722 mg/l	-	1130	05/19/94	BH
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	-	1130	05/19/94	BH
Alkalinity Total as CaCO <sub>3</sub>	592 mg/l	0.84	1130	05/19/94	BH
Chloride as Cl	88 mg/l	1.41	1400	05/17/94	DD
Sulfate as SO <sub>4</sub>	973 mg/l	2.29	1400	05/23/94	DD
<b>CATIONS</b>					
	<b>35.73 meq/l</b>				
Calcium as Ca	150 mg/l	0.39	1000	05/11/94	BH
Hardness as CaCO <sub>3</sub>	1200 mg/l	-	1000	05/11/94	BH
Magnesium as Mg	200 mg/l	0.31	1000	05/11/94	BH
Potassium as K	9 mg/l	0.18	1000	05/09/94	AH
Sodium as Na	266 mg/l	0.81	1000	04/25/94	AH
<b>INORGANICS</b>					
pH	7.8 S.U.	-	1630	04/22/94	DD
Total Dissolved Solids	2190 mg/l	11.7	1400	04/26/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	1400	05/02/94	AH
Barium as Ba (Dissolved)	* <0.3 mg/l	0.031	1630	05/03/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1400	04/29/94	AH
Chromium as Cr (Dissolved)	* <0.06 mg/l	0.009	1630	05/03/94	BH
Copper as Cu (Dissolved)	* <0.06 mg/l	0.005	1630	05/03/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	04/28/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1300	05/06/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	1400	05/04/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	05/03/94	AH
Zinc as Zn (Dissolved)	* <0.06 mg/l	0.008	1630	05/03/94	BH

\* Higher detection limit due to interference.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148511  
 Sample Name: MW-1/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1245  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	530 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	434 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	79 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	1130 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	150 mg/l	0.39	1600	02/04/94	BH
Hardness as CaCO <sub>3</sub>	1200 mg/l	-	1600	02/04/94	BH
Magnesium as Mg	190 mg/l	0.31	1600	02/04/94	BH
Potassium as K	8 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	274 mg/l	0.81	1600	02/04/94	BH
<b>INORGANICS</b>					
pH	7.6 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	2140 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	0930	01/20/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1500	01/21/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1500	01/21/94	BH
Chromium as Cr (Dissolved)	*<0.06 mg/l	0.009	1500	01/21/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1500	01/21/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	01/20/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	0900	01/21/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1500	01/21/94	BH

\* Higher detection limit reported due to sample interferences.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148517  
 Sample Name: DUPLICATE 148511 MW-1/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1245  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	541 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	443 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	84 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	1130 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	140 mg/l	0.39	0930	01/21/94	BH
Hardness as CaCO <sub>3</sub>	1100 mg/l	-	0930	01/21/94	BH
Magnesium as Mg	180 mg/l	0.31	0930	01/21/94	BH
Potassium as K	8 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	316 mg/l	0.81	0930	01/21/94	BH
<b>INORGANICS</b>					
pH	7.6 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	2170 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	0930	01/20/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1500	01/21/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1500	01/21/94	BH
Chromium as Cr (Dissolved)	*<0.06 mg/l	0.009	1500	01/21/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1500	01/21/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	01/20/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	0900	01/21/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1600	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1500	01/21/94	BH

\* Higher detection limit due to sample interferences.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogeneration Facility 5-137.2-91

July 22, 1993  
 Sheet 2 of 5

Laboratory No.: 142301  
 Sample Name: MW-1/062993  
 Sample Date: 06/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1045  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD LIMIT	DETECTION DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	580 mg/l	1.02	07/17/93	1400	DD
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	-	07/17/93	1400	DD
Alkalinity Total as CaCO <sub>3</sub>	475 mg/l	0.84	07/17/93	1400	DD
Chloride as Cl	59 mg/l	0.24	07/08/93	1500	DD
Sulfate as SO <sub>4</sub>	923 mg/l	1.83	07/14/93	1430	CC
<b>CATIONS:</b>					
Calcium as Ca	126 mg/l	0.39	07/19/93	1045	NH
Hardness as CaCO <sub>3</sub>	1030 mg/l	-	07/19/93	1045	NH
Magnesium as Mg	171 mg/l	0.31	07/07/93	1045	NH
Potassium as K	8 mg/l	0.18	07/07/93	1156	NH
Sodium as Na	249 mg/l	0.81	07/19/93	1045	NH
<b>INORGANICS:</b>					
pH	7.3 S.U.	-	07/03/93	1730	DD
Total Dissolved Solids	1790 mg/l	20	07/06/93	1730	CC
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	07/08/93	1300	PB
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	07/19/93	1600	NH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	07/19/93	1600	NH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	07/19/93	1600	NH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	07/19/93	1600	NH
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	07/13/93	1330	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	07/13/93	1100	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	07/12/93	1540	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	07/08/93	1400	NH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	07/19/93	1600	NH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. Groundwater  
 5-137.2-91

June 17, 1993  
 Sheet 4 of 6

Laboratory No.: 141073  
 Sample Name: MW-1/052193  
 Sample Date: 05/21/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1459  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD	DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	TIME OF ANALYSIS
<b>ANIONS:</b>						
Alkalinity Bicarbonate as HCO <sub>3</sub>	1050	mg/l	--	05/26/93	BH	1630
Alkalinity Carbonate as CO <sub>3</sub>	0	mg/l	--	05/26/93	BH	1630
Alkalinity Total as CaCO <sub>3</sub>	858	mg/l	0.84	05/26/93	BH	1630
Chloride as Cl	64	mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	1010	mg/l	1.83	06/02/93	CC	1500
<b>CATIONS:</b>						
Calcium as Ca	118	mg/l	0.39	06/02/93	NH	1040
Hardness as CaCO <sub>3</sub>	945	mg/l	--	06/02/93	NH	1040
Magnesium as Mg	158	mg/l	0.31	06/02/93	NH	1040
Potassium as K	10	mg/l	0.18	06/04/93	NH	0900
Sodium as Na	250	mg/l	0.81	06/02/93	NH	1040
<b>INORGANICS:</b>						
pH	7.6	S.U.	--	05/25/93	TK	1600
Total Dissolved Solids	1810	mg/l	20	05/28/93	CC	1805
<b>METALS:</b>						
Arsenic as As (Total)	<0.002	mg/l	0.0014	06/08/93	AH	1430
Barium as Ba (Total)	<0.1	mg/l	0.031	06/01/93	NH	1040
Cadmium as Cd (Total)	<0.003	mg/l	0.002	06/01/93	NH	1040
Chromium as Cr (Total)	<0.02	mg/l	0.009	06/01/93	NH	1040
Copper as Cu (Total)	<0.02	mg/l	0.005	06/01/93	NH	1040
Lead as Pb (Total)	<0.01	mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Total)	<0.0005	mg/l	0.00025	06/02/93	AH	1050
Selenium as Se (Total)	<0.002	mg/l	0.0011	06/03/93	AH	1330
Silver as Ag (Total)	<0.01	mg/l	0.0001	06/01/93	NH	1150
Zinc as Zn (Total)	<0.02	mg/l	0.008	06/01/93	NH	1040

The cation-anion analysis does not meet our quality assurance requirements. However, the values reported herein were verified by duplicate analysis. This indicates there are other unmeasured cations or anions present in the sample.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 1993  
 Sheet 2 of 10

Laboratory No.: 140273  
 Sample Name: MW-1/042993  
 Sample Date: 04/29/33  
 Collected by: GREG McDONALD  
 Time Sampled: 1310  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	725 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	594 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	69 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	821 mg/l	1.83	05/13/93	CC	1230
<b>CATIONS:</b>					
Calcium as Ca	125 mg/l	0.39	05/07/93	NH	1100
Hardness as CaCO <sub>3</sub>	1004 mg/l	--	05/07/93	NH	1100
Magnesium as Mg	168 mg/l	0.31	05/07/93	NH	1100
Potassium as K	12 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	268 mg/l	0.81	05/07/93	NH	1100
<b>INORGANICS:</b>					
pH	7.3 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	1920 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/11/93	NH	1600
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/11/93	NH	1600
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/11/93	NH	1600
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/11/93	NH	1600
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/17/93	NH	1220
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/11/93	NH	1600
Zinc as Zn (Dissolved)	0.14 mg/l	0.008	05/11/93	NH	1600

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 1993  
 Sheet 9 of 10

Laboratory No.: 140280  
 Sample Name: DUPLICATE 140273 MW-1/042993  
 Sample Date: 04/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1310  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Total as CaCO <sub>3</sub>	598 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	64 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	887 mg/l	1.83	06/03/93	CC	1100
<b>CATIONS:</b>					
Calcium as Ca	121 mg/l	0.39	05/07/93	NH	1100
Hardness as CaCO <sub>3</sub>	973 mg/l	--	05/07/93	NH	1100
Magnesium as Mg	163 mg/l	0.31	05/07/93	NH	1100
Potassium as K	12 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	266 mg/l	0.81	05/07/93	NH	1100
<b>INORGANICS:</b>					
pH	7.3 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	1800 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/11/93	NH	1600
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/11/93	NH	1600
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/11/93	NH	1600
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/11/93	NH	1600
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/17/93	NH	1220
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/11/93	NH	1600
Zinc as Zn (Dissolved)	0.14 mg/l	0.008	05/11/93	NH	1600

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Groundwater Compliance Sampling

HUNTINGDON Chen - Northern

WELL NUMBER: MW-1

GWD

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: ions, metals, pH, TDS

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters				Sample Method	Observations (color, sheen, odor, etc.)	
								Purge Volume (gallons)	Temp (F)	pH	SC (umhos)			Dc Meter No.
2/27	continued							6	20	7.49	2000		DB	light brown silty. 1415 st
2/28	0930	MH	S, H	18.29	29.74	5.50	SSB	1.5	15.8	7.25	2100			
								3.5	15.2	7.57	2150			silty H <sub>2</sub> O
								6.0	14.3	7.52	2100		DB	
2/28	1810	CW/Gm	Warm	18.25	29.7	5.50	SSB	1	15.5	7.09	1200			silty
								4	14.5	7.06	1200			
								5	13.5	7.03	1200			
								6	14.5	7.05	1200			Sample collected 1845
2/27	1140	MH	Warm	17.82	29.7	5.70	SSB	6	12.0	7.6	2000	2.0		
3/9/4	1217	Gm	Cold Clear	17.65	29.7	5.78	SSB	1.5	12.5	7.42	2106			silty
								3.0	13.2	7.43	2074			
								5.0	13.2	7.41	1987			
								6.0	13.2	7.38	2063		DB	ST = 1245
4/10/4	1040	Gm/CW	Warm Sunny	17.78	29.7	4.8	SSB	1.5	14.8	7.47	2200			
								3.0	13.1	7.49	2400			
								4.5	13.3	7.49	2400			
								6.0	13.4	7.48	2400			
								7.0	13.9	7.42	2400		DB	ST = 1124

Static water level and well depth measurements are below measuring point at well head.  
 Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
 Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
 Purge Volume (gallons) = Casing Volume (gallons)  $\times 3$

\* 3120  
corrected

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Groundwater Compliance Sampling

HUNTINGDON Chen-Northern

WELL NUMBER: MW-1

GWO

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: Ions, Metals, pH, TDS

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters				Sample Method	Observations (color, sheen, odor, etc.)	
								Purge Volume (gallons)	Temp (°F)	pH	SC (umhos)			Meter No.
7/29	1232	Gm	Sunny Warm	17.90	29.8	5.68	SSB	12.5 B:1	18	8.18	2000		DB	Silty Lt. Brown.
								1.5	15	7.07	2100			
								3	15	7.68	2100			
								4.5	16	7.73	2000			
								6	16	7.68	2000			
5/29	1427	Gm	Sunny Warm	17.96	29.8	5.68	SSB	1.5	18	1800	7.91			Supls. collected 1310 Silty Lt. Brown.
								3.0	18	1400	7.78			
								4.5	18	1400	7.80			
								6.0	18	1900	7.68		DB	
6/29	0934	Gm, MH	Sunny Hot	18.34	29.7	5.50	SSB	12.5 B:1	26	8.22	2200			Silty, Light Brown.
								2	18	7.81	2200			
								3	16	7.49	2100			
								4	16	7.20	2100			
								5	15	7.02	2100			
								6.5	15	6.98	2100		DB	Supls. coll. @ 1045

\* Static water level and well depth measurements are below measuring point at well head.  
 Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
 Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
 Purge Volume (gallons) = Casing Volume (gallons)          x 3

Jordan Creek #3 & #6  
ACT/007/017 #7

Client Name: MUNTINGDOM - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153687  
 Sample Name: MW-2/072094  
 Sample Date: 07/20/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1430  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
		26.03 meq/l				
Alkalinity Bicarbonate as HCO <sub>3</sub>	310.1	616 mg/l	--	1400	07/27/94	HB
Alkalinity Carbonate as CO <sub>3</sub>	310.1	0 mg/l	--	1400	07/27/94	HB
Alkalinity Total as CaCO <sub>3</sub>	310.1	505 mg/l	0.43	1400	07/27/94	HB
Chloride as Cl	325.2	48 mg/l	0.72	1630	08/02/94	DD
Sulfate as SO <sub>4</sub>	375.2	700 mg/l	1.75	1315	08/08/94	CC
<b>CATIONS</b>						
		26.05 meq/l				
Calcium as Ca	200.7	96 mg/l	0.10	1100	07/29/94	BH
Hardness as CaCO <sub>3</sub>	200.7	697 mg/l	--	1100	07/29/94	BH
Magnesium as Mg	200.7	111 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	8 mg/l	0.18	1100	08/02/94	BH
Sodium as Na	200.7	274 mg/l	0.81	1000	08/08/94	BH
<b>INORGANICS</b>						
pH	150.1	7.7 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	1450 mg/l	6.3	1500	07/26/94	HB
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	<0.02 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 150819  
 Sample Name: MW-2/041994  
 Sample Date: 04/19/94  
 Collected by: CHUCK WEMPLE  
 Time Sampled: 1225  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
	25.32 meq/l				
Alkalinity Bicarbonate as	627 mg/l	-	1300	05/11/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1300	05/11/94	HB
Alkalinity Total as CaCO <sub>3</sub>	514 mg/l	0.84	1300	05/11/94	HB
Chloride as Cl	41 mg/l	1.41	1530	04/27/94	DD
Sulfate as SO <sub>4</sub>	667 mg/l	2.29	1430	05/09/94	DD
<b>CATIONS</b>					
	26.07 meq/l				
Calcium as Ca	88 mg/l	0.39	1600	05/11/94	BH
Hardness as CaCO <sub>3</sub>	714 mg/l	-	1600	05/11/94	BH
Magnesium as Mg	120 mg/l	0.31	1000	05/04/94	BH
Potassium as K	9 mg/l	0.81	1000	05/09/94	AH
Sodium as Na	266 mg/l	0.81	1600	05/11/94	AH
<b>INORGANICS</b>					
pH	7.9 S.U.	-	1630	04/22/94	DD
Total Dissolved Solids	1380 mg/l	11.7	1400	04/26/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	1400	05/02/94	AH
Barium as Ba (Dissolved)	*<0.3 mg/l	0.031	1630	05/03/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1400	04/29/94	AH
Chromium as Cr (Dissolved)	*<0.06 mg/l	0.009	1630	05/03/94	BH
Copper as Cu (Dissolved)	*<0.06 mg/l	0.005	1630	05/03/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	04/28/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1300	04/27/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	1400	05/04/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	05/03/94	AH
Zinc as Zn (Dissolved)	*<0.06 mg/l	0.008	1630	05/03/94	BH

\* Higher detection limit due to interference.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148512  
 Sample Name: MW-2/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1157  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	593 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	486 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	59 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	774 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	100 mg/l	0.39	1600	02/04/94	BH
Hardness as CaCO <sub>3</sub>	780 mg/l	-	1600	02/04/94	BH
Magnesium as Mg	130 mg/l	0.31	1600	02/04/94	BH
Potassium as K	9 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	286 mg/l	0.81	1600	02/04/94	BH
<b>INORGANICS</b>					
pH	7.7 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	1620 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	0930	01/20/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1500	01/21/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1500	01/21/94	BH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	1500	01/21/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1500	01/21/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	01/20/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	0900	01/21/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1500	01/21/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogeneration Facility 5-137.2-91

July 22, 1993  
 Sheet 3 of 5

Laboratory No.: 142302  
 Sample Name: MW-2/062993  
 Sample Date: 06/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1150  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	602 mg/l	1.02	07/08/93	1400	DD
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	-	07/08/93	1400	DD
Alkalinity Total as CaCO <sub>3</sub>	493 mg/l	0.84	07/08/93	1400	DD
Chloride as Cl	63 mg/l	0.24	07/08/93	1500	DD
Sulfate as SO <sub>4</sub>	861 mg/l	1.83	07/14/93	1000	CC
<b>CATIONS:</b>					
Calcium as Ca	123 mg/l	0.39	07/19/93	1045	NH
Hardness as CaCO <sub>3</sub>	920 mg/l	-	07/19/93	1045	NH
Magnesium as Mg	136 mg/l	0.31	07/19/93	1045	NH
Potassium as K	9 mg/l	0.18	07/07/93	1156	NH
Sodium as Na	282 mg/l	0.81	07/19/93	1045	NH
<b>INORGANICS:</b>					
pH	7.2 S.U.	-	07/03/93	1730	DD
Total Dissolved Solids	1720 mg/l	20	07/06/93	1730	CC
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	07/08/93	1300	PB
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	07/19/93	1600	NH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	07/19/93	1600	NH
Chromium as Cr (Dissolved)	0.02 mg/l	0.009	07/19/93	1600	NH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	07/19/93	1600	NH
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	07/13/93	1330	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	07/13/93	1100	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	07/12/93	1540	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	07/08/93	1400	NH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	07/19/93	1600	NH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. Groundwater  
 5-137.2-91

June 17, 1993  
 Sheet 5 of 6

Laboratory No.: 141074  
 Sample Name: MW-2/052193  
 Sample Date: 05/21/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1547  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	TIME OF ANALYSIS
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	852	mg/l --	05/26/93	BH	1630
Alkalinity Carbonate as CO <sub>3</sub>	0	mg/l --	05/26/93	BH	1630
Alkalinity Total as CaCO <sub>3</sub>	698	mg/l 0.84	05/26/93	BH	1630
Chloride as Cl	70	mg/l 0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	932	mg/l 1.83	06/02/93	CC	1500
<b>CATIONS:</b>					
Calcium as Ca	112	mg/l 0.39	06/02/93	NH	1040
Hardness as CaCO <sub>3</sub>	889	mg/l --	06/02/93	NH	1040
Magnesium as Mg	148	mg/l 0.31	06/02/93	NH	1040
Potassium as K	12	mg/l 0.18	06/04/93	NH	0900
Sodium as Na	273	mg/l 0.81	06/02/93	NH	1040
<b>INORGANICS:</b>					
pH	7.7	S.U. --	05/25/93	TK	1600
Total Dissolved Solids	1760	mg/l 20	05/28/93	CC	1805
<b>METALS:</b>					
Arsenic as As (Total)	<0.002	mg/l 0.0014	06/08/93	AH	1430
Barium as Ba (Total)	<0.1	mg/l 0.031	06/01/93	NH	1040
Cadmium as Cd (Total)	<0.003	mg/l 0.002	06/01/93	NH	1040
Chromium as Cr (Total)	<0.02	mg/l 0.009	06/01/93	NH	1040
Copper as Cu (Total)	<0.02	mg/l 0.005	06/01/93	NH	1040
Lead as Pb (Total)	<0.01	mg/l 0.001	06/14/93	NH	1000
Mercury as Hg (Total)	<0.0005	mg/l 0.00025	06/02/93	AH	1050
Selenium as Se (Total)	<0.002	mg/l 0.0011	06/03/93	AH	1330
Silver as Ag (Total)	<0.01	mg/l 0.0001	06/01/93	NH	1150
Zinc as Zn (Total)	<0.02	mg/l 0.008	06/01/93	NH	1040

The cation-anion analysis does not meet our quality assurance requirements. However, the values reported herein were verified by duplicate analysis. This indicates there are other unmeasured cations or anions present in the sample.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 19  
 Sheet 3 of

Laboratory No.: 140274  
 Sample Name: MW-2/042993  
 Sample Date: 04/29/33  
 Collected by: GREG McDONALD  
 Time Sampled: 1414  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	591 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	484 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	73 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	868 mg/l	1.83	06/03/93	CC	1100
<b>CATIONS:</b>					
Calcium as Ca	114 mg/l	0.39	05/07/93	NH	1100
Hardness as CaCO <sub>3</sub>	894 mg/l	--	05/07/93	NH	1100
Magnesium as Mg	148 mg/l	0.31	05/07/93	NH	1100
Potassium as K	15 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	288 mg/l	0.81	05/07/93	NH	1100
<b>INORGANICS:</b>					
pH	7.5 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	1900 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/11/93	NH	1600
Cadmium as Cd (Dissolved)	0.006 mg/l	0.002	05/11/93	NH	1600
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/11/93	NH	1600
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/11/93	NH	1600
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/17/93	NH	1220
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/11/93	NH	1600
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	05/11/93	NH	1600

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Groundwater Compliance Sampling

HUNTINGDON Chen-Northern

WELL NUMBER: MW-2

GWD

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: Ions, Metals, pH, TDS

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters				Sample Method	Observations (color, sheen, odor, etc.)
								Purge Volume (gallons)	Temp (F)	pH	SC (umhos)		
7/27	1240	GM	S.H	24.16	37.5	6.40	SSB	6.5	20	6.91	1800		
								3	21	6.98	2000		
								4.5	20	7.01	2100		silty water.
								6.5	14	7.14	2100	DB	ST=1323
8/12/03	1110	MH	S.H	23.97	37.5	6.49	SSB	2	15.2	7.39	2000		
								4	15.3	7.52	2200		silty H <sub>2</sub> O
								6	15.4	7.63	2400	DB	
7/2/03	1850	CWGM	SW	23.98	37.5	6.49	SSB	1	13.5	6.99	1250		silty
								4	12.5	6.95	1270		
								5	12.0	6.95	1300		
								6.5	12.0	6.95	1300	DB	sample collected 1958
10/27	1240	MH	windy	23.73	37.5	6.61	SSB	6.6	13.0	8.1	2100	1.8	Silty
1/3/04	1127	GM	Clear Cold	24.41	37.5	6.28	SSB	1.5	12.5	7.09	2551		
								3.0	13.0	7.49	2239		
								4.5	12.7	7.53	2162		
								6.5	13.1	7.47	2176	DB	ST=1157

\* Static water level and well depth measurements are below measuring point at well head.  
 Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
 Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
 Purge Volume (gallons) = Casing Volume (gallons)  $\times 3$

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Groundwater Compliance Sampling

HUNTINGDON Chen-Northern

WELL NUMBER: MW-2

GWO

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: ions, Metals, pH, TDS

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters				Sample Method	Observations (color, sheen, odor, etc.)
								Purge Volume (gallons)	Temp (F)	pH	SC (umhos)		
3/24/08	0804	CW	Sunny-Warm	24.72	37.48	6.13	SSB	2	16	7.63	2100K		R5 SC
								4	15	7.38	.22"		Sampled @ 1139
								6.5	14.5	7.33	.22"		Silty Gray Water
4/29	1328	GM	Sunny Warm	24.68	37.5	6.15	SSB	1.5	17.5	8.37	2400	DB	Silty Gray Purge Water
								3	17	8.43	2200		
								5	15.5	8.23	2200		
								6.5	16.5	8.47	2200		Samples collected @ 1414
5/21	1511	GM	Sunny Warm	24.58	37.5	6.20	SSB	1.5	20	8.02	2050		Light Gray, silty
								3	17	7.86	1900		
								5	17	7.87	2100		
								7	16.5	7.72	2050	DB	Sample coll @ 1547
6/29	1058	GM/MT	Sunny Hot	24.47	37.4	6.35	SSB	1.5	16	*	2500		Silty Gray * pH meter not func.
								2	16		2300		
								3	17		2400		
								4.5	17		2350		
								5.5	17		2300		
								6.5	15		2200		
								7	16		2300	DB	Sample collected @ 1150

\* Static water level and well depth measurements are below measuring point at well head.  
 Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
 Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
 Purge Volume (gallons) = Casing Volume (gallons)  $\times 3$



C.V. Spur  
ACT/005/022 #7

Client Name: MOUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153688  
 Sample Name: MW-3/072094  
 Sample Date: 07/20/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1515  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
		23.53 meq/l				
Alkalinity Bicarbonate as HCO <sub>3</sub>	310.1	593 mg/l	--	1400	07/27/94	BH
Alkalinity Carbonate as CO <sub>3</sub>	310.1	0 mg/l	--	1400	07/27/94	BH
Alkalinity Total as CaCO <sub>3</sub>	310.1	486 mg/l	0.43	1400	07/27/94	BH
Chloride as Cl	325.2	47 mg/l	0.72	1630	08/02/94	DO
Sulfate as SO <sub>4</sub>	375.2	600 mg/l	1.75	2000	07/27/94	DO
<b>CATIONS</b>						
		24.10 meq/l				
Calcium as Ca	200.7	86 mg/l	0.10	1000	08/08/94	BH
Hardness as CaCO <sub>3</sub>	200.7	622 mg/l	--	1000	08/08/94	BH
Magnesium as Mg	200.7	99 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	7 mg/l	0.18	1100	08/02/94	AAH
Sodium as Na	200.7	264 mg/l	0.45	1000	08/08/94	BH
<b>INORGANICS</b>						
pH	150.1	7.7 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	1370 mg/l	6.3	1500	07/26/94	WB
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	<0.02 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1430	08/11/94	BH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 150820  
 Sample Name: MW-3/041994  
 Sample Date: 04/19/94  
 Collected by: CHUCK WEMPLE  
 Time Sampled: 1303  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>	<b>23.53 meq/l</b>				
Alkalinity Bicarbonate as	576 mg/l	-	1400	05/03/94	DD
Alkalinity Carbonate as C	0 mg/l	-	1400	05/03/94	DD
Alkalinity Total as CaCO <sub>3</sub>	472 mg/l	0.84	1400	05/03/94	CC
Chloride as Cl	39 mg/l	1.41	1530	04/27/94	DD
Sulfate as SO <sub>4</sub>	624 mg/l	2.29	1430	05/09/94	DD
<b>CATIONS</b>	<b>22.88 meq/l</b>				
Calcium as Ca	80 mg/l	0.39	1000	05/04/94	BH
Hardness as CaCO <sub>3</sub>	590 mg/l	-	1000	05/04/94	BH
Magnesium as Mg	95 mg/l	0.31	1000	05/04/94	BH
Potassium as K	8 mg/l	0.18	1000	05/09/94	AH
Sodium as Na	250 mg/l	0.81	1600	05/11/94	BH
<b>INORGANICS</b>					
pH	8.0 S.U.	-	1630	04/22/94	DD
Total Dissolved Solids	1170 mg/l	11.7	1400	04/26/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	1400	05/02/94	AH
Barium as Ba (Dissolved)	*<0.3 mg/l	0.031	1630	05/03/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1400	04/29/94	AH
Chromium as Cr (Dissolved)	*<0.06 mg/l	0.009	1630	05/03/94	BH
Copper as Cu (Dissolved)	*<0.06 mg/l	0.005	1630	05/03/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	04/28/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1300	04/27/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	1400	05/04/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	05/03/94	AH
Zinc as Zn (Dissolved)	*<0.06 mg/l	0.008	1630	05/03/94	BH

\* Higher detection limit due to interference.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148513  
 Sample Name: MW-3/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1110  
 Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	605 mg/l	-	1100	02/10/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	02/10/94	HB
Alkalinity Total as CaCO <sub>3</sub>	496 mg/l	0.84	1100	02/10/94	HB
Chloride as Cl	53 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	672 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	88 mg/l	0.39	1600	02/04/94	BH
Hardness as CaCO <sub>3</sub>	670 mg/l	-	1600	02/04/94	BH
Magnesium as Mg	110 mg/l	0.31	1600	02/04/94	BH
Potassium as K	9 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	272 mg/l	0.81	1600	02/04/94	BH
<b>INORGANICS</b>					
pH	7.7 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	1450 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	0930	01/20/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1500	01/21/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1500	01/21/94	BH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	1500	01/21/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1500	01/21/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1400	01/20/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	0900	01/21/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1500	01/21/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogeneration Facility 5-137.2-91

July 22, 1993  
 Sheet 4 of 5

Laboratory No.: 142303  
 Sample Name: MW-3/062993  
 Sample Date: 06/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1237  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	602 mg/l	1.02	07/13/93	1400	DD
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	-	07/13/93	1400	DD
Alkalinity Total as CaCO <sub>3</sub>	493 mg/l	0.84	07/13/93	1400	DD
Chloride as Cl	66 mg/l	0.24	07/08/93	1500	DD
Sulfate as SO <sub>4</sub>	864 mg/l	1.83	07/13/93	1000	CC
<b>CATIONS:</b>					
Calcium as Ca	120 mg/l	0.39	07/19/93	1045	NH
Hardness as CaCO <sub>3</sub>	992 mg/l	-	07/19/93	1045	NH
Magnesium as Mg	144 mg/l	0.31	07/19/93	1045	NH
Potassium as K	8 mg/l	0.18	07/07/93	1156	NH
Sodium as Na	267 mg/l	0.81	07/19/93	1045	NH
<b>INORGANICS:</b>					
pH	7.5 S.U.	-	07/03/93	1730	DD
Total Dissolved Solids	1720 mg/l	20	07/06/93	1730	CC
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	07/08/93	1300	PB
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	07/19/93	1600	NH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	07/19/93	1600	NH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	07/19/93	1600	NH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	07/19/93	1600	NH
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	07/13/93	1330	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	07/13/93	1100	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	07/12/93	1540	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	07/08/93	1400	NH
Zinc as Zn (Dissolved)	0.05 mg/l	0.008	07/19/93	1600	NH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. Groundwater  
 5-137.2-91

June 17, 1993  
 Sheet 6 of 6

Laboratory No.: 141075  
 Sample Name: MW-3/052193  
 Sample Date: 05/21/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1622  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD	DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	TIME OF ANALYSIS
<b>ANIONS:</b>						
Alkalinity Bicarbonate as HCO <sub>3</sub>	583	mg/l	--	05/26/93	BH	1630
Alkalinity Carbonate as CO <sub>3</sub>	0	mg/l	--	05/26/93	BH	1630
Alkalinity Total as CaCO <sub>3</sub>	478	mg/l	0.84	05/26/93	BH	1630
Chloride as Cl	63	mg/l	0.24	06/08/93	DD	1530
Sulfate as SO <sub>4</sub>	858	mg/l	1.83	06/09/93	CC	1115
<b>CATIONS:</b>						
Calcium as Ca	108	mg/l	0.39	06/08/93	NH	0940
Hardness as CaCO <sub>3</sub>	862	mg/l	--	06/08/93	NH	0940
Magnesium as Mg	144	mg/l	0.31	06/08/93	NH	0940
Potassium as K	14	mg/l	0.18	06/04/93	NH	0900
Sodium as Na	273	mg/l	0.81	06/02/93	NH	1040
<b>INORGANICS:</b>						
pH	7.7	S.U.	--	05/25/93	TK	1600
Total Dissolved Solids	1710	mg/l	20	05/28/93	CC	1805
<b>METALS:</b>						
Arsenic as As (Total)	<0.002	mg/l	0.0014	06/08/93	AH	1430
Barium as Ba (Total)	<0.1	mg/l	0.031	06/01/93	NH	1040
Cadmium as Cd (Total)	0.011	mg/l	0.002	06/01/93	NH	1040
Chromium as Cr (Total)	<0.02	mg/l	0.009	06/01/93	NH	1040
Copper as Cu (Total)	<0.02	mg/l	0.005	06/01/93	NH	1040
Lead as Pb (Total)	<0.01	mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Total)	<0.0005	mg/l	0.00025	06/02/93	AH	1050
Selenium as Se (Total)	<0.002	mg/l	0.0011	06/03/93	AH	1330
Silver as Ag (Total)	<0.01	mg/l	0.0001	06/01/93	NH	1150
Zinc as Zn (Total)	<0.02	mg/l	0.008	06/01/93	NH	1040

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 1993  
 Sheet 4 of 10

Laboratory No.: 140275  
 Sample Name: MW-3/042993  
 Sample Date: 04/29/33  
 Collected by: GREG McDONALD  
 Time Sampled: 1456  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	569 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	466 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	74 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	825 mg/l	1.83	06/03/93	CC	1100
<b>CATIONS:</b>					
Calcium as Ca	101 mg/l	0.39	06/03/93	NH	1101
Hardness as CaCO <sub>3</sub>	1100 mg/l	--	06/03/93	NH	1100
Magnesium as Mg	139 mg/l	0.31	06/03/93	NH	1100
Potassium as K	14 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	280 mg/l	0.81	05/07/93	NH	1100
<b>INORGANICS:</b>					
pH	7.5 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	1740 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/11/93	NH	1600
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/11/93	NH	1600
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/11/93	NH	1600
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/11/93	NH	1600
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/17/93	NH	1220
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/11/93	NH	1600
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	05/11/93	NH	1600

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah

Groundwater Discharge Permit Number UGW070002

Groundwater Compliance Sampling

HUNTINGDON Chen - Northern

Well Number: MW-3

GWD

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: Ions, Metals, TDS, pH

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters					Sample Method	Observations (color, sheen, odor, etc.)
								Purge Volume (gallons)	Temp (F)	pH	SC (umhos)	Meter No.		
2/27	1942	Gm CW	Clear	14.62	22.5	3.78	SSB	1	14.5	7.34	1250			
								3	14.0	7.18	1250			Muddy
								6	14.0	7.11	1250	DB		suppl. c. 6. 1940
2/27	1330	MH	windy	14.60	22.5	3.78	SSB	4	16	8.20	2200	2.0		
2/27	1016	Gm	Cold Clear	14.92	22.5	3.63	SSB	1.0	11.3	7.59	2003			Silty
								2.5	11.3	7.64	2045			
								4.0	11.3	7.74	2031			
								5.5	11.2	7.72	2031			ST=1110
2/27	1236	Gm/CW	Warm, Sunny	14.71	22.5	3.74	SSB	1.5	11.3	7.93	1600			Silty
								3.0	10.2	7.94	1800			
								5.0	9.5	7.53	1850			
								5.5	9.0	7.59	1850	2710	DB	ST=1303

Static water level and well depth measurements are below measuring point at well head.  
 Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
 Purge Volume (gallons) = 1/25 x (Well Depth - Static Water Level) x (casing dia.)<sup>2</sup>  
 Sample Volume (gallons) = Casing Volume (gallons) x 3

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah  
Groundwater Discharge Permit Number UGW007002  
Groundwater Compliance Sampling

HUNTINGDON Chen - Northern

WELL NUMBER: MW-3

GWD

Casing Diameter (inches): 2

Casing Type: PVC

Sampling Parameters: ions, metals, TDS, pH

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters					Sample Method	Observations (color, sheen, odor, etc.)	
								Purge Volume (gallons)	Temp (°F)	pH	SC (umhos)	Meter No.			
1/27/03	1345	Gm CW	Clear Cld	15.68	22.53	3.29	SSB	12" Bail	11						
								1	11		.12				
								2.5	11		.16				
								5	11		.14				
								7	11		.145				
2/23/03	1235	Gm CW	Cold Snowing	15.25	22.6	~5	SSB	12" Bail	11.5	6.83	2200			Sample Time = 1413	
								1	11.5	7.20	1800			Clear	
								3	12.0	7.28	1800			Silty	
								5	-	-	-				
								6	12.0	7.18	1800				
3/24/03	0757	CW	Sunny Warm	14.72	22.62	5.05	SSB	2	12	6.82	.18			Sample collected 1251	
								4	11	7.13	.18			125 SC	
								5.5	11	7.30	.20			Silty Water	
4/29/03	1419	Gm	Warm Partly Cld	14.72	22.6	3.79	SSB	1.5	16	8.93	1800		DB	Samples collected @ 1225	
								3	17	8.62	1800			Silty Light Brown	
								4.5	13	8.47	1400			Water	
								6	14	8.31	1450		DB	Samples collected @ 1456	

\* Static water level and well depth measurements are below measuring point at well head.  
Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
Purge Volume (gallons) = Casing Volume (gallons)            x 3

# SUNNYSIDE COGENERATION ASSOCIATES FACILITY

Carbon County, Utah  
Groundwater Discharge Permit Number UGW070002  
Groundwater Compliance Sampling

HUNTINGDON Chen - Northern

WELL NUMBER: MW-3

GWD

Casing Diameter (inches): 2

Casing Type: \_\_\_\_\_

Sampling Parameters: \_\_\_\_\_

Date	Time	Personnel	Weather	Static Water Level* (feet)	Well Depth* (feet)	Calculated Purge Volume (gallons)	Purge Method	Field Parameters				Sample Method	Observations (color, sheen, odor, etc.)
								Purge Volume (gallons)	Temp (°F)	pH	SC (umhos)		
5/21	1552	GM	Sunny Warm	14.74	22.5	3.82	SSB	1	17	8.25	1800		Light Grey Silty
								2.5	17	8.17	1800		
								4	17.5	8.01	1800		
								6	17	7.91	1900		
6/29	1200	GM/MT	Sunny Hot	14.76	22.55	3.72	SSB	13.5 Bail	21	*	2200		Sample collected @ 1622 * pH meter not Purge.
								2	18		2200		light Brown silty
								3.5	17		2200		
								4.5	16		2200		
								5.5	15		2200	DIB	Sample coll @ 1237

\* Static water level and well depth measurements are below measuring point at well head.  
Purge and Sample Methods: P=Pump, B=Bailer, D=Disposable, T=Teflon, SS=Stainless Steel  
Casing Volume (gallons) =  $1/25 \times (\text{Well Depth} - \text{Static Water Level}) \times (\text{casing dia.})^2$   
Purge Volume (gallons) = Casing Volume (gallons)            x 3

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153690  
 Sample Name: WS/072094  
 Sample Date: 07/21/94  
 Collected by: GREG McDONALD  
 Time Sampled: 0930  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
		27.58 meq/l				
Alkalinity Bicarbonate as HCO <sub>3</sub>	310.1	627 mg/l	--	1400	07/27/94	BH
Alkalinity Carbonate as CO <sub>3</sub>	310.1	0 mg/l	--	1400	07/27/94	BH
Alkalinity Total as CaCO <sub>3</sub>	310.1	514 mg/l	0.43	1400	07/27/94	BH
Chloride as Cl	325.2	59 mg/l	0.72	1630	08/02/94	DD
Sulfate as SO <sub>4</sub>	375.2	751 mg/l	1.75	1315	08/08/94	CC
<b>CATIONS</b>						
		27.67 meq/l				
Calcium as Ca	200.7	102 mg/l	0.10	1000	08/08/94	BH
Hardness as CaCO <sub>3</sub>	200.7	724 mg/l	--	1000	08/08/94	BH
Magnesium as Mg	200.7	114 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	6 mg/l	0.18	1100	08/02/94	BH
Sodium as Na	200.7	300 mg/l	0.81	1000	08/08/94	BH
<b>INORGANICS</b>						
pH	150.1	8.3 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	1530 mg/l	6.3	1500	07/26/94	BH
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	<0.02 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153692  
 Sample Name: SPIKE 153690 WS-072094  
 Sample Date: 07/21/94  
 Collected by: GREG McDONALD  
 Time Sampled: 0930  
 Sample Type: GROUNDWATER

PARAMETER	METHOD NUMBER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>						
Alkalinity Total as CaCO3	310.1	99 %	0.43	1400	07/27/94	HB
Chloride as Cl	325.2	97 %	0.72	1630	08/02/94	DD
Sulfate as SO4	375.2	98 %	1.75	2000	07/27/94	DD
<b>CATIONS</b>						
Calcium as Ca	200.7	101 %	0.10	1100	07/29/94	BH
Magnesium as Mg	200.7	104 %	0.10	1100	07/29/94	BH
Potassium as K	258.1	106 %	0.18	1100	08/02/94	BH
Sodium as Na	200.7	101 %	0.45	1130	07/29/94	BH
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	100 %	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	99 %	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	100 %	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	98 %	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	92 %	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	100 %	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	110 %	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	100 %	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	92 %	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	100 %	0.002	1430	08/03/94	BH

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 150821  
 Sample Name: WS-041994  
 Sample Date: 04/19/94  
 Collected by: CHUCK WEMPLE  
 Time Sampled: 1528  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
	<b>24.62 meq/l</b>				
Alkalinity Bicarbonate as	432 mg/l	-	1400	05/03/94	DD
Alkalinity Carbonate as C	17 mg/l	-	1400	05/03/94	DD
Alkalinity Total as CaCO3	382 mg/l	0.84	1400	05/03/94	DD
Chloride as Cl	47 mg/l	1.41	1530	04/27/94	DD
Sulfate as SO4	752 mg/l	2.29	1430	05/09/94	DD
<b>CATIONS</b>					
	<b>25.34 meq/l</b>				
Calcium as Ca	98 mg/l	0.39	1600	05/11/94	BH
Hardness as CaCO3	698 mg/l	-	1600	05/11/94	BH
Magnesium as Mg	110 mg/l	0.31	1000	05/04/94	BH
Potassium as K	7 mg/l	0.18	1000	05/09/94	AH
Sodium as Na	258 mg/l	0.81	1000	04/25/94	AH
<b>INORGANICS</b>					
pH	8.4 S.U.	-	1630	04/22/94	DD
Total Dissolved Solids	1360 mg/l	11.7	1400	04/26/94	HB
<b>METALS</b>					
Arsenic as As (Total)	<0.002 mg/l	0.0014	1400	05/02/94	AH
Barium as Ba (Total)	<0.1 mg/l	0.031	1330	05/06/94	BH
Cadmium as Cd (Total)	<0.003 mg/l	0.002	1400	04/29/94	AH
Chromium as Cr (Total)	<0.02 mg/l	0.009	1330	05/06/94	BH
Copper as Cu (Total)	<0.02 mg/l	0.005	1000	05/09/94	BH
Lead as Pb (Total)	<0.01 mg/l	0.0012	1400	04/28/94	AH
Mercury as Hg (Total)	<0.0005 mg/l	0.0002	1300	04/27/94	AH
Selenium as Se (Total)	<0.002 mg/l	0.001	1400	05/04/94	AH
Silver as Ag (Total)	<0.01 mg/l	0.0001	1400	05/03/94	AH
Zinc as Zn (Total)	0.03 mg/l	0.008	1330	05/06/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148514  
 Sample Name: WS/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1600  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	553 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	453 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	44 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	633 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	82 mg/l	0.39	0930	01/21/94	BH
Hardness as CaCO <sub>3</sub>	620 mg/l	-	0930	01/21/94	BH
Magnesium as Mg	100 mg/l	0.31	0930	01/21/94	BH
Potassium as K	6 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	274 mg/l	0.81	0930	01/21/94	BH
<b>INORGANICS</b>					
pH	8.3 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	1440 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	1400	01/26/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1130	02/01/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1130	02/01/94	BH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	1200	02/01/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1200	02/01/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1500	02/02/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	0.003 mg/l	0.001	1400	01/31/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1130	02/01/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogeneration Facility 5-137.2-91

July 22, 1993  
 Sheet 5 of 5

Laboratory No.: 142304  
 Sample Name: WS/062993  
 Sample Date: 06/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1330  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	TIME OF ANALYSIS	ANALYST
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	606 mg/l	1.02	07/08/93	1400	DD
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	-	07/08/93	1400	DD
Alkalinity Total as CaCO <sub>3</sub>	497 mg/l	0.84	07/08/93	1400	DD
Chloride as Cl	63 mg/l	0.24	07/08/93	1500	DD
Sulfate as SO <sub>4</sub>	930 mg/l	1.83	07/13/93	1000	CC
<b>CATIONS:</b>					
Calcium as Ca	156 mg/l	0.39	07/19/93	1045	NH
Hardness as CaCO <sub>3</sub>	1070 mg/l	-	07/19/93	1045	NH
Magnesium as Mg	144 mg/l	0.31	07/19/93	1045	NH
Potassium as K	8 mg/l	0.18	07/07/93	1156	NH
Sodium as Na	324 mg/l	0.81	07/19/93	1045	NH
<b>INORGANICS:</b>					
pH	8.1 S.U.	-	07/03/93	1730	DD
Total Dissolved Solids	1960 mg/l	20	07/06/93	1730	CC
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.004	07/08/93	1300	PB
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	07/19/93	1600	NH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	07/19/93	1600	NH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	07/19/93	1600	NH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	07/19/93	1600	NH
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	07/13/93	1330	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	07/13/93	1100	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	07/12/93	1540	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	07/08/93	1400	NH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	07/19/93	1600	NH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. Groundwater  
 5-137.2-91

June 17, 1993  
 Sheet 3 of 6

Laboratory No.: 141072  
 Sample Name: WS/052193  
 Sample Date: 05/21/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1636  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD	DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	TIME OF ANALYSIS
<b>ANIONS:</b>						
Alkalinity Bicarbonate as HCO <sub>3</sub>	533	mg/l	--	05/26/93	BH	1630
Alkalinity Carbonate as CO <sub>3</sub>	8	mg/l	--	05/26/93	BH	1630
Alkalinity Total as CaCO <sub>3</sub>	450	mg/l	0.84	05/26/93	BH	1630
Chloride as Cl	66	mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	898	mg/l	1.83	06/02/93	CC	1500
<b>CATIONS:</b>						
Calcium as Ca	87	mg/l	0.39	06/02/93	NH	1040
Hardness as CaCO <sub>3</sub>	608	mg/l	--	06/02/93	NH	1040
Magnesium as Mg	95	mg/l	0.31	06/02/93	NH	1040
Potassium as K	10	mg/l	0.18	06/04/93	NH	0900
Sodium as Na	366	mg/l	0.81	06/02/93	NH	1040
<b>INORGANICS:</b>						
pH	8.3	S.U.	--	05/25/93	TK	1600
Total Dissolved Solids	1700	mg/l	20	05/28/93	CC	1805
<b>METALS:</b>						
Arsenic as As (Total)	<0.002	mg/l	0.0014	06/08/93	AH	1430
Barium as Ba (Total)	<0.1	mg/l	0.031	06/01/93	NH	1030
Cadmium as Cd (Total)	<0.003	mg/l	0.002	06/01/93	NH	1030
Chromium as Cr (Total)	<0.02	mg/l	0.009	06/01/93	NH	1030
Copper as Cu (Total)	<0.02	mg/l	0.005	06/01/93	NH	1030
Lead as Pb (Total)	<0.01	mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Total)	<0.0005	mg/l	0.00025	06/02/93	AH	1050
Selenium as Se (Total)	<0.002	mg/l	0.0011	06/03/93	AH	1330
Silver as Ag (Total)	<0.01	mg/l	0.0001	06/01/93	NH	1150
Zinc as Zn (Total)	0.03	mg/l	0.008	06/01/93	NH	1030

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 1993  
 Sheet 8 of 10

Laboratory No.: 140279  
 Sample Name: WS/042993  
 Sample Date: 04/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1537  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	521 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	427 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	70 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	841 mg/l	1.83	06/03/93	CC	1100
<b>CATIONS:</b>					
Calcium as Ca	97 mg/l	0.39	06/03/93	NH	1100
Hardness as CaCO <sub>3</sub>	698 mg/l	--	06/03/93	NH	1100
Magnesium as Mg	111 mg/l	0.31	06/03/93	NH	1100
Potassium as K	8 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	363 mg/l	0.81	06/03/93	NH	1100
<b>INORGANICS:</b>					
pH	8.3 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	1720 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/20/93	NH	1230
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/20/93	NH	1230
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/20/93	NH	1230
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/20/93	NH	1230
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/20/93	NH	1100
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/20/93	NH	1230
Zinc as Zn (Dissolved)	0.02 mg/l	0.008	05/20/93	NH	1230

The cation-anion analysis does not meet our quality assurance requirements. However, the values reported herein were verified by duplicate analysis. This indicates there are other unmeasured cations or anions present in the sample.

Huntington #4 Mine  
Act 1015/004 #7

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

June 17, 1993  
 Sheet 7 of 10

Laboratory No.: 140278  
 Sample Name: ADB/042993  
 Sample Date: 04/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1515  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	62 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	0 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	51 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	16 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	439 mg/l	1.83	05/13/93	CC	1230
<b>CATIONS:</b>					
Calcium as Ca	115 mg/l	0.39	06/03/93	NH	1100
Hardness as CaCO <sub>3</sub>	419 mg/l	--	06/03/93	NH	1100
Magnesium as Mg	32 mg/l	0.31	06/03/93	NH	1100
Potassium as K	4 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	55 mg/l	0.81	06/03/93	NH	1100
<b>INORGANICS:</b>					
pH	7.8 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	741 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/20/93	NH	1230
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/20/93	NH	1230
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/20/93	NH	1230
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/20/93	NH	1230
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/20/93	NH	1100
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/20/93	NH	1230
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	05/20/93	NH	1230

Client Name: HUNTINGDON - SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 153689  
 Sample Name: FWR-072094  
 Sample Date: 07/20/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1545  
 Sample Type: GROUNDWATER

	METHOD	MEASURED	METHOD DETECTION	TIME OF	DATE OF	
<b>ANIONS</b>						
		9.63 meq/l				
Alkalinity Bicarbonate as HCO3	310.1	219 mg/l	--	1400	07/27/94	HB
Alkalinity Carbonate as CO3	310.1	57 mg/l	--	1400	07/27/94	HB
Alkalinity Total as CaCO3	310.1	274 mg/l	0.43	1300	07/27/94	HB
Chloride as Cl	325.2	10 mg/l	0.72	1630	08/02/94	DD
Sulfate as SO4	375.2	186 mg/l	1.75	1900	07/27/94	DD
<b>CATIONS</b>						
		10.16 meq/l				
Calcium as Ca	200.7	15 mg/l	0.10	1000	07/29/94	BH
Hardness as CaCO3	200.7	247 mg/l	--	1000	07/29/94	BH
Magnesium as Mg	200.7	51 mg/l	0.10	1100	07/29/94	BH
Potassium as K	258.1	3 mg/l	0.18	1100	08/02/94	BH
Sodium as Na	200.7	120 mg/l	0.81	1130	07/29/94	BH
<b>INORGANICS</b>						
pH	150.1	9.4 S.U.	--	--	07/26/94	TK
Total Dissolved Solids	160.1	515 mg/l	6.3	1500	07/26/94	HB
<b>METALS</b>						
Arsenic as As (Dissolved)	206.3	<0.005 mg/l	0.002	1100	07/28/94	AMH
Barium as Ba (Dissolved)	200.7	<0.1 mg/l	0.009	1430	08/03/94	BH
Cadmium as Cd (Dissolved)	200.7	<0.003 mg/l	0.002	1430	08/03/94	BH
Chromium as Cr (Dissolved)	200.7	<0.02 mg/l	0.003	1430	08/03/94	BH
Copper as Cu (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Lead as Pb (Dissolved)	239.2	<0.01 mg/l	0.001	1400	08/11/94	AAH
Mercury as Hg (Dissolved)	245.1	<0.0002 mg/l	0.0002	1100	07/29/94	AMH
Selenium as Se (Dissolved)	270.3	<0.005 mg/l	0.001	1500	08/02/94	AAH
Silver as Ag (Dissolved)	200.7	<0.02 mg/l	0.004	1430	08/02/94	BH
Zinc as Zn (Dissolved)	200.7	<0.02 mg/l	0.002	1430	08/03/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Project Name: Sunnyside Cogen. G.W. Permit  
 5-137.2-91

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Laboratory No.: 140276  
 Sample Name: FWRES/042993  
 Sample Date: 04/29/93  
 Collected by: GREG McDONALD  
 Time Sampled: 1146  
 Sample Type: WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	DATE OF ANALYSIS	ANALYST	ANALYSIS TIME
<b>ANIONS:</b>					
Alkalinity Bicarbonate as HCO <sub>3</sub>	478 mg/l	--	05/12/93	HB	1000
Alkalinity Carbonate as CO <sub>3</sub>	26 mg/l	--	05/12/93	HB	1000
Alkalinity Total as CaCO <sub>3</sub>	436 mg/l	0.84	05/12/93	HB	1000
Chloride as Cl	31 mg/l	0.24	05/27/93	CC	1230
Sulfate as SO <sub>4</sub>	284 mg/l	1.83	05/13/93	CC	1230
<b>CATIONS:</b>					
Calcium as Ca	34 mg/l	0.39	05/07/93	NH	1100
Hardness as CaCO <sub>3</sub>	250 mg/l	--	05/07/93	NH	1100
Magnesium as Mg	40 mg/l	0.31	05/07/93	NH	1100
Potassium as K	7 mg/l	0.18	05/19/93	NH	0930
Sodium as Na	260 mg/l	0.81	05/07/93	NH	1100
<b>INORGANICS:</b>					
pH	8.5 S.U.	-	05/04/93	HB	1500
Total Dissolved Solids	919 mg/l	20	05/06/93	CC	1615
<b>METALS:</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	05/20/93	AH	1430
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	05/20/93	NH	1230
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	05/20/93	NH	1230
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	05/20/93	NH	1230
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	05/20/93	NH	1230
Lead as Pb (Dissolved)	<0.01 mg/l	0.001	06/14/93	NH	1000
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.00025	05/20/93	NH	1100
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	05/21/93	NH	1100
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	05/20/93	NH	1230
Zinc as Zn (Dissolved)	0.05 mg/l	0.008	05/20/93	NH	1230

The cation-anion analysis does not meet our quality assurance requirements. However, the values reported herein were verified by duplicate analysis. This indicates there are other unmeasured cations or anions present in the sample.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148515  
 Sample Name: WSB/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1610  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	587 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	481 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	44 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	637 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	92 mg/l	0.39	1600	02/04/94	BH
Hardness as CaCO <sub>3</sub>	680 mg/l	-	1600	02/04/94	BH
Magnesium as Mg	110 mg/l	0.31	1600	02/04/94	BH
Potassium as K	7 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	254 mg/l	0.81	1600	02/04/94	BH
<b>INORGANICS</b>					
pH	8.3 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	1410 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	1400	01/26/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1130	02/01/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1130	02/01/94	BH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	1200	02/01/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1200	02/01/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1500	02/02/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	1400	01/31/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1400	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1130	02/01/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148518  
 Sample Name: SPIKE 148515 WSB/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1610  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>				
Alkalinity Total as CaCO3	101 %	1100	01/22/94	HB
Chloride as Cl	101 %	1400	01/26/94	HB
Sulfate as SO4	103 %	1115	02/02/94	CC
<b>CATIONS</b>				
Calcium as Ca	104 %	0930	01/21/94	BH
Magnesium as Mg	101 %	0930	01/21/94	BH
Potassium as K	100 %	1400	01/28/94	AH
Sodium as Na	101 %	0930	01/21/94	BH
<b>METALS</b>				
Arsenic as As (Total)	100 %	1400	01/26/94	AH
Barium as Ba (Total)	95 %	1130	02/01/94	BH
Cadmium as Cd (Total)	95 %	1130	02/01/94	BH
Chromium as Cr (Total)	90 %	1200	02/01/94	BH
Copper as Cu (Total)	92 %	1200	02/01/94	BH
Lead as Pb (Total)	100 %	1500	02/02/94	AH
Mercury as Hg (Total)	110 %	1000	01/25/94	AH
Selenium as Se (Total)	100 %	1400	01/31/94	AH
Silver as Ag (Total)	95 %	1600	02/17/94	AH
Zinc as Zn (Total)	90 %	1130	02/01/94	BH

007/016

GORDON

CREEK 278

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148516  
 Sample Name: GWB/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1010  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	<1 mg/l	-	1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l	-	1100	01/22/94	HB
Alkalinity Total as CaCO <sub>3</sub>	<1 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	<1 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO <sub>4</sub>	<5 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	<1 mg/l	0.39	0930	01/21/94	BH
Hardness as CaCO <sub>3</sub>	<7 mg/l	-	0930	01/21/94	BH
Magnesium as Mg	<1 mg/l	0.31	0930	01/21/94	BH
Potassium as K	<1 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	<1 mg/l	0.81	0930	01/21/94	BH
<b>INORGANICS</b>					
pH	6.6 S.U.	-	-	01/19/94	TK
Total Dissolved Solids	<20 mg/l	11.7	1720	01/20/94	HB
<b>METALS</b>					
Arsenic as As (Dissolved)	<0.002 mg/l	0.001	1400	01/26/94	AH
Barium as Ba (Dissolved)	<0.1 mg/l	0.031	1130	02/01/94	BH
Cadmium as Cd (Dissolved)	<0.003 mg/l	0.002	1130	02/01/94	BH
Chromium as Cr (Dissolved)	<0.02 mg/l	0.009	1200	02/01/94	BH
Copper as Cu (Dissolved)	<0.02 mg/l	0.005	1200	02/01/94	BH
Lead as Pb (Dissolved)	<0.01 mg/l	0.0012	1500	02/02/94	AH
Mercury as Hg (Dissolved)	<0.0005 mg/l	0.0002	1000	01/25/94	AH
Selenium as Se (Dissolved)	<0.002 mg/l	0.001	1400	01/31/94	AH
Silver as Ag (Dissolved)	<0.01 mg/l	0.0001	1600	02/17/94	AH
Zinc as Zn (Dissolved)	<0.02 mg/l	0.008	1130	02/01/94	BH

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148528  
 Sample Name: ICE-2/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1459  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Bicarbonate as	530 mg/l		1100	01/22/94	HB
Alkalinity Carbonate as C	0 mg/l		1100	01/22/94	HB
Alkalinity Total as CaCO3	434 mg/l	0.84	1100	01/22/94	HB
Chloride as Cl	59 mg/l	1.41	1400	01/26/94	HB
Sulfate as SO4	943 mg/l	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	110 mg/l	0.39	1600	02/04/94	BH
Hardness as CaCO3	850 mg/l		0930	01/21/94	BH
Magnesium as Mg	140 mg/l	0.31	0930	01/21/94	BH
Potassium as K	12 mg/l	0.18	1400	01/28/94	AH
Sodium as Na	296 mg/l	0.81	1600	02/04/94	BH
<b>INORGANICS</b>					
Oil & Grease	<1 mg/l	0.9	1030	01/27/94	TK
Settleable Solids	<0.1 ml/l	0.1	1045	01/19/94	CC
Total Dissolved Solids	1740 mg/l	11.7	1720	01/20/94	HB
Total Suspended Solids	7 mg/l	3.5	1300	01/21/94	HB
<b>METALS</b>					
Aluminum as Al (Dissolved)	* <0.5 mg/l	0.023	1400	02/03/94	BH
Arsenic as As (Dissolved)	<0.002 mg/l	0.0014	0930	01/20/94	AH
Boron as B (Dissolved)	* <0.5 mg/l	0.045	1100	02/03/94	BH
Cadmium as Cd (Dissolved)	<0.001 mg/l	0.0002	1100	01/27/94	BH
Copper as Cu (Dissolved)	* <0.10 mg/l	0.005	1100	02/03/94	BH
Iron as Fe (Dissolved)	* <0.25 mg/l	0.008	1100	02/03/94	BH
Iron as Fe (Total)	0.35 mg/l	0.008	1630	02/03/94	BH
Lead as Pb (Dissolved)	<0.002 mg/l	0.0012	1300	01/20/94	AH
Manganese as Mn (Dissolved)	* <0.10 mg/l	0.003	1100	02/03/94	BH
Manganese as Mn (Total)	* <0.10 mg/l	0.003	1630	02/03/94	BH
Molybdenum as Mo (Dissolved)	* <0.25 mg/l	0.023	1100	02/03/94	BH
Selenium as Se (Dissolved)	<0.002 mg/l	0.0011	1130	01/21/94	AH
Zinc as Zn (Dissolved)	* <0.10 mg/l	0.008	1100	02/03/94	BH

\* Higher detection limit is due to interference present in the sample.

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
Project No.: 87-927  
Laboratory No.: 148528  
Sample Name: ICE-2/011394  
Sample Date: 01/13/94  
Collected by: GREG McDONALD  
Time Sampled: 1459  
Sample Type: SURFACE WATER

Page 11

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PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>NUTRIENTS</b>					
Ammonia Nitrogen as N	0.11 mg/l	0.034	1515	01/24/94	CC
Nitrite as N	<0.05 mg/l	0.005	1200	01/20/94	DD
Phosphorous Total	0.05 mg/l	0.002	1600	02/09/94	CC
Nitrate as N	0.71 mg/l	0.005	1015	01/28/94	CC

Client Name: CHEN-NORTHERN, INC. SALT LAKE CITY, UT  
 Project No.: 87-927  
 Laboratory No.: 148530  
 Sample Name: SPIKE 148528 ICE-2/011394  
 Sample Date: 01/13/94  
 Collected by: GREG McDONALD  
 Time Sampled: 1459  
 Sample Type: SURFACE WATER

PARAMETER	MEASURED VALUE	METHOD DETECTION LIMIT	TIME OF ANALYSIS	DATE OF ANALYSIS	ANALYST
<b>ANIONS</b>					
Alkalinity Total as CaCO3	96 %	0.84	1100	01/22/94	HB
Chloride as Cl	102 %	1.41	1400	01/26/94	HB
Sulfate as SO4	101 %	2.29	1115	02/02/94	CC
<b>CATIONS</b>					
Calcium as Ca	100 %	0.39	0930	01/21/94	BH
Magnesium as Mg	98 %	0.31	0930	01/21/94	BH
Potassium as K	100 %	0.18	1400	01/28/94	AH
Sodium as Na	99 %	0.81	0930	01/21/94	BH
<b>METALS</b>					
Aluminum as Al (Dissolved)	100 %	0.023	1400	02/03/94	BH
Arsenic as As (Dissolved)	100 %	0.0014	0930	01/20/94	AH
Boron as B (Dissolved)	103 %	0.045	1100	02/03/94	BH
Cadmium as Cd (Dissolved)	100 %	0.0002	1100	01/27/94	BH
Copper as Cu (Dissolved)	94 %	0.005	1100	02/03/94	BH
Iron as Fe (Dissolved)	105 %	0.008	1100	02/03/94	BH
Iron as Fe (Total)	93 %	0.008	1630	02/03/94	BH
Lead as Pb (Dissolved)	100 %	0.0012	1300	01/20/94	AH
Manganese as Mn (Dissolve)	102 %	0.003	1100	02/03/94	BH
Manganese as Mn (Total)	100 %	0.003	1630	02/03/94	BH
Molybdenum as Mo (Dissolv)	91 %	0.023	1100	02/03/94	BH
Selenium as Se (Dissolved)	92 %	0.0011	1130	01/21/94	AH
Zinc as Zn (Dissolved)	104 %	0.008	1100	02/03/94	BH
<b>NUTRIENTS</b>					
Ammonia Nitrogen as N	95 %	0.034	1515	01/24/94	CC
Nitrite as N	107 %	0.005	1200	01/20/94	DD
Phosphorous Total	100 %	0.002	1600	02/09/94	CC
Nitrate as N	104 %	0.005	1015	01/28/94	CC





# CHEMTECH - FORD ANALYTICAL LABORATORY

# ANALYSIS REQUEST FORM

COMPANY: Sunnyside Co-Gen  
 ADDRESS: #1 Power Plant RD  
 CITY/STATE/ZIP: East Carbon Utah, 84539  
 PHONE #: 888-4476 FAX #: 888-2538  
 CO. CONTACT: \_\_\_\_\_  
 PROJECT ID: Baseline

BILLING ADDRESS: \_\_\_\_\_  
 BILLING CITY/ST/ZIP: \_\_\_\_\_  
 P.O. #: \_\_\_\_\_  
 TURNAROUND REQ'D: \_\_\_\_\_  
 \*expedited turnaround subject to additional charge

Lab ID #	SAMPLE LOCATION	SAMPLE DATE	SAMPLE TIME	Number of Containers	MATRIX					ANALYTES REQUESTED											
					Drinking Water	Water	Gas / Solid (circle)	Sludge	Other (specify)												
1035	1. Well #1 #	3/16	1010	3	✓					XXXXX Baseline											
1030	2. F-2 #	11	1040	3	✓					Not Filtered											
1037	3. ICE-1 +	11	1050	3	✓					XXXXX Baseline											
1030	4. CRB	11	1130	3	✓					XXXXX Baseline											
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

Sampled by: (print) \_\_\_\_\_ Sampled by: (signature) \_\_\_\_\_ Receiving Temp. (C): 4.1

Special Instructions: \* Oil & Grease bottles broken in shipment. RC + ICE-1 bottle was custom broken glass (unpreserved) bottle

Relinquished by: (signature) <u>Rust net</u>	Received by: (signature) <u>M. Callan</u>	Date/Time <u>3-16-98</u>	Comments <u>bottle</u>
Relinquished by: (signature) <u>M. Callan</u>	Received by: (signature) <u>Fed Ex</u>	Date/Time	Comments
Relinquished by: (signature) <u>Fed Ex</u>	Received by: (signature) <u>J. Gundersen</u>	Date/Time <u>03/17/98 0950</u>	Comments

NET 30 DAYS: 1.5% PER MONTH INTEREST CHARGE (18% A.P.R.)  
 CUSTOMER AGREES TO PAY COLLECTION COSTS AND ATTORNEYS FEES

6100 SOUTH STRATLER AVENUE, OFFICE: (801)262-7299  
 SALT LAKE CITY, UT 84107 FAX: (801)262-7378

04/10/98 15:48 CHEMTECH 801888238











# TABLE 1

## Sunnyside Cogeneration Facility Sunnyside, Utah

### Compliance Monitoring Locations

#### DOGM Permit Boundary Water Quality Monitoring Plan

#### DOGM UPDES Monitoring Locations

Outfall 004, Clear Water Pond  
Outfall 007, Rail Cut Pond  
Outfall 008, Old Coarse Refuse Pond  
Outfall 009, Pasture Pond  
Outfall 012, Coarse Refuse Pond  
Outfall 013, Facility Sediment Pond  
Outfall 014, Coal Pile Runoff Pond  
Outfall 015, Landfill Sediment Pond  
Outfall 016, Borrow Area Pond

#### DOGM Operational Water Quality Monitoring Locations

ICE - 1, Icelander Creek  
F - 2, Columbia Dugway Spring  
CRS, Coarse Refuse Seep-Source  
CRB, Coarse Refuse Seep-Boundary  
Well-1, Draegerton Well

JOB NO. 5-137.1-91 JOB TITLE Sunnyside UPOES - 002 DATE 3-24-95 BY RBB  
 SUBJECT TDS Loading Calculations CHECKED RC SHEET \_\_\_\_\_ OF \_\_\_\_\_

2-2-95

$$530 \text{ mg/L} \times \frac{3.785306 \text{ L}}{\text{gal}} \times \frac{150 \text{ gal}}{\text{min}} \times \frac{1 \text{ gram}}{1000 \text{ mg}} \times \frac{1 \text{ lb}}{453.5923 \text{ gram}} \times \frac{1440 \text{ min}}{\text{day}}$$

$$= 955 \text{ lb/day}$$

2-5-95

$$522 \text{ mg/L} \times \frac{3.785306 \text{ L}}{\text{gal}} \times \frac{200 \text{ gal}}{\text{min}} \times \frac{1 \text{ gram}}{1000 \text{ mg}} \times \frac{1 \text{ lb}}{453.5923 \text{ gram}} \times \frac{1440 \text{ min}}{\text{day}}$$

$$= 1256 \text{ lb/day}$$

2-7-95

$$586 \text{ mg/L} \times \frac{3.785306 \text{ L}}{\text{gal}} \times \frac{300 \text{ gal}}{\text{min}} \times \frac{1 \text{ gram}}{1000 \text{ mg}} \times \frac{1 \text{ lb}}{453.5923 \text{ gram}} \times \frac{1440 \text{ min}}{\text{day}}$$

$$= 2113 \text{ lb/day}$$

2-12-95

$$564 \text{ mg/L} \times \frac{3.785306 \text{ L}}{\text{gal}} \times \frac{250 \text{ gal}}{\text{min}} \times \frac{1 \text{ gram}}{1000 \text{ mg}} \times \frac{1 \text{ lb}}{453.5923 \text{ gram}} \times \frac{1440 \text{ min}}{\text{day}}$$

$$= 1694 \text{ lb/day}$$

MAY 30, 95 1435 HRS FE SAMPLE #2 WELL  
400 GPM

JUNE 26, 1995 0615 STARTED DISCHARGE TO WATER CANYON

### BIO MONITORING

JUNE 26, 1995 SAMPLER R. MILLER  
WATER CANYON #2 WELL T. BELCHAK

TIME FLOW

COMP 0805 450 GPM

COMP 0905 450 GPM

COMP 1005 450 GPM

COMP 1105 450 GPM

COMP 1205 450 GPM

COMP 1305 450 GPM

WPLE #1	PHENOL	1315	6-26-95	#2 WELL	R. MILLER
WPLE #2	CYANIDE	1315	6-26-95	#2 WELL	
WPLE #3	METALS	1315	6-26-95	#2 WELL	
WPLE #4	NUTRIENTS	1315	6-26-95	#2 WELL	
WPLE #5	BOD/COD	1316	6-26-95	#2 WELL	
WPLE #6	SULFIDE	1316	6-26-95	#2 WELL	

-95 WATER CANYON #2 WELL R. MILLER

157 OIL/GREASE SAMPLE #1

710 D.O. 5.8 mg/L

713 pH 7.55

JUNE 27, 1995 1700 DISCHARGE ENDED

UNITED STATES DEPARTMENT OF THE INTERIOR  
Office of Surface Mining  
Reclamation and Enforcement  
**TEN-DAY NOTICE**

Originating Office: Albuquerque, NM  
Office of Surface Mining  
219 Central N.W.  
Albuquerque, NM 87102  
Telephone Number: (505) 766-1486

Number: X 83 - II 242 - 10 TV 4

Ten-Day Notice to the State of Utah

You are notified that, as a result of Federal inspection on 11-15-83 (e.g. a federal inspection, citizen information, etc.) the Secretary has reason to believe that the person described below is in violation of the Act or a permit condition required by the Act. If the State Regulatory Authority fails within ten days after receipt of this notice to take appropriate action to cause the violation(s) described herein to be corrected, or to show cause for such failure and transmit notice of your action to the Secretary through the originating office designated above, then a Federal inspection of the surface coal mining operation at which the alleged violation(s) is occurring will be conducted and appropriate enforcement action as required by Section 521(a)(1) of the Act will be taken.

Permittee: <u>Kaiser Steel Corp</u> <small>(Or Operator if No Permit)</small>	County: <u>Carbon</u>	<input type="checkbox"/> Surface
Mailing Address: <u>P.O. Box D Sunnyside UT 84539</u>		<input checked="" type="checkbox"/> Underground
Permit Number: <u>ACT/007/007</u>	Mine Name: <u>Sunnyside</u>	<input type="checkbox"/> Other _____

NATURE OF VIOLATION AND LOCATION: Failure to have sediment ponds certified by a registered professional engineer.  
None of the ponds have been certified.

Section of State Law, Regulation or Permit Condition believed to have been violated: UMC 817.46 (f)

NATURE OF VIOLATION AND LOCATION: Failure to pass all disturbed area drainage through a sediment pond or treatment facility before leaving the permit area. This applies to the Outcrop Fan Pond + the Whitmore Fan Pond.

Section of State Law, Regulation or Permit Condition believed to have been violated: UMC 817.42(a)(ii)

NATURE OF VIOLATION AND LOCATION: Failure to maintain sediment control measures to prevent additional contributions of sediment to streamflow + minimize erosion. This applies to two small areas where the berm along Grass Trail Creek does not retain disturbed area drainage.

Section of State Law, Regulation or Permit Condition believed to have been violated: UMC 817.45(i)+(iii)

Remarks or Recommendations: \* Continued on separate page

Date of Notice: <u>11-22-83</u>	Signature of Authorized Rep: <u>Jodie Merriman</u>
	Print Name and ID: <u>Jodie Merriman 242</u>

UNITED STATES DEPARTMENT OF THE INTERIOR  
Office of Surface Mining  
Reclamation and Enforcement  
**TEN-DAY NOTICE**

Originating Office:

Continuation

Number: X-83-IT-242-10 TV 4

Telephone Number:

Ten-Day Notice to the State of \_\_\_\_\_

You are notified that, as a result of \_\_\_\_\_ (e.g. a federal inspection, citizen information, etc.) the Secretary has reason to believe that the person described below is in violation of the Act or a permit condition required by the Act. If the State Regulatory Authority fails within ten days after receipt of this notice to take appropriate action to cause the violation(s) described herein to be corrected, or to show cause for such failure and transmit notice of your action to the Secretary through the originating office designated above, then a Federal inspection of the surface coal mining operation at which the alleged violation(s) is occurring will be conducted and appropriate enforcement action as required by Section 521(a)(1) of the Act will be taken.

Permittee: \_\_\_\_\_  
(Or Operator if No Permit)

County: \_\_\_\_\_

Surface

Mailing Address: \_\_\_\_\_

Underground

Permit Number: \_\_\_\_\_ Mine Name: \_\_\_\_\_

Other \_\_\_\_\_

NATURE OF VIOLATION AND LOCATION: Failure to maintain sediment control measures on roads up Water Canyon and #2 Canyon to prevent additional contributions of sediment to streamflow + to minimize erosion.

Section of State Law, Regulation or Permit Condition believed to have been violated: WRC 817-45 (i) (ii)

NATURE OF VIOLATION AND LOCATION: \_\_\_\_\_

Section of State Law, Regulation or Permit Condition believed to have been violated:

NATURE OF VIOLATION AND LOCATION: \_\_\_\_\_

Section of State Law, Regulation or Permit Condition believed to have been violated:

Remarks or Recommendations: \_\_\_\_\_

Date of Notice: 11-22-83

Signature of Authorized Rep. Jodie Merriman

Print Name and ID: Jodie Merriman 242

## United States Department of the Interior Office of Surface Mining Mine Site Evaluation Inspection Report

26. State Permit Number

27. Date of Inspection  
(Y M M D D)

ACT 007 007

840801

28. Yes  No  Do mining and reclamation activities on the site comply with the plans in the permit?  
If no, provide narrative to support this determination.

29. Indicate number of complete and partial inspections conducted by the State to date for this annual review period:

29a.  Number of Completes

29b.  Number of Partials

30. Indicate number of complete and partial inspections required by the State during this annual review period:

30a.  Number of Completes

30b.  Number of Partials

31. Has inspection frequency been met?

31a. Yes  No  Completes

31b. Yes  No  Partials

32. FEDERAL ENFORCEMENT INFORMATION. [Enter violation number. Check appropriate box(es)]

Ten-Day Notice No.

Notice of Violation No.

Cessation Order No.

Violation Codes

84-02-031-5

Ten-Day Notice No.	Notice of Violation No.	Cessation Order No.	Violation Codes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Authorizations to Operate
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signs and Markers
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Backfilling and Grading
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Highwall Elimination
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rills and Gullies
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Improper Fills
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Topsoll Handling
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Ponds
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effluent Limits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Monitoring
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Buffer Zones
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Roads
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dams
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blasting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Revegetation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spoil on the Downslope
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mining Without Permit
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exceeding Permit Limits
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance Prohibitions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Toxic Materials
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other Violations

33. Name of Authorized Representative (print or type)

FRANK S. ATENCIA

Signature of Authorized Representative

Date

08 0

Signature of Reviewing Official

Date

06 0

Signature of Reviewing Official

Date

09 0

03 0

United States Department of the Interior  
Office of Surface Mining  
Mine Site Evaluation Inspection Report

For Office Use Only

1a Y Y M M	1b Batch	1c Report
---------------	-------------	--------------

2. Name of Permittee  
KAISER STEEL CORP

9. NSMA Number

10. Date of Inspection (Y Y M M D D)  
83 11 15

3. Street Address  
PO BOX D

11. State Permit Number  
ACT007007

4. City  
SUNNYSIDE

5. State  
UT

12. Name of Mine  
SUNNYSIDE

8. Zip Code  
84539

7. Area Code  
801

8. Telephone Number  
888-4431

13. County Code  
007

14. State Code  
UT

15. Strata

16. State Area Office  
01

17. OSM Field Office No.  
02

18. OSM Area Office No.

19. OSM Sample No.

20. Type of Inspection (Code)  
A

21. Joint Inspection  
Yes No

22. Inspector's ID No.  
249

23. Status

- A  Type of Permit
- B  Mine Status (Code)
- C  20 + 31 Type of Facility (Code)
- D  14300.0 Number of Permitted Acres
- E  00400.0 Number of Disturbed Acres

24. Type of Activity (check applicable boxes).

- A  Steep Slope
- B  Mountain Top Removal
- C  Prime Farmlands
- D  Alluvial Valley Floors
- E  Anthracite
- F  Federal Lands
- G  Indian Lands
- H  Other

25. Performance Standards (Codes)

Instructions: Indicate compliance code. For any standard marked 2 or 3 provide narrative to support this determination.

Standards That Limit the Effects to the Permit Area

- A  Distance Prohibitions
- B  Mining Within Permit Boundaries
- C  Signs and Markers
- D  Sediment Control Measures
- E  Design and Certification Requirements—Sediment Control
- F  Effluent Limits
- G  Surface Water Monitoring
- H  Ground Water Monitoring
- I  3 Blasting Procedures
- J  Haul/Access Road Design and Maintenance
- K  Refuse Impoundments
- L  Other: Specify \_\_\_\_\_

Standards That Assure Reclamation Quality and Timeliness

- M  Topsoil Handling
- N  Backfilling and Grading
- O  Following Reclamation Schedule
- P  Revegetation Requirements
- Q  Disposal of Excess Spoil
- R  Handling of Acid or Toxic Materials
- S  Highwall Elimination
- T  3 Downslope Spoil Disposal
- U  Post-Mining Land Use
- V  Cessation of Operations: Temporary
- W  Other \_\_\_\_\_

RECEIVED

DEC 7 1983

DIVISION OF  
OIL, GAS & MINING

# United States Department of the Interior Office of Surface Mining Mine Site Evaluation Inspection Report

26. State Permit Number

27. Date of Inspection  
(Y M M D D)

ACT 005007

83 11 15

28.  Yes  No Do mining and reclamation activities on the site comply with the plans in the permit?  
 If no, provide narrative to support this determination.

29. Indicate number of complete and partial inspections conducted by the State to date for this annual review period:

29a.  02 Number of Completes

29b.  04 Number of Partials

30. Indicate number of complete and partial inspections required by the State during this annual review period:

30a.  02 Number of Completes

30b.  04 Number of Partials

31. Has inspection frequency been met?

31a.  Yes  No Completes

31b.  Yes  No Partials

32. FEDERAL ENFORCEMENT INFORMATION. [Enter violation number. Check appropriate box(es)]

Ten-Day Notice No.

Notice of Violation No.

Enforcement Order No.

Violation Codes

83-02-242-010

- - - - -

- - - - -

A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Authorizations to Operate
B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signs and Markers
C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Backfilling and Grading
D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Highwall Elimination
E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fills and Gullies
F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Improper Fills
G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Topsoll Handling
H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Ponds
I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effluent Limits
J	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Monitoring
K	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Buffer Zones
L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Roads
M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dams
N	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Blasting
O	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Revegetation
P	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spoil on the Downslope
Q	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mining Without Permit
R	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exceeding Permit Limits
S	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Distance Prohibitions
T	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Toxic Materials
U	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other Violations

33. Name of Authorized Representative (print or type)

Jodie Meiriman

Signature of Authorized Representative

Date

08 0

Jodie Meiriman

11-22-83

10 0

Signature of Reviewing Official

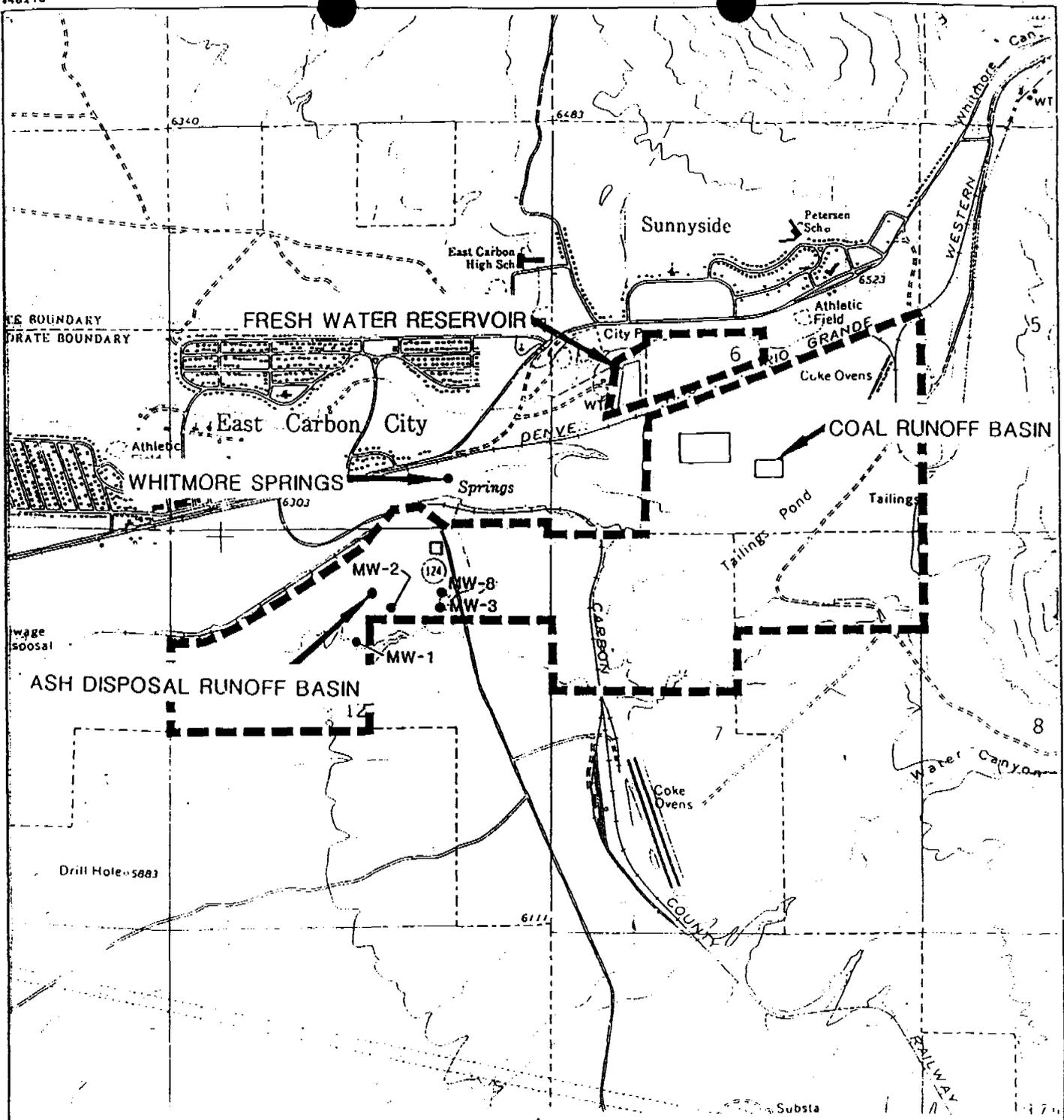
Date

10 5

John J. Perry

11-30-83

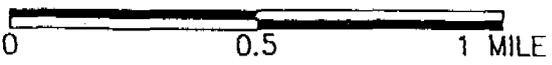
02 5



QUADRANGLE LOCATION



SCALE



SUNNYSIDE COGENERATION FACILITY  
SUNNYSIDE, UTAH